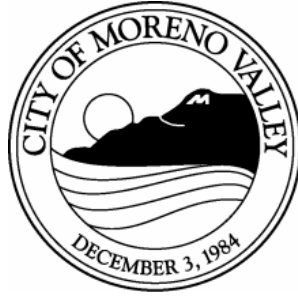

PLANNING COMMISSIONERS

BRIAN LOWELL
Chair

JEFFREY SIMS
Vice-Chair

RAY L. BAKER
Commissioner



JEFFREY BARNES
Commissioner

CARLOS RAMIREZ
Commissioner

PATRICIA KORZEC
Commissioner

MELI VAN NATTA
Commissioner

PLANNING COMMISSION Special Meeting (Regular Meeting)

Agenda

**Thursday, June 25, 2015 at 5:00 PM
City Hall Council Chamber – 14177 Frederick Street**

CALL TO ORDER

ROLL CALL

PLEDGE OF ALLEGIANCE

APPROVAL OF AGENDA

CONSENT CALENDAR

All matters listed under Consent Calendar are considered to be routine and all will be enacted by one roll call vote. There will be no discussion of these items unless Members of the Planning Commission request specific items be removed from the Consent Calendar for separate action.

APPROVAL OF MINUTES

None

PUBLIC COMMENTS PROCEDURE

Any person wishing to address the Commission on any matter, either under the Public Comments section of the Agenda or scheduled items or public hearings, must fill out a "Request to Speak" form available at the door. The completed form must be submitted to the Secretary prior to the Agenda item being called by the Chairperson. In speaking to the Commission, member of the public may be limited to three minutes per person, except for the applicant for entitlement. The Commission may establish an overall time limit for comments on a particular Agenda item. Members of the public must direct their questions to the Chairperson of the Commission and not to other members of the Commission, the applicant, the Staff, or the audience.

Upon request, this agenda will be made available in appropriate alternative formats to persons with disabilities, in compliance with the Americans with Disabilities Act of 1990. Any person with a disability who requires a modification or accommodation in order to participate in a meeting should direct such request to Mark Sambito, ADA Coordinator, at 951.413.3120 at least 48 hours before the meeting. The 48-hour notification will enable the City to make reasonable arrangements to ensure accessibility to this meeting.

NON-PUBLIC HEARING ITEMS

None

PUBLIC HEARING ITEMS

1. Case: PA12-0010 (General Plan Amendment), PA12-0011 (Development Agreement), PA12-0012 (Change of Zone), PA12-0013 (Specific Plan), PA12-0014 (Pre-Zoning/Annexation), PA12-0015 (Tentative Parcel Map No, 36457), P12-016 (Environmental Impact Report)

Applicant: Highland Fairview Inc.

Owner: Highland Fairview and various private property owners

Representative: Iddo Benzeevi

Location: The project is in the eastern portion of the city and is more specifically located east of Redlands Boulevard, south of the SR-60 Freeway, west of Gilman Springs Road, and north of the San Jacinto Wildlife Area

Case Planner: Mark Gross

Council District: 3

Proposal: PROPOSED WORLD LOGISTICS CENTER
CONTINUED PUBLIC HEARING

STAFF RECOMMENDATION

APPROVE Resolution Nos. 2015-12, 2015-13, 2015-14, 2015-15 and 2015-16 thereby recommending that the City Council:

1. **CERTIFY** the Environmental Impact Report (P12-016), including approval of the Mitigation Monitoring Program and adoption of a Statement of Overriding Considerations (Exhibits A and B of Resolution 2015-12) for PA12-0010 (General Plan Amendment), PA12-0011 (Development Agreement) PA12-0012 (Change of Zone), PA12-0013 (Specific Plan), PA12-0014 (Pre-Zoning/Annexation), PA12-0015 (Tentative Parcel Map), pursuant to the California Environmental Quality Act (CEQA) Guidelines.

2. **APPROVE** General Plan Amendment PA12-0010, to change the land use designations for the project area to Business Park/Light Industrial (BP) and Open Space (OS), and to amend General Plan goals and objectives text and map in the respective Community Development, Circulation, Parks, Recreation and Open Space, Safety, and Conservation Elements identified in Exhibits A through M of Resolution 2015-13.
3. **APPROVE** Change of Zone PA12-012 and Specific Plan PA12-0013 and Annexation PA12-0014, which would repeal the current Moreno Highlands Specific Plan No. 212-1, would establish the World Logistics Center Specific Plan including Change of Zone on the City's Zoning Atlas to Logistics Development (LD), Light Logistics (LL) and Open Space (OS) for areas within the proposed WLC Specific Plan boundary, would establish Pre-zoning/Annexation for an 85 acre site at the northwest corner of Gilman Springs and Alessandro Boulevard, and authorize Change of Zone on the City's Zoning Atlas to Open Space (OS) for those project areas outside and southerly of the new WLC Specific Plan boundary, Exhibits A, B and C of Resolution 2015-14.
4. **APPROVE** Tentative Parcel Map No. 36457 PA12-0015 for a tentative parcel map that includes 26 parcels for financing and conveyance purposes, Exhibit A and B of Resolution 2015-15.
5. **APPROVE** Development Agreement PA12-0011 covering properties controlled by Highland Fairview, Exhibit A of Resolution 2015-16.

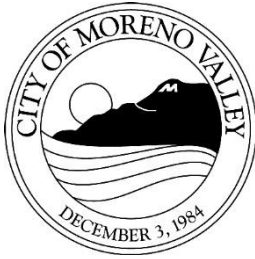
OTHER COMMISSION BUSINESS

STAFF COMMENTS

PLANNING COMMISSIONER COMMENTS

ADJOURNMENT

Next Meeting: Planning Commission Regular Meeting, July 9, 2015 at 7:00 P.M., City of Moreno Valley, City Hall Council Chamber, 14177 Frederick Street, Moreno Valley, CA 92553.



PLANNING COMMISSION

STAFF REPORT

Meeting Date: June 25, 2015

PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING

Case: PA12-0010 (General Plan Amendment), PA12-0011 (Development Agreement), PA12-0012 (Change of Zone), PA12-0013 (Specific Plan), PA12-0014 (Pre-Zoning/Annexation), PA12-0015 (Tentative Parcel Map No, 36457), P12-016 (Environmental Impact Report)

Applicant: Highland Fairview Inc.

Owner: Highland Fairview and various private property owners

Representative: Iddo Benzeevi

Location: The project is in the eastern portion of the city and is more specifically located east of Redlands Boulevard, south of the SR-60 Freeway, west of Gilman Springs Road, and north of the San Jacinto Wildlife Area

Case Planner: Mark Gross

Council District: 3

SUMMARY

The applicant, Highland Fairview, has submitted multiple project entitlement applications for an approximate 3,818 acre project area in the eastern portion of the City. Collectively the project applications are referred to as the World Logistics Center (WLC) Project. The applications have been under review since March of 2012.

On June 11, 2015, the Planning Commission initiated a public hearing on the proposed WLC Project, which includes a General Plan Amendment (PA12-0010), Development Agreement (PA12-0011), Change of Zone (PA12-0012), Specific Plan (PA12-0013), Pre-zoning/Annexation (PA12-0014), Tentative Parcel Map No. 36457 (PA12-0015) and Environmental Impact Report (P12-016). As this is a large complex project with multiple legislative issues under consideration and extensive public interest, the public hearing was not able to be completed on June 11, 2015. During the first night of the public hearing, staff and applicant presentations were made, questions to staff and the applicant were asked by the Commission, and the public hearing was opened. Five of the approximate 100 speakers who filled out requests to speak were able to make their public testimony before the meeting was ended and public hearing continued. The hearing was continued to June 25, 2015, in the City Council Chambers, at City Hall. The start time of the continued public hearing was set for 5:00 p.m. at which time the public comments portion will resume.

To provide clarification to the public on the hearing procedures the City issued a press release that was published on the City website within the WLC banner on the home page (Attachment 2).

Written comments received prior to the start of the Planning Commission meeting on June 11, 2015 were provided in hard copy format to Commissioners at the meeting. Initial written staff responses to some of the comment letters, that could be prepared in advance of the hearing, were also provided to the Commission immediately prior to the meeting. Some additional written comments have been received since the June 11, 2015, meeting. All the written materials which have come in as letters or emails include correspondence from public agencies as well as interested parties from the general public. A total of 70 comment letters and e-mails have been collected since the public hearing notice was issued on May 1, 2015 up to the time of preparation of this staff report. All these correspondence received are attached hereto as Attachment 1 for review by the Commission and public. All of the comments are under consideration and staff will be prepared to provide responses to the Commission as requested by the Commission. Full consideration of the comments will also be provided subsequently to the City Council.

This staff report is submitted as additional information. All other pertinent project information, exhibits, and recommendations remain unchanged and are included in the original staff report distributed for the June 11, 2015 meeting. These materials can be accessed and/or viewed on the City website by viewing the June 11, 2015 posted Planning Commission Agenda Packet.

ALTERNATIVES

The following alternatives were included in the June 11, 2015 Planning Commission staff report and are repeated here for ease of reference:

1. Recommend that the City Council Certify the Environmental Impact Report and approve the World Logistics Center project including a General Plan Amendment,

Development Agreement, Change of Zone, Specific Plan, Pre-Zoning/Annexation, and Tentative Parcel Map.

2. Recommend that the City Council Certify the Environmental Impact Report and approve the World Logistics Center project including a General Plan Amendment, Change of Zone, Specific Plan, Pre-Zoning/Annexation, and Tentative Parcel Map, but without a Development Agreement.
3. Deny the World Logistics Center project.
4. Recommend that the City Council Certify the Environmental Impact Report and approve the World Logistics Center project including a General Plan Amendment, Development Agreement, Change of Zone, Specific Plan, Pre-Zoning/Annexation, and Tentative Parcel Map, with modifications specified by the Planning Commission.

STAFF RECOMMENDATION

APPROVE Resolution Nos. 2015-12, 2015-13, 2015-14, 2015-15 and 2015-16 thereby recommending that the City Council:

1. **CERTIFY** the Environmental Impact Report (P12-016), including approval of the Mitigation Monitoring Program and adoption of a Statement of Overriding Considerations (Exhibits A and B of Resolution 2015-12) for PA12-0010 (General Plan Amendment), PA12-0011 (Development Agreement) PA12-0012 (Change of Zone), PA12-0013 (Specific Plan), PA12-0014 (Pre-Zoning/Annexation), PA12-0015 (Tentative Parcel Map), pursuant to the California Environmental Quality Act (CEQA) Guidelines.
2. **APPROVE** General Plan Amendment PA12-0010, to change the land use designations for the project area to Business Park/Light Industrial (BP) and Open Space (OS), and to amend General Plan goals and objectives text and map in the respective Community Development, Circulation, Parks, Recreation and Open Space, Safety, and Conservation Elements identified in Exhibits A through M of Resolution 2015-13.
3. **APPROVE** Change of Zone PA12-012 and Specific Plan PA12-0013 and Annexation PA12-0014, which would repeal the current Moreno Highlands Specific Plan No. 212-1, would establish the World Logistics Center Specific Plan including Change of Zone on the City's Zoning Atlas to Logistics Development (LD), Light Logistics (LL) and Open Space (OS) for areas within the proposed WLC Specific Plan boundary, would establish Pre-zoning/Annexation for an 85 acre site at the northwest corner of Gilman Springs and Alessandro Boulevard, and authorize Change of Zone on the City's Zoning Atlas to Open Space (OS) for those project areas

outside and southerly of the new WLC Specific Plan boundary, Exhibits A, B and C of Resolution 2015-14.

4. **APPROVE** Tentative Parcel Map No. 36457 PA12-0015 for a tentative parcel map that includes 26 parcels for financing and conveyance purposes, Exhibit A and B of Resolution 2015-15.
5. **APPROVE** Development Agreement PA12-0011 covering properties controlled by Highland Fairview, Exhibit A of Resolution 2015-16.

Prepared by:
Mark Gross
Senior Planner

Approved by:
Allen Brock
Community Development Director

ATTACHMENTS

1. PC COMMENTS (COMBINED).
2. WLC PC Public Hearing Guide posted 061515
3. PC Mtg 06.11.15 - Staff Report Packet
4. LSA Responses to Comments (combined)

Grace Espino-Salcedo

Subject: RE: Proposed World Logistics Center Project Comment

From: aja smith [<mailto:asmith951@hotmail.com>]

Sent: Thursday, June 11, 2015 2:33 PM

To: Allen D. Brock, CBO; Brian Lowell; George Price; Jeffrey J. Giba; Jesse L. Molina; D. LaDonna Jempson; Michelle Dawson; Richard Sandzimier; Dr. Yxstian A. Gutierrez; Mark Gross; Mike Lee; City Clerk

Subject: Proposed World Logistics Center Project Comment

Greetings everyone

I hope I have all the emails in this.

I hope that all of you take in consideration all the concerns that this project will entail and look at the pros and cons. I have several concerns regarding The World Logistics Center (WLC) and I hope that everyone that is making this decision takes this in consideration. This is a short time to decide on a project this size that will change not only the cities landscape, but the Inland Empires. A project this size needs to have full review from all industry experts (pros and cons) and also community forums to educate the citizens in Moreno Valley and sister cities. This is not a small parcel change of 10-20 acres; this is over 2,000 acres in a zone change. I attached my questions and concerns regarding the World Logistics Center Project. I had a little more to say than the time allowed. I hope that we have more than one planning commission meeting after tonight. Thank you

Aja Smith

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

No wonder developers want to build warehouse and apartments they are the cheapest for them when it comes to paying for their share of the infrastructure

Section 12 - Development Impact Fees

RESIDENTIAL IMPACT FEES

City-Wide (Except as otherwise noted)

City-Wide except MV Ranch and TownGate SP	TUMF (per unit)	DIF ⁽²⁾ (per unit)	TUMF + DIF (per unit)	SKR MITIGATION FEE	MSHCP Mitigation Fee (per unit)
Single Family (8.0 du/acre or less) (excludes custom home,granny unit and second unit)	\$ 8,873.00	\$9,067.80	\$ 17,940.80	\$500/acre	\$ 1,938.00
Custom Home	\$ 8,873.00	\$9,067.80	\$ 17,940.80	\$500/acre up to 5 acres. No more than \$250	\$ 1,938.00
Second Unit	Exempt	\$2,996.76	\$ 2,996.76		Exempt
Multi-family (8.1 du/acre - 14 du/acre)	\$ 6,231.00	\$5,992.50	\$ 12,223.50	Exempt	\$ 1,241.00
Multi-family (greater than 14 du/acre)	\$ 6,231.00	\$5,992.50	\$ 12,223.50	Exempt	\$ 1,008.00

NON-RESIDENTIAL IMPACT FEES

City-Wide (Except as otherwise noted)

City-Wide except TownGate SP (1)	TUMF (per Square foot -sf)	DIF ⁽²⁾ (\$ per sf)	TUMF + DIF	SKR MITIGATION FEE (3)	MSHCP Mitigation Fee
Retail Commercial (Neighborhood Commercial)	\$ 10.49	\$ 4.831	\$ 15.321	\$500/acre	\$6,597/ acre
Retail Commercial (Regional Commercial)	\$ 10.49	\$ 4.307	\$ 14.797	\$500/acre	\$6,597/ acre
Service Commercial/Office (Not Class A or B)	\$ 4.19	\$ 3.233	\$ 7.423	\$500/acre	\$6,597/ acre
Office (Class A or B) ⁽⁴⁾	\$ 2.19	\$ 3.233	\$ 5.423	\$500/acre	\$6,597/ acre
Industrial	\$ 1.73	\$ 2.330	\$ 4.060	\$500/acre	\$6,597/ acre
High-Cube ⁽⁵⁾	See footnote (6)	\$ 1.016	See footnote (6)	\$500/acre	\$6,597/ acre

Footnotes:

- (1) See Planning staff for projects within TownGate Specific Plan (SP200)
- (2) The DIF Fee calculation includes a 2% Administrative Fee for reimbursement of the 2012 update to the DIF Nexus Study.
- (3) Projects with Moreno Valley Ranch are exempt from SKR Mitigation Fees.
- (4) In order to qualify for this fee the office building must satisfy the definition of Class A or B as provided for in City Ordinance 807. The office building must be two or more stories,a minimum of 15,000 sq ft and include a central interior lobby with access to suites from inside the building. Construction materials for Class A office are required to be steel frame construction. Class B office can include a steel, concrete or masonry shell.
- (5) High cube Warehouse and Distribution Centers may be subject to a reduced TUMF fee if the building meets specific criteria, including a minimum gross floor area of more than 200,000 square feet, a minimum ceiling height of 24 feet and a minimum dock-high door landing ratio of 1 door per 10,000 sq ft. If this criteria is satisfied, the TUMF fee will be calculated based on Section 5.8 of the WRCOF TUMF Fee Handbook.
- (6) The TUMF fee for high cube is calculated based on an adjusted square footage which is determined by multiplying the building square footage exceeding 200,000 sq ft by 0.24 and adding 200,000 to the result. The adjusted square footage is then multiplied by the adopted TUMF industrial fee.

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD

Highland Fairview Corporate Park,
Highland Fairview was already
seeking to change the agreement.

Highland Fairview Corporate Park



HIGHLAND FAIRVIEW

14225 CINDRASE WAY
Moreno Valley, CA 92552
Tel: 951.867.5300

April 14, 2009

Mayor Richard Stewart and
Members of the City Council
City of Moreno Valley
14177 Frederick Avenue
Moreno Valley, CA 92552

SUBJECT: Modification to Conditions of Approval
Highland Fairview Corporate Park.

Dear Mayor Stewart and Council Members:

Highland Fairview respectfully requests the City Council to consider the following conditions of approval imposed on the Highland Fairview Corporate Park project. As we brought up in the public hearing, these conditions are either unsuitable for the nature of this project or require unwarranted exactions that fail to meet the nexus requirement of the law. We request that the Council conduct its hearing on this matter at the earliest available opportunity in order to avoid any additional delays to the project.

1. SR60 Landscaping

Existing Condition: Condition of Approval P14 on Tentative Parcel Map TPM 35629 (Resolution 2009-10) requires the preparation and processing of plans for the installation of landscaping and irrigation within the SR60 right-of-way adjacent to the project site in compliance with the SR60 Design Manual.

Requested Action: Highland Fairview requests the removal of this condition.

Justification: This condition has been inconsistently applied throughout the city and has been shown to be unproductive in many instances, ineffective in most cases, and arbitrary. Installation of such landscaping will only detract from the extensive landscaping designed for the project and will likely not be maintained by Caltrans. In some areas along the freeway some sparse landscaping has been installed but is very poorly maintained. In other areas, no landscaping has been installed. Currently, the freeway frontage is a mixture of areas of sparse, struggling landscape, and areas of barren, unmaintained land. Clearly, there has been no consistent application of the SR60 Design Manual criteria. To apply this requirement to the HFCP project is unreasonable.

No project along the SR60 frontage includes a landscape treatment as extensive as that proposed with the HFCP project. Millions of dollars in landscaping and irrigation improvements are proposed to be installed along the freeway boundary, the sole purpose of which is to enhance the appearance of the project site as viewed from the freeway. The requirement to add additional basic landscaping within the freeway right-of-way will only detract from the project landscaping.

Mayor Richard Stewart and
Members of the City Council
April 14, 2009
Page 2

There is no assurance that Caltrans will allow landscaping to be installed within its right-of-way and no indication that they will maintain it. In fact, Caltrans staff has indicated informally that they will not allow such improvements nor will they commit to any maintenance whatsoever.

2. Eucalyptus Avenue Median

Existing Conditions: Several conditions require the installation of a new median within the future right-of-way of Eucalyptus Avenue.

Requested Action: Modify the applicable conditions to allow for the option to install a median along Eucalyptus Avenue.

Justification: Prior to the HFCP project, the previous Circulation Element of the General Plan did not require a median in Eucalyptus Avenue. The option of adding a median was raised by Highland Fairview as a way to enhance the street scene adjacent to the project site. The reason the median was articulated in the project plans is to enable staff to consider the issues involved before an option is selected. The median is not a requirement of the City. There is no traffic-related need for the median, nor is it required for other sections of the Eucalyptus Avenue throughout the City. Therefore, the installation of the median should be an option on the part of the project applicant.

3. Multi-Use Trails

Existing Condition: Several conditions imposed on the TPM and the Plot Plan require the dedication and improvement of multi-use trails on the project site.

Requested Action: Delete and/or modify all conditions requiring dedication and improvement of multi-use trails on the project site. Modify all related conditions to require that: 1) the necessary land be allocated for potential future multi-use trails, 2) site grading be designed to accommodate the future multi-use trails, 3) the multi-use trail areas be landscaped and maintained in a manner consistent with immediately adjacent areas until such time as the City decides to construct the multi-use trails, and 4) the on-going maintenance of the multi-use trails, if built, be borne by the City for the benefit of the public and not by the property owner or the local property owners' association.

Justification: There is a complete lack of nexus between the project and the City's requirement to dedicate and improve multi-use trails on the project site. The project creates absolutely no demand for these trails, therefore there is no nexus. The trails can be accommodated in the project design but the impacted land (or appropriate easements) should be acquired by the City, the trails should be constructed by the City and the trails should be maintained by the City. There should be a sunset clause in the condition such that if the City does not acquire the impacted land or easements within five years of the recordation of the Final Map for the project, the City's option to acquire the land or easements will expire.

Highland Fairview Corporate Park

Mayor Richard Stewart and
Members of the City Council
April 14, 2009
Page 3

4. Deferral of Development Impact Fees

Existing Conditions: The project is conditioned to pay massive development impact fees, amounting to nearly 15 million dollars.

Requested Action: Modify related conditions to defer payment of all applicable development impact fees to Certificate of Occupancy.

Justification: Development impact fees constitute a substantial financial hardship for all new construction projects. Collection of these fees at the point of building occupancy is the most equitable point in the process. It is at the point of occupancy when the building or project begins having an impact on the local infrastructure. It is at that point when the various development impact fees should be collected.

5. Dedication and Improvement of Public Improvements

Existing Conditions: The project approval contains dozens of conditions requiring the dedication and improvement of public facilities (streets, parkways, trails, etc.) far in excess of the demand which the project creates for such facilities.


Requested Action: Modify all related conditions to only require a fair-share contribution by the project for the dedication and improvement of all public infrastructures. Improvement credits and Reimbursement Agreements should be entered into between the City and the project for any amount the project contributes in excess of its pro-rata share for such improvements.

Justification: These conditions fail to meet the requirement for a direct nexus between the project and any required public improvements. Such conditions impose an unjust and unequal burden on some projects while benefiting the city and others unfairly at the expense of one taxpayer.

Attached is a listing of the conditions which we believe are related to each of the changes requested above. Other conditions may be impacted as a result of our detailed discussions with staff.

We look forward to discussing these issues with staff and with the City Council at the earliest possible opportunity. If questions arise during the City's review of this request, please do not hesitate to contact me directly.

Sincerely,


Iddo Benzeevi
President and CEO

MV00233576

Requested Changes to Resolution 2009-10 (TPM 35629)

1) SR 60 Landscaping

- a) Delete Condition P14

2) Eucalyptus Avenue Median

- a) Modify Condition P20 to add "Construction of raised, planted median is optional. Subdivider may choose to install painted median."
- b) Modify Condition LD70(a)(i) to insert "(optional)" after the words "raised landscape median."
- c) Modify Condition SD-2 to insert "(optional)" after the word "median."
- d) Modify Condition SD-6 to insert "if installed by the Subdivider" after the words "median landscape" in the first sentence.
- e) Modify Condition SD-10 to insert "(optional)" after the word "median."
- f) Delete Condition SD-12 requiring installation of median landscaping.
- g) Modify Condition TE19 to insert "optional" following the word "median" in the second and fourth bullets.

3) Multi-Use Trails

- a) Modify Condition LD68(b) to add: "Said multi-use trail easement shall be labeled 'future,' and is contingent upon City acquisition of said easement from the landowner."
- b) Modify Condition LD68(c) to add, "The City will maintain all multi-use trails."
- c) Modify Condition LD70(a)(viii) to add, "The future trail area shall be designed and graded with the project and shall be landscaped consistent with adjacent land. The City may acquire an easement for a multi-use trail from the property owner and construct and maintain a multi-use trail."
- d) Modify Condition LD91 to add "(optional)" after the words "multi-use trail."
- e) The entire set of Conditions of Approval from Parks and Community Services Department needs to be re-written to differentiate between bike trails and multi-use trails. Future multi-use trails will be graded with the project. Easements for the multi-use trails will be acquired from the landowner by the City. The City shall be responsible for the construction and the maintenance of the multi-use trails.

4) Deferral of Development Impact Fees

- a) Modify Condition P23 to replace "building permits" with "Certificate of Occupancy."

5) Dedication and Improvement of Public Infrastructure

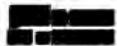
- a) Modify Condition LD2 to add, "All dedications and improvements to public infrastructure shall be on a fair-share basis. The value of required dedications and/or improvements beyond the project's fair-share obligation shall be established as a credit against which the Subdivider may draw to offset other public infrastructure dedications and/or improvements."
- b) Modify Condition LD4 to add, "All dedications and improvements to public infrastructure shall be on a fair-share basis. The value of required dedications and/or improvements beyond the project's fair-share obligation shall be established as a

Highland Fairview Corporate Park

- credit against which the Subdivider may draw to offset other public infrastructure dedications and/or improvements."
- c) Modify Condition LD27 to add, "All dedications and improvements to public infrastructure shall be on a fair-share basis. The value of required dedications and/or improvements beyond the project's fair-share obligation shall be established as a credit against which the Subdivider may draw to offset other public infrastructure dedications and/or improvements."
 - d) Modify Condition LD46 to add, "All dedications and improvements to public infrastructure shall be on a fair-share basis. The value of required dedications and/or improvements beyond the project's fair-share obligation shall be established as a credit against which the Subdivider may draw to offset other public infrastructure dedications and/or improvements."
 - e) Modify Condition LD65 to add, "All dedications and improvements to public infrastructure shall be on a fair-share basis. The value of required dedications and/or improvements beyond the project's fair-share obligation shall be established as a credit against which the Subdivider may draw to offset other public infrastructure dedications and/or improvements."
 - f) Modify Condition LD66 to add, "All dedications and improvements to public infrastructure shall be on a fair-share basis. The value of required dedications and/or improvements beyond the project's fair-share obligation shall be established as a credit against which the Subdivider may draw to offset other public infrastructure dedications and/or improvements."
 - g) Modify Condition LD68 to add, "All dedications and improvements to public infrastructure shall be on a fair-share basis. The value of required dedications and/or improvements beyond the project's fair-share obligation shall be established as a credit against which the Subdivider may draw to offset other public infrastructure dedications and/or improvements."
 - h) Modify Condition LD70 to add, "All dedications and improvements to public infrastructure shall be on a fair-share basis. The value of required dedications and/or improvements beyond the project's fair-share obligation shall be established as a credit against which the Subdivider may draw to offset other public infrastructure dedications and/or improvements."
 - i) Modify Condition LD78 to add, "All dedications and improvements to public infrastructure shall be on a fair-share basis. The value of required dedications and/or improvements beyond the project's fair-share obligation shall be established as a credit against which the Subdivider may draw to offset other public infrastructure dedications and/or improvements."
 - j) Modify Condition LD90 to add, "All dedications and improvements to public infrastructure shall be on a fair-share basis. The value of required dedications and/or improvements beyond the project's fair-share obligation shall be established as a credit against which the Subdivider may draw to offset other public infrastructure dedications and/or improvements."
 - k) Modify Condition LD91 to add, "All dedications and improvements to public infrastructure shall be on a fair-share basis. The value of required dedications and/or improvements beyond the project's fair-share obligation shall be established as a credit against which the Subdivider may draw to offset other public infrastructure dedications and/or improvements."
 - l) Modify Condition LD93 to add, "All dedications and improvements to public

- infrastructure shall be on a fair-share basis. The value of required dedications and/or improvements beyond the project's fair-share obligation shall be established as a credit against which the Subdivider may draw to offset other public infrastructure dedications and/or improvements."
- m) Modify Condition TE17 to add, "All dedications and improvements to public infrastructure shall be on a fair-share basis. The value of required dedications and/or improvements beyond the project's fair-share obligation shall be established as a credit against which the Subdivider may draw to offset other public infrastructure dedications and/or improvements."
 - n) Modify Condition TE18 to add, "All dedications and improvements to public infrastructure shall be on a fair-share basis. The value of required dedications and/or improvements beyond the project's fair-share obligation shall be established as a credit against which the Subdivider may draw to offset other public infrastructure dedications and/or improvements."
 - o) Modify the Parks and Community Services Department conditions to add paragraph (u) as follows, "All dedications and improvements to public infrastructure shall be on a fair-share basis. The value of required dedications and/or improvements beyond the project's fair-share obligation shall be established as a credit against which the Subdivider may draw to offset other public infrastructure dedications and/or improvements."

Highland Fairview Corporate Park



WWW.SIERRACLUB.ORG



14777 DORFBERG STREET
P. O. BOX 80009
MORENO VALLEY, CA 92552-0009

10 JAN 21 AM 9: 02

January 21, 2010

Mr. Iddo Benzeevi
Highland Fairview Properties, LLC
14225 Corporate Way
Moreno Valley CA 92553

Dear Mr. Benzeevi:

First let me congratulate you on reaching a settlement with the Sierra Club. Councilmember Richard Stewart reported this information at the Council's Study Session last evening, on January 19, 2010.

He also mentioned that you were pursuing the possibility of modifying a number of conditions applicable to the approval of the Highland Fairview Corporate Park Project and related matters. I have attached the minutes of the Project Review Staff Committee held on June 10, 2009. In addition, I have copies of e-mails indicating that since that meeting City Staff has worked on these with your staff through October of 2009. In those minutes a number of conditions you desire to modify were discussed. As indicated in those minutes some of those modifications will have to be approved by the Planning Commission and City Council.

In order for you to proceed with the modifications, you must initiate the appropriate requests through the Planning Division. As soon as you initiate this process, Staff will provide professional attention to your requests and advise you and your staff of all necessary steps that are required. Staff is not certain at this point of all the conditions you wish to modify; you can enumerate them in your application.

One other comment I will provide is the suggestion that you might want to confer with your environmental consultant regarding the modifications you are considering.

CITY MANAGER'S OFFICE

MV00233815

Highland Fairview Properties, LLC
January 20, 2010
Page 7

We look forward to receiving your application in the very near future. Staff will cooperate with you within the policies established by the City Council, and we certainly look forward to the successful completion of your project.

Sincerely,

William L. Bopf
Interim City Manager

WLB/cp

c: Mayor and Members of the City Council
Bob Hansen, Interim City Attorney
Chris Vogt, Public Work Director/City Engineer
Kyle Kollar, Interim Community Development Director
Barry Foster, Economic Development Director
John Terrell, Planning Division Manager / Planning Official
Wayne Petersen, Highland Fairview
Danette Fenstermacher, Highland Fairview

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD

Highland Fairview Corporate Park



Community and Economic Development Department
Planning Division
14177 Frederick Street

P.O. Box 88005
Moreno Valley, CA 92552-0805

CITY OF MORENO VALLEY PROJECT REVIEW STAFF COMMITTEE MEETING MINUTES

PA09-0013 (General Plan Amendment), P09-038 (Amended Map – Modification of Conditions), and P09-039 (Amended Plot Plan – Modification of Conditions)

The Project Review Staff Committee Meeting for this project was convened at 10:00 a.m. in Training Room. The following department and agency staff members were in attendance:

PRSC Meeting – June 10, 2009

John C. Terell – Planning
Mark Gross – Planning
Michael Lloyd – Transportation Division
Mark Sambito – Land Development
Stuart Sheldon – Special Districts
Tony Hatherman – Parks and Community Services
Denise Bagley – Economic Development

9:00 a.m.

I. Case No.

PA09-0013 (General Plan Amendment), P09-038 (Amended Map – Modification of Conditions), and P09-039 (Amended Plot Plan – Modification of Conditions)

Applicant:
Owner:
Representative:
APN:

Highland Fairview
Highland Fairview
Wayne Peterson
488-350-001 through 002 and 488-360-001 through 012.

Location:

On the north side of Eucalyptus Ave., east of Redlands Blvd., west of Theodore Street and south of Highway 60

Proposal:

A request to modify approximately 56 conditions of approval from the recently approved Highland Fairview Corporate Park Project and Tentative Parcel Map (PA07-0090) as well as Plot Plan (PA07-0091) to cover such items as the removal of Highway 60 landscape, providing an optional center median along Fir/Future Eucalyptus Avenue, removing a required multi-use trail along the project frontage along Fir/future Eucalyptus from Redlands Boulevard to Theodore Street, the deferral of development impact fees and the modification of conditions related to the dedication and improvement of public improvements. A General Plan Amendment is required for removal of any multi-use trail and center median.

RDA Area:
Case Planner:
Status:

No
Mark Gross
First Review

Planning Division Comments

General Comments

- The comments provided in these minutes are based on current fees, ordinances, policies and conditions. Future changes could necessitate a modification of these comments.

Highland Fairview Corporate Park

2. The proposed General Plan amendment, modified map and plot plan include changes to approximately 56 original plot plan and map conditions of approval for the Highland Fairview Corporate Park Project (primarily including PA07-0090 and PA07-0091), which was approved by City Council on February 10, 2009. The modifications include the removal of Highway 60 landscape requirements to provide landscape along the freeway, a General Plan required multi-use trail, a landscape median along Fir/future Eucalyptus required pursuant to a General Plan amendment with the original project, the deferral of development impact fees until certificate of occupancy and various conditions of approval relating to the provision of public improvements.
3. Some of the items requested as modification of conditions of the original Highland Fairview Corporate Park Project consists of changes to the General Plan, specifically the removal of the multi-use trail and landscape median. Staff will be seeking input from affected committees regarding the proposal prior to scheduling before the Planning Commission/ and or City Council. The General Plan Amendment would require hearings before the Planning Commission and City Council.
4. At the request of the applicant, all proposed modification of conditions that do not require a General Plan Amendment can be brought forward to the City Council ahead of the items that require a General Plan Amendment. Additional fees for posting and noticing of the additional public hearing would be charged to the applicant.
5. The proposed removal of any landscape along Highway 80 is a requirement of the Highway 60 Corridor Design Manual, which has been incorporated by reference for all properties that contain freeway right of way. Any changes would require the approval of a policy change by City Council. Upon request by the applicant, this item can be provided at a separate public hearing before the City Council (see item above).
6. The proposed modification of the multi-use trail to the north side of Fir Avenue/future Eucalyptus from Redlands Blvd. to Theodore Street is a Parks and Community Services requirement that was originally approved by the Trails Committee and may need to be brought forward to that Committee before scheduling for public hearings. This item would require a public hearing before the Planning Commission and City Council (see Item No. 3 above).
7. The requested deferral of Development Impact Fees until Certificate of Occupancy has been previously approved by City Council for all new development projects and will apply to the Highland Fairview Corporate Park project should the project move forward during the timeframe of the City Council approval.
8. The request for dedication and improvement of public improvements includes conditions of approval that involve the Land Development Division and Transportation Divisions of Public Works in addition to some involvement on the part of Moreno Valley Utilities and will be addressed by those divisions/ departments. Upon request by the applicant, this item can be provided at a separate public hearing before the City Council.

MV00233819

9. The request for the option to construct the previously approved Eucalyptus Avenue median involves the Special Districts Division of Public Works and will be addressed by that department/division. This request requires a General Plan Amendment, and would require a public hearing before the Planning Commission and City Council (see item No. 3 above).
10. The modification of conditions appear to require an addendum to the recently approved and certified Environmental Impact Report (EIR). Items such as the removal of the multi-use trail and landscaped median along Fir/Future Eucalyptus could have an affect on studies (i.e. traffic study) included in the EIR and the overall document. It is recommended that the EIR consultant review the document and prepare information for the proposed addendum.
11. Pursuant the application form for a General Plan Amendment, a written explanation of the requested amendment and the reasons for the request, including the proposal's consistency with the goals, objectives, policies and programs of the General Plan is required to proceed with these items.
12. A modified plot plan is necessary to show any deletion of improvements, including any proposed removal of the multi-use trail and median along Fir/Future Eucalyptus Avenue.
13. Additional diagrams/maps shall be supplied by Highland Fairview that show all changes proposed to the General Plan.
14. All required application materials for General Plan Amendment related items necessary for a complete application shall be provided to staff prior to conducting any additional Project Review Staff Committee (PRSC) meetings beyond the first meeting and scheduling the items before Planning Commission and/or City Council.
15. In the April 14, 2009 letter to City Council, the Plot Plan modifications to conditions refer to P60 and PD61 through PD85 where improvements to public infrastructure are being requested on a fair share basis. As "PD" comments refer to "Police Department" and PD61 through PD65 do not exist, please clarify if these conditions are referring to Planning Division mitigation measures or Land Development conditions of approval.
16. As discussed at the Project Review Staff Committee (PRSC) meeting, Highland Fairview will be providing a letter to staff that clarifies the policy issues related to previous requests made in a letter dated April 14, 2009 to modify specific conditions of approval for the Highland Fairview Corporate Park project.

Building and Safety

1. No comments provided.

Fire

1. No comments provided as the requested amendment to conditions does not reflect this department.

Highland Fairview Corporate Park

Page 1 of 2

Public Works

1. Transportation Engineering

- a. See attached comments.

2. Land Development

- a. See attached comments.

3. Special Districts

- a. See attached comments.

4. Moreno Valley Utilities

- a. See attached comments.

5. Capital Projects

- a. No comments are provided as the requested amendment to conditions does not reflect this department.

Police

- 1. No comments are provided as the requested amendment to conditions does not reflect this department.

Recreation and Community Services

- 1. See attached comments.

Other (MVUSD, Dept. of Health, EMWD, RTA, etc.)

Any comment letters from outside agencies, responsible agencies or interested parties have been provided to the applicant.

Results

Provided to the applicant for informational purposes and corrections.

Copies of written comments given to the Applicant regarding this project are on file in the Planning Division in the Official PRSC Minutes binder.

MV00233821

Mark Gross

From: Wayne Peterson [wpeterson@highlandfairview.com]
Sent: Tuesday, October 13, 2009 9:07 AM
To: John Terrell
Cc: Danette Fenstermacher; Brian Hixson; Mark Gross; Kyle Kollar; Rick Hartmann
Subject: RE: HFCP - Native American Monitoring Invitation

John -

I'll check with people here, but three of the five issues we originally raised have been resolved or deferred to the point where they will not impact the ability to get the project underway, the City has deferred impact fees to occupancy, HF will build the Eucalyptus median with the project, and the SR60 landscape issue has been linked to precise grading. The other two issues, trail construction and fair-share dedications, can be addressed later in the process. We do not see an urgency to bring these issues to the Council at this time.

From: John Terrell [mailto:JohnT@moval.org]
Sent: Tuesday, October 13, 2009 8:13 AM
To: Wayne Peterson
Cc: Danette Fenstermacher; Brian Hixson; Mark Gross; Kyle Kollar; Rick Hartmann
Subject: RE: HFCP - Native American Monitoring Invitation

Wayne:

Thanks for your response. Does HFP want to pursue any of the other modifications at this time and defer the trails and other issues to a future application?

Thanks,

John

John C. Terrell AICP
 Planning Official
 City of Moreno Valley

PO Box 88005
 Moreno Valley, CA 92552-0805
 [REDACTED]
 johnt@moval.org

From: Wayne Peterson [mailto:wpeterson@highlandfairview.com]
Sent: Monday, October 12, 2009 3:43 PM
To: John Terrell
Cc: Danette Fenstermacher; Brian Hixson; Mark Gross; Kyle Kollar; Rick Hartmann
Subject: RE: HFCP - Native American Monitoring Invitation

Thanks John. We'll send the letter to the Tribal groups well in advance of a pre-grade meeting.

Regarding the Trails Committee, please be advised that Highland Fairview will not be pursuing the trails issue immediately and therefore will not need to schedule a discussion at the upcoming Trails Committee meeting.

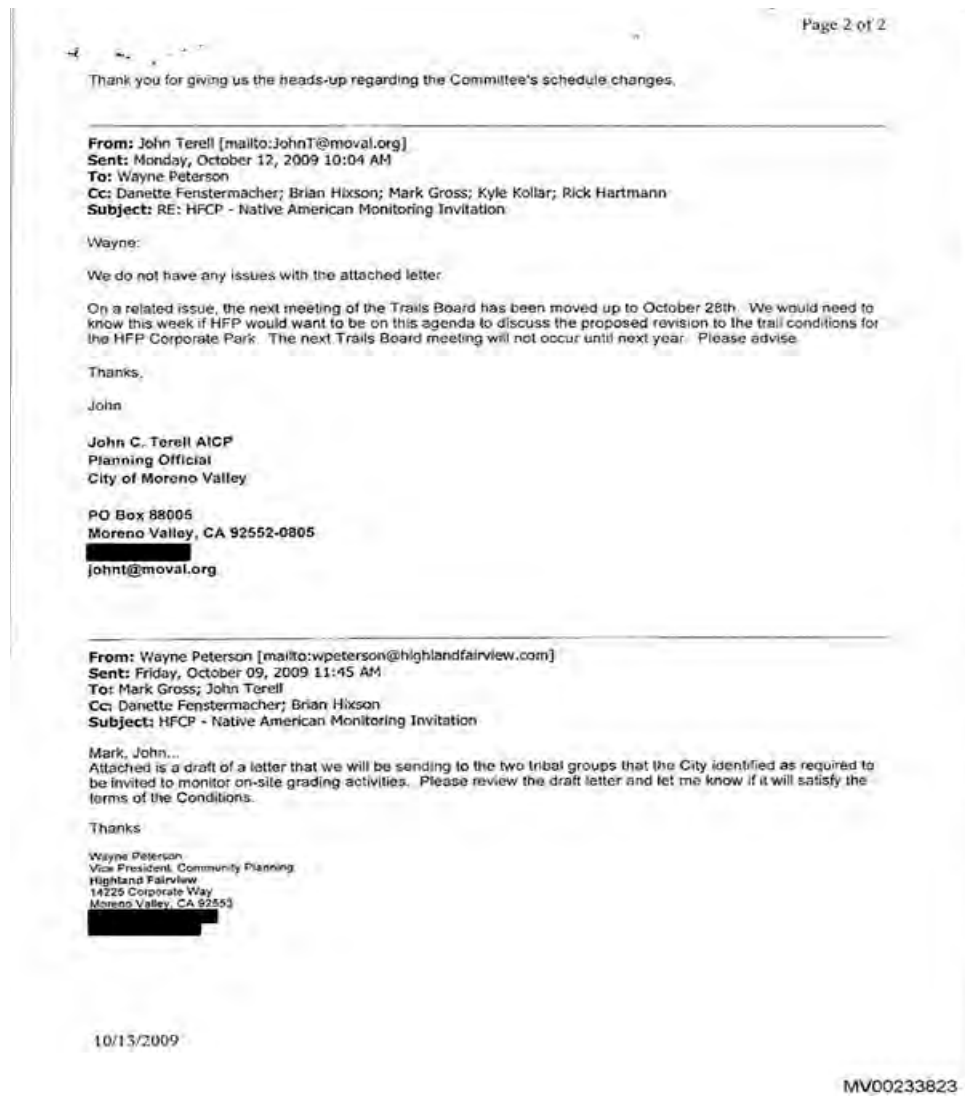
10/13/2009

MV00233822

Packet Pg. 17

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD

Highland Fairview Corporate Park



Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD

Greetings

I hope that all of you take in consideration all the concerns that this project will entail and look at the pros and cons. I have several concerns regarding The World Logistics Center (WLC) and I hope that everyone that is making this decision takes this in consideration. This is a short time to decide on a project this size that will change not only the cities landscape, but the Inland Empires. A project this size needs to have full review from all industry experts (pros and cons) and also community forums to educate the citizens in Moreno Valley and sister cities. This is not a small parcel change of 10-20 acres; this is over 2,000 acres in a zone change.

The Development Agreement

The Development Agreement for the WLC is too vague (it's a blank check from the city). This agreement presents itself as if it will be honored and the citizens of Moreno Valley will get so many bells and whistles. Here is some history, two months after the city of Moreno Valley entered into the development agreement of Highland Fairview Corporate Park, Highland Fairview was already seeking to change the agreement. It clearly states in the WLC agreement that Highland Fairview can change this agreement at anytime as well. The last development agreement that the city and Highland Fairview entered into ten years ago for the specific plan known as Aquabella. In that development agreement Highland Fairview promised the world with tons of infrastructure improvements designed and built at 100% their cost. In the end, it was the city taxpayers who have paid for 100% of all infrastructure improvements associated with that development agreement, with Highland Fairview paying not one single dime towards anything. Then Highland Fairview decided to have a Medical Corridor, right after the March JPA announced March Life Care. Still today, the Aquabella/Medical Corridor is vacant, with infrastructure that the citizens of Moreno Valley had to pay for. The World Logistics Center (WLC) agreement needs to have further review and it needs to be changed. This agreement needs to be explained in more detail, and the false promises need to come out. We have already had at least two agreements with Highland Fairview, and nothing has come in to benefit the citizens of Moreno Valley. When will we learn as a city entering in development agreements with Highland Fairview, we as tax payers have had to pay cost? When will we learn that when Highland Fairview promotes projects, it does not fulfill them, or if it does (such as Sketchers) the end result is false promises?

- Section H p. 681 states: The City has previously adopted the Economic Development Action Plan ("EDAP"). The WLCSP responds to a portion of the EDAP. The eastern portion of Moreno Valley is deficient in the infrastructure necessary to support and implement the City's EDAP. To allow for the development of the World Logistics Center and the WLCSP, HF is willing to provide and assist the City in the development of infrastructure in support of the City's economic plan which may be in excess of HF's fair share and therefore may provide broader benefits. The City and HF desire to ensure that all beneficiaries of the Infrastructure Improvements will pay their fair share per the Municipal Code.

- Question is: What is considered “fair share”? This needs to be defined and also stated how much from the city, and how much from Highland Fairview.
- Section 3.4 p. 685 States: Assignment Rights. From time to time HF may sell or otherwise transfer title to buildings or property in the WLC.
 - Question: If we enter this agreement with Highland Fairview, and we will be providing “our fair share” in infrastructure as the developer has a track record of modifying agreements, what is the guarantee that this project would be built?
- Section 3.5 p 687 States: Unless earlier terminated as provided in this Agreement, this Agreement shall continue in full force and effect until the earlier of (i) the date of completion of the last portion of the Development, or (ii) the date that is fifteen (15) years from and after the Effective Date of this Agreement unless Certificates of Occupancy have been granted by the City for buildings on the Subject Property consistent with the Development Plan for not less than twelve million(12,000,000) square feet (gross floor area as defined by Moreno Valley Municipal Code 9.15.030) in which event the Term shall be extended for an additional ten (10) years, subject to extension pursuant to Section 11.9 below (the “Term”). Alternatively, **if HF is, for any reason, Unable to obtain Certificates of Occupancy for not less than eight (8) million square feet, and up to twelve million (12,000,000) square feet within the original fifteen (15) year Term, it shall be entitled to have this Agreement extended for an additional ten (10) years, subject to extension pursuant to Section 11.9 below, upon the payment to the City of one million dollars (\$1,000,000) prior to the expiration of the original fifteen (15) year term.**
 - Questions: It clearly states that Highland Fairview can extend this project for up to 15 years. It also clearly states in **section 3.4 p 685** that Highland Fairview can sell the property at any given time. If this is the case, then why are we as a city allowing for a zone change? Is it because the owner can sell it for a higher value if it is changed to logistics with city paid infrastructure?
- Section 4.4 p 689 States: HF represents that it intends to commence and complete the physical improvements specified in the Development Plan for the Project. **HF cannot specify the specific timing of development. HF will use its best efforts to commence construction at the earliest possible date consistent with market conditions.** Because the California Supreme Court held in Pardee Construction Co. v. City of Camarillo (1984) 37 Cal.3d 455, that the failure of the parties therein to provide for the timing of development resulted in a latter adopted initiative restricting the timing of development to prevail over such parties’ agreement, it is the Parties’ intent to cure that deficiency by expressly acknowledging and providing that HF shall have the right to develop the Subject Property at its own timing. In addition, to the extent HF decides to proceed with the Development of the Subject Property, City shall cooperate with HF with respect to the improvement of the Development of the Subject Property. If HF determines, in its sole and absolute discretion, to develop portions or phases of the Project, the City shall allow the phasing of public improvements unless the City determines that generally

applied City of Moreno Valley Municipal engineering or planning requirements demand that additional or complete public improvements be made. The public improvements to be provided would be only those needed to serve the portion or phase being developed consistent with the environmental analysis which shall demonstrate to the City that the public improvements to be provided would be only those needed to serve the portion or phase being developed.

- Question and issue: **“HF cannot specify the specific timing of development”**. According to HF, the industry is now or never. **HF will use its best efforts to commence construction at the earliest possible date consistent with market conditions.”** What are the market conditions? Or is it when we as a city will be taking funds from other projects just as we did with Aquabella?
- Section 4.6 P 69 States: **Changes and Amendments.** The Parties acknowledge that although Development of the Project may require Subsequent Development Approvals, such Development shall be in compliance with this Agreement including the Development Plan. The above notwithstanding, **HF may determine that changes are appropriate and desirable in the existing Project Approvals or Development Plan. In the event HF finds that such a change is appropriate or desirable, HF may apply in writing for an amendment to the existing Project Approvals or the Development Plan to effectuate such change. The City shall review and process any request for an amendment in the same manner that it would review and process a similar request for an amendment from any other owner of commercial or industrial land in similar circumstances. Any amendment to the Project Approvals or the Development Plan, when granted, shall be deemed to be part of the Existing Regulations from the date of the grant. Such amendments shall not be unreasonably withheld.**
 - Issue: As stated in the beginning of this letter, Highland Fairview already has a track record of this with Highland Fairview Corporate Park and Aquabella(Medical Corridor as well). How many times will we as city pay and adhere to projects that never happen? How much more money, presentations, promises etc.. Do we as citizens have comply with the developers needs and wants?
- Section 4.9 p 692 States: Provision of a “turnkey” Fire Station. HF shall, at its own cost, provide a fully constructed, fully equipped fire station and fire station site, including fire trucks, as specified by the City’s Fire Chief.
 - Issue: We all know this is not going to happen.
- Section 4.10 States p 692: **City’s Provision of Public Infrastructure and Services. Except as otherwise prescribed in this Agreement and/or as required of the**

development through existing or future mitigation measures, development standards, and conditions of approval, the City shall provide the public infrastructure and services which are not HF's responsibility as determined by the City with timing at the sole and absolute discretion of the City.

- Issues: My favorite part! Per the Press Enterprise and even stated by former Mayor Mr. Tom Owings, the city will be paying over 100 million dollars. Still today, this amount has not been retracted by the city, yes by Highland Fairview, but not by the city. Until the city, retracts the story from the press, this is going to cause our city to be in shambles. It will be the same practice (worse) when we took the library fund and reduced the police department to pay for the Aquabella infrastructure with the promise of the Medical Corridor.
- Section 4.11 and 4.12 p 692 states: Local Hiring Program and Education/ Innovation/ Training /Library Funding.
 - Issues: The local Hire Program was introduced in 2009(2008) by Mr. Daryl Terrell. This program was never taken in consideration until Mayor Pro Tem Dr. Gutierrez took credit for it. Now all of a sudden it's in the development agreement. This is odd, first Highland Fairview has been promoting jobs for the community, and as we learned from Sketchers, they transferred employee's from Ontario(and laid off many) and this warehouse provided one job from someone who was already employed but decided to move to Moreno Valley
 - The promise of educational, training, library funding from Highland Fairview then needs to be done before hand, as it states in the agreement that it will be contributing pretty much when they fell like it.
 - As a note, keep in mind that in this development agreement, Highland Fairview determines when they will build and has the obligation to sell the property at any given time.
- Section 4.14 p 693 states: Air Filtration Systems for Three Properties at Theodore Street and Dracaea Avenue. Should the property owner at these locations desire to install an air filtration system on their homes, HF agrees to fund the installation of air filtration systems meeting ASHRSE Standard 52.2 MERV-13 standards in the existing houses at the locations listed below, not to exceed \$25,000 per property.
 - Question: If this project per Highland Fairview is supposed to be state of the art with trucks that have zero emission, why are they offering an air filtration system to the local home owners?

Conclusion

I do have an issue from the outcome of placing this project on the ballot. Anytime someone says "it's too complicated for the voters" it's an indication that there's something that is not entirely ethical, moral about some aspect of this project. If this project was that complicated then the city failed the citizens, by not giving people full access to all the information, set up community forums (pros and cons) from each side of the industry (experts). If the city thought this process out correctly, we would have started this conversation at least a year ago with all available resources for review.

So we should just trust you and basically accept whatever happens, whether it's good for the people or not. If this has anything to do with the Trans Pacific Partnership - with all its secrecy, and the disregard for the workers, the environment, lack of regulations, corporate decisions for their profits, over and beyond what the rights and needs of the people, then the people should know about all the details before it happens, in all fairness. This is alarming and raises red flags.

Empty promises is all it is. We need to seriously reconsider a different employment strategy in this bedroom community. Warehouses do create jobs but is that what is happening, I think not. First the developers tore down the racetrack for a mall before there was community to support it. Riverside got the revenue by building on the boarder all its stores that are used by Moreno Valley residents. Too bad the State prison that was earmarked for Perris was voted down in the 80's and it went to San Diego. Could you imagine the jobs that would have created and the equity for the Inland Empire all around?

Communities around us "get it" so why can't Moreno Valley get it? We need to make the developer stick to the General Plan, develop or even finish either Aquabella and or the Medical corridor before we start changing the whole cities dynamics. If we continue to bounce all over town to please one company, the city has failed its citizens. Take a look at some of our sister city's such as Rancho Cucamonga. They did not have to change the General Plan, they stayed with it and developed the other areas of the city and provided diverse job opportunities. Yes Moreno Valley needs to move on! We need to make every developer accountable to provide other advantages/careers/diversity in this city. As of right now, jobs are available, and Amazon proved it in the Press. The lack of jobs is not the issue; it's the lack of integrity, business creativity, transparency, and trust. Make the developer finish his empty promises and not change the general plan for this project, if Highland Fairview wants this project, then they will have to pay full cost and the agreement needs to be changed to state this. If not, the general plan needs to stay as is and we need to move on and find better developers who want to see our city grow and prosper.

Thank you

Aja Smith

I will be writing more about this issue to everyone. But here is some reading that maybe would shine some light on other issues with this.

<http://articles.latimes.com/2011/sep/09/local/la-me-pollution-suit-20110909>

<http://www.ejnet.org/ej/>

<http://www.usccr.gov/pubs/envjust/ch2.htm>

<http://www.mindthesciencegap.org/2012/01/16/silent-discrimination-issues-of-environmental-justice/>

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2705126/>

http://dornsife.usc.edu/assets/sites/242/docs/WarehouseWorkerPay_web.pdf

<http://www.sbsun.com/business/20130927/usc-report-questions-logistics-industry-wages-in-the-inland-empire>

<http://cssd.ucr.edu/Seminars/PDFs/De%20Lara.pdf>

http://www.huffingtonpost.com/2011/12/20/new-blue-collar-temp-warehouses_n_1158490.html

http://www.ase.tufts.edu/gdae/education_materials/modules/Environmental_Justice.pdf

<http://www.cornell-landproject.org/download/landgrab2012papers/macinnes.pdf>

10 June 2015

Via e-mail: markg@moval.org

Moreno Valley Planning Commission Members
City of Moreno Valley
14177 Frederick Street
Moreno Valley, CA 92557

Dear Planning Commission Members:

Re: Vote No—Proposed World Logistics Center (WLC) Project, Planning Commission Hearing, June 11, 2015

I am writing to ask each one of you to vote no on the proposed World Logistics Center (WLC) project at your June 11, 2015 meeting.

The 40.6 million square foot project (the size of 700 full-sized football fields) will have severe negative impacts on the city and its quality of life.

Air Quality—The project will increase air pollution, fine and ultra-fine diesel particulates which are known to have negative effects on children’s health, those with asthma, lung disease and the elderly. The following source ([http://www.catf.us/diesel/dieselhealth/Diesel Soot Health Impacts; Clean Air Task Force; map](http://www.catf.us/diesel/dieselhealth/DieselSootHealthImpacts;CleanAirTaskForce;map)) states that: “The average lifetime diesel soot cancer risk for a resident of Riverside County is 1 in 3,917. This risk is 255 times greater than EPA’s acceptable cancer level of 1 in a million.”

I also ask you to read the California Air Resources Board comment letter that was sent to the city this week stating that the environmental impact report is “legally inadequate”. Please read the Press Enterprise article of June 10, 2015: <http://www.pe.com/articles/city-769741-air-health.html>

Traffic—Beside clogging Moreno Valley streets & freeway, many cities such as Riverside have stated their concerns about the increase in traffic (69,000 vehicle trips per day) for the region and the ability of regional governments to adapt freeways to accommodate the increase, and local governments to deal with increased congestions to side streets, etc.

I understand the need for more local jobs to help those who currently commute long distances to work. What I don’t see is an attempt to bring in diverse businesses and jobs that will bring more balance to employment in the city. Putting all of the city’s hopes into one project is extremely short-sighted. The developer may see himself as the expert on all things Moreno Valley, but what the residents see is divisiveness. Moreno Valley can do better than this lop-sided proposal.

Thank you for considering my comments.

Sincerely,

Ann Turner McKibben

Ann Turner McKibben
23296 Sonnet Drive
Moreno Valley, CA 92557-5403
atmckibben@roadrunner.com



Air Resources Board



Matthew Rodriguez
Secretary for
Environmental Protection

Mary D. Nichols, Chairman
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov

Edmund G. Brown Jr.
Governor

June 8, 2015

Mr. Mark Gross
City of Moreno Valley
Community Development Department
14177 Frederick Street
PO Box 88005
Moreno Valley, California 92552

Re: World Logistics Center Final Environmental Impact Report
SCH# 2012021045

Dear Mr. Gross:

The Air Resources Board (ARB) has received and reviewed the World Logistics Center (WLC or project) Final Environmental Impact Report (FEIR). This project provides an opportunity to create a state-of-the-art facility that promotes the use of the cleanest technologies available and maximizes efficiency improvements during both the construction and operational phases at full build out in 2030.

ARB reviewed the Draft Environmental Impact Report (DEIR) and provided comments to the City of Moreno Valley (City) in a letter dated April 16, 2013. ARB's comment letter expressed concern over the increase in health risk in the immediate area and the significant and unavoidable air quality and greenhouse gas related impacts caused by the proposed WLC. To address those concerns, ARB recommended actions to support the development, demonstration, and deployment of zero and near-zero emission technology at the WLC.

Unfortunately, ARB finds the FEIR to be legally inadequate and unresponsive to the comments ARB provided in its April 16, 2013 letter regarding the DEIR. ARB appreciates the opportunity to comment on the FEIR, as we have significant concerns with the analysis and mitigation currently outlined in the document. We urge the City to revise and recirculate the EIR, to reflect needed changes in mitigation and to bolster the analysis of potential health risks posed by the project, as required by California Environmental Quality Act (CEQA).

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

Mr. Mark Gross
 June 8, 2015
 Page 2

In addition, we are aware of the possibility that the City may opt to move the WLC decision to a ballot measure. Given the potential emissions impacts and increase in health risk associated with project construction and operation, we strongly urge CEQA compliance by the City, irrespective of whether or not this project becomes a ballot measure.

CEQA Background Regarding Responses to Comments and Need for EIR Recirculation

When a significant environmental issue is raised in comments that object to the draft EIR's analysis, the response must be detailed and must provide a reasoned, good faith analysis. (14 CCR § 15088(c).) The responses to comments on a draft EIR must state reasons for rejecting suggestions and objections concerning significant environmental issues. (*City of Maywood v. Los Angeles Unified Sch. Dist.* (2012) 208 Cal.App.4th 362, 391.) The need for a reasoned, factual response is particularly acute when critical comments have been made by other agencies or by experts. (See *Berkeley Keep Jets Over the Bay Comm. v. Board of Port Comm'rs* (2001) 91 Cal.App.4th 1344, 1367,1371.)

If significant new information¹ is added to an Environmental Impact Report (EIR)² after notice of public review has occurred, but before final certification of the EIR, the lead agency must issue a new notice and recirculate the EIR for comments and consultation. (Pub. Res. Code § 21092.1; 14 CCR § 15088.5.) "Significant new information" triggering the need for EIR recirculation includes information showing that (1) a new or more severe environmental impact would result from the project, (2) a feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of a project but the project proponent declines to adopt it, or (3) the draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (14 CCR § 15088.5(a)(1)-(4).)

A decision not to recirculate an EIR must be supported by substantial evidence in the administrative record. (14 CCR § 15088.5(e).)

¹ "Information" triggering recirculation can include additional data or other information. (14 CCR § 15088.5(a).)

² Note that even if new information is not "added to an EIR," it can still trigger the need for recirculation. (See, e.g., *Save Our Peninsula Comm. v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 131 (information on important new mitigation measure, added to record after EIR was completed, should have been included in EIR and circulated for public review and comment given questions raised about its effectiveness and potential impacts).)

Mr. Mark Gross
June 8, 2015
Page 3

The Response to Comments Fails to Adequately Address ARB's Comments And Does Not Adopt All Feasible Mitigation Measures

In its previous comment letter, ARB recommended "actions to support the development, demonstration, and deployment of zero and near-zero emission technology to reduce localized health risk and regional emissions. We believe that use of these technologies is feasible within the build-out years of the Center." However, the FEIR discussion (in particular, responses to comment B-5-7 and B-5-8 and Master Response 3) regarding zero emission and hybrid electric trucks, vehicles, and equipment does not evaluate the current feasibility of hybrid technologies, or consider the potential for other zero and near-zero emission technologies to be feasible and commercially available, both at the present date and by project build-out in 2030. These technologies are feasible measures that would lessen the WLC's impacts on criteria and greenhouse gas emissions, as well as air toxics and health risk.³

Because these mitigation measures have not been fully adopted for the proposed project, the EIR must be recirculated to incorporate the feasible mitigation measures, or to make a supportable finding that the measures are infeasible. (See 14 CCR § 15088.5(a)(3).)

The information contained in the FEIR regarding feasibility and availability of these technologies relies largely on information from the Port of Long Beach and Los Angeles, most of which is at least two years old, and is but one source of information regarding the feasibility of zero or near-zero emissions vehicles. Today, zero and near-zero emission technologies are commercially available in vehicle and equipment applications typically used at warehouse and distribution centers. Examples include battery electric and fuel cell electric forklifts, battery electric and hybrid electric medium-duty trucks, and plug-in hybrid electric transportation refrigeration units. For more information, please see ARB's Heavy-Duty Technology and Fuels Assessment: Overview, found at http://www.arb.ca.gov/msprog/tech/techreport/ta_overview_v_4_3_2015_final_pdf.pdf.

However, the FEIR discussion (in particular, responses to comment B-5-7 and B-5-8 and Master Response 3) regarding zero emission and hybrid electric trucks, vehicles, and equipment does not adequately evaluate the current feasibility of hybrid technologies, or consider the potential for other zero and near-zero emission technologies to be feasible and commercially available, both at the present date and by project build-out.

³ For the purposes of CEQA, "feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. (California Code of Regulations, title 14, section 15364)

Mr. Mark Gross
June 8, 2015
Page 4

The response to comment B-5-7 states that “the project will support a variety of future users which are unknown at this time so it is not possible to specify or require future users to have zero emission or alternative fuel fleets since most logistics companies use independent contractors and truck drivers rather than maintain their own fleets.” This response is contradictory and insufficient to show that the proposed mitigation measures are infeasible. This is particularly true given the FEIR’s inclusion of several requirements that are applicable to all future tenants; specifically, that all medium and heavy-duty diesel trucks entering logistics sites shall meet or exceed 2010 engine emission standards and all yard trucks shall be powered by electricity, natural gas, propane, or an equivalent non-diesel fuel. If the mitigation measures can restrict access to the facility by truck engine year, there is no reason the mitigation measures cannot similarly restrict access by allowable technologies.

Furthermore, the response to comments rejected the proposed measure of requiring that trucks travelling between the project and any ports or rail yards within 100 miles use zero or near zero emission technology. The reasons for rejecting this measure are also unclear. The response to comments notes that “the Port of Los Angeles is testing various types of zero-emission technology solutions for heavy-duty vehicles,” which the response to comments explains have a “range of travel between 100 miles and 200 miles per charge.” (WLC Response to Comments at 234.) Therefore, it remains unclear why a measure requiring zero or near zero emission trucks for trips within 100 miles of the project would not be feasible, particularly by project build out in 2030.

With regard to onsite service vehicles and equipment, the response to comment B-5-8 further notes that the only included mitigation measure incorporated into the FEIR is prohibiting the use of diesel-powered onsite vehicles and equipment. (WLC Response to Comments at 185.) Again, the reasons for not including mitigation measures for these onsite vehicles remain unclear, since the response to comments does not clearly address why these types of vehicles and equipment are not available in zero or near-zero emission configurations.

The EIR should therefore be revised and recirculated to do the following:

- Fully evaluate mitigation measures for zero and near-zero emission technologies that are commercially available over the course of project development and by full build-out in 2030.
- Require all feasible mitigation measures and support the development, demonstration, and deployment of zero and near-zero emission technologies including requiring zero emission (such as battery electric or fuel cell electric) forklifts and battery electric and hybrid electric medium-duty trucks. These technologies are commercially available today. Additional advancements,

Mr. Mark Gross
 June 8, 2015
 Page 5

especially for on-road trucks, are expected in the next three to five years; well before project build-out in 2030.

Recirculation Is Required Due To Fundamental Inadequacies in the Project's Health Risk Assessment

Several elements of the health risk assessment section of the FEIR are flawed and inadequate, and require revision and recirculation. As noted above, one of the circumstances triggering the need for EIR recirculation is the addition of information showing that the EIR was fundamentally inadequate and conclusory in nature that meaningful public review and comment were precluded. (14 CCR § 15088.5(a).)

In this case, this recirculation “trigger” is present. The FEIR analysis has been revised since the draft EIR was released to include a new study regarding health impacts from diesel engines, specifically, the Advanced Collaborative Emissions Study (ACES). The FEIR repeatedly references that the ACES study concludes that the “application of new emissions control technology to diesel engines have virtually eliminated the health impacts of diesel exhaust.” First, the use of only one study as the basis for this analysis is not sufficient for the purpose of providing a comprehensive analysis of health risk from project construction and operations. The ACES study is only one of many scientific studies related to health risk and emissions, and therefore, cannot serve as substantial evidence regarding the project impact to human health. In fact, there are many other studies that conclude that diesel particulate matter (PM) is a health hazard. For example, the International Agency for Research on Cancer evaluated the scientific literature as a whole and concluded in 2012 that diesel PM is carcinogenic to humans (class 1). Second, and more importantly, the ACES study’s methodology and findings render it inadequate for inclusion in an environmental document, and cannot serve as substantial evidence supporting a finding that the project will not result in significant cancer risk impacts.⁴ Therefore, use of and reference to the ACES study should be removed throughout the FEIR.⁵

⁴ An EIR’s CEQA significance findings must be supported by substantial evidence. “Substantial evidence” means enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached. (14 CCR § 15384(a).) Notably, argument, speculation, unsubstantiated opinion or narrative, evidence which is clearly erroneous or inaccurate, does not constitute substantial evidence. (*Id.*) In this case, the ACES study should not be used for the purposes of a CEQA analysis, as the exposure levels used in the ACES study were based on diluted NO₂ and not particulate matter and therefore actual exposure of particulate matter in this study is unknown. Additionally, during the lab exposure testing, two 2007 Detroit Diesel engines were used, one for a total of 10,090 hours and one for 4031 hours with oil changes at every 250 hours (250 hours = 5,000 miles). Therefore, the study results are based on the best-case scenario and did not account for potential real world wear and tear on diesel engines, poor maintenance, and failure rates of diesel particulate filters.

Mr. Mark Gross
June 8, 2015
Page 6

Further, the air quality and health risk methodology and models used in the FEIR should be fully explained to ensure the information is accessible and understandable to the public. Specifically, the final document should include the presentation of all cancer and non-cancer health risks at the receptor locations of interest for all emissions from construction and operations at the WLC. The methodology should include the use of all the current Office of Environmental Health Hazard Assessment (OEHHA) approved risk assessment methodology contained in the OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines: Guidance Manual for the Preparation of Health Risk Assessments (February 2015).

Furthermore, we recommend the document include an evaluation of the potential health impacts at the major milestones identified for this project (e.g., beginning in 2015, 2022, and 2035) for each receptor of interest and appropriate exposure duration (i.e., resident would be 30 years). This analysis will allow the presentation of potential health impacts at key milestones and how the potential health risk estimates may change as the project is completed and the facility changes to full operation.

Other ARB Recommendations

Attainment of Federal Ambient Air Quality Standards

The FEIR determines that the proposed project would have significant long term air quality impacts. Specifically, the air quality analysis demonstrates that the project's operational nitrogen oxides (NOx) emissions far exceed the South Coast Air Quality Management District's significance threshold of 55 pounds per day. The projected rise in emissions of criteria pollutants may interfere with current strategy to bring the South Coast Air Basin into attainment with federal air quality standards. Given the level of impacts and the location in the South Coast Air Basin, the project needs to be revised to include substantial air quality mitigation by employing effective and feasible zero and near-zero emission technologies.

Use of Future Baseline in the Health Risk and Air Quality Analysis

Should the City re-circulate the EIR, ARB strongly recommends that the health risk and air quality analysis use both the existing conditions baseline (current conditions) and a future conditions baseline (full build out year, without the project.) This analysis will be useful to the public in understanding the full impacts of the project. *Neighbors for Smart Rail v Exposition Metro Line Construction Authority* (2013) 57 C4th 439 confirmed that the lead agency has discretion on how to best define a baseline under the

⁵ For more information regarding diesel engine exhaust health impacts, please see http://oehha.ca.gov/public_info/DEEposter.html.

Mr. Mark Gross
June 8, 2015
Page 7

circumstances of rapidly changing environmental conditions. In this situation, the project site is located in a federal nonattainment area and is adjacent to residences; given the timeframe for full build out, those conditions may be significantly different from current conditions.

Specifically, it is important to analyze whether anticipated regional air quality improvements in future years as the result of State, federal, and local air quality programs, may be reduced or negated as the result of this project. For those reasons, it is important to ensure that the public has a complete understanding of the environmental impacts of the WLC, as compared to both existing conditions and future conditions.

Charging Infrastructure to Support Zero and Near-Zero Emission Technology

Should the City re-circulate the EIR, ARB recommends including mitigation measures that detail more robust plans for charging and fueling infrastructure, which will be necessary to support increased zero emission vehicles and equipment used on the project site. Mitigation measure 4.3.6.3C indicates that one alternative fueling station will be publicly available prior to the issuance of building permits for more than 25 million square feet. This mitigation measure should include a more comprehensive description of the fueling station, including how that fueling station will adequately meet the needs of the zero and near-zero emission equipment used on site.

Furthermore, mitigation measure 4.3.6.4A indicates two electric vehicle-charging stations for automobiles or light duty trucks shall be provided at each building. The project description does not include an estimation of how many buildings are expected to be developed on site. While the FEIR does provide an estimation of the number of daily trips by passenger vehicles and light duty trucks (54,714 and 2,385 daily trips, respectively), mitigation measure 4.3.6.4A and the associated analysis does not contain an estimation of how many of those trips will be made by electric vehicles and does not provide enough information to evaluate whether mitigation measure 4.3.6.4A satisfies potential charging demand. Given Governor's Executive Order B-16-2012 target of reaching 1.5 million zero emission vehicles on California roadways by 2025 and the Governor's goal of cutting petroleum use in half by 2030, mitigation measure 4.3.6.4A should be expanded to ensure that the charging infrastructure required on-site will meet the needs of the growing numbers of zero emission vehicles that will be accessing the project site.

Mr. Mark Gross
June 8, 2015
Page 8

Statewide Air Quality, Climate and Health Drivers to Reduce Emissions from Freight Hubs

To achieve California's air quality, climate and sustainability goals, and to reduce the health risk from diesel PM in communities located near freight hubs, the State, including public and private partners, must take effective action to transition to a zero and near-zero emission freight system. This effort is laid out in ARB's Sustainable Freight Pathways to Zero and Near-Zero Emissions Discussion Draft, which can be found at http://www.arb.ca.gov/gmp/sfti/Sustainable_Freight_Draft_4-3-2015.pdf.

Closing

Given the scale of the project, the substantial increases in criteria pollutants and greenhouse gas emissions, as well as the potential impact to health risk, it is critical that the FEIR require the use of zero and near-zero emission technologies. Furthermore, the health risk analysis must be revised to ensure that the potential impacts are fully analyzed and disclosed. We would be pleased to provide assistance to help develop the analysis and mitigation measures to ensure that this state-of-the-art facility is able to serve the region's distribution needs, while protecting air quality and public health, as well as minimizing the project's contribution to greenhouse gas emissions. Please include ARB on any further notifications related to the WLC.

If you have questions, please contact me at (916) 322-8382 or freight@arb.ca.gov.

Sincerely,



Heather Arias, Chief
Freight Transport Branch
Transportation and Toxics Division

cc: See next page

Mr. Mark Gross
June 8, 2015
Page 9

cc: Honorable Mayor and Council Members- City of Moreno Valley
14177 Frederick Street
Moreno Valley, CA 92552

State Clearinghouse
P.O. Box 3044
Sacramento, CA 95812-3044

Mr. Ian MacMillan
Program Supervisor
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765

Mr. Thomas Jelenic
Vice President of Planning and Program Management
Highland Fairview
14225 Corporate Way
Moreno Valley, CA 92553



AMERICAN LUNG ASSOCIATION IN CALIFORNIA
 441 MAC KAY DRIVE, SAN BERNARDINO, CA 92408
 phone: 909.884.5864 | fax: 909.884.6249

June 10, 2015

Mark Gross, Senior Planner
 City of Moreno Valley
 Community and Economic Development Department
 14177 Frederick Street
 Moreno Valley, CA 92553

Re: World Logistics Center FEIR

Dear Mr. Gross,

The American Lung Association in California is submitting this letter in response to the World Logistics Center (WLC) Final Environmental Impact Report (FEIR). We continue to have concerns about the significant air pollution-related health impacts of the proposed project and believe the FEIR fails to consider additional project alternatives that would mitigate those impacts and protect public health.

We remain concerned that the proposed project will generate significant health risks to the community, one that is already burdened by significant air pollution. After reviewing the FEIR, we believe the proposed mitigations and health risk assessment are inadequate. We support the recommendations made in the letter by the California Air Resources Board (CARB) to Mr. Mark Gross (June 8, 2015) to address those inadequacies.

The American Lung Association *State of the Air* report lists Riverside County as having a failing grade for both ozone and particle pollution, and among the worst air pollution in the nation. The WLC project will increase emissions both locally and regionally. In addition to cancer risk, emissions from the project will also impact sensitive receptors, including those living with chronic cardiovascular and respiratory illnesses, the elderly and our children. In Riverside County, more than 160,000 people suffer from asthma, including 41,000 children. An additional 66,000 have chronic bronchitis and 28,000 have emphysema, who suffer even further when breathing polluted air. The FEIR fails to include all feasible mitigation measures that would address these impacts.

Numerous recommendations were submitted by CARB and others as part of the Draft Environmental Impact Report (DEIR) to support the deployment of zero and near zero emission technology at the WLC to reduce localized health risk and regional emissions. The FEIR discussion (See responses to comment B-5-7 and B-5-8 and Master Response 3) regarding zero emission and

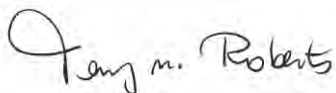
hybrid electric trucks, vehicles, and equipment fails to adequately evaluate the current and near term feasibility of hybrid technologies, and other zero and near zero emission technologies both at the present date and by project build-out in 2030. There been huge advances in freight transport technologies that if required, would lessen the WLC's impacts on criteria air pollutants, greenhouse gas emissions, as well as air toxics and health risk. Based on the availability of these technologies today, mitigation measures restricting access to zero emission freight technologies should be fully analyzed and included in the FEIR to help mitigate and reduce the health risk from diesel PM in communities located near freight hubs and the region.

We also believe that mitigation measures (EV infrastructure) outlined in 4.3.6.4A should be significantly increased to recognize and meet the needs of the growing numbers of zero emission vehicles that will be accessing the project site. This will also help meet the Governor's Executive Order B-16-2012 target of 1.5 million zero emission vehicles on California roadways by 2025 and the goal of cutting petroleum use in half by 2030.

We support the recommendations of CARB to fully explain and ensure the information about air quality and health risk methodology is accessible and understandable by the public. The final document should include the presentation of all cancer and non-cancer health risks at the receptor locations of interest for all emissions from construction and operations at the WLC. The methodology should include the use of all the current Office of Environmental Health Hazard Assessment (OEHHA) approved risk assessment methodology guidelines. We also support the inclusion of an evaluation of the potential health impacts at the major milestones identified for this project (e.g., beginning in 2015, 2022, and 2035) for each receptor of interest and appropriate exposure duration (i.e., resident would be 30 years). This analysis will allow the presentation of potential health impacts at key milestones and how the potential health risk estimates may change as the project is completed and the facility changes to full operation.

Finally, given the scale of the project, the significant increases in criteria pollutants and greenhouse gas emissions, as well as the potential impact to health risk, it is critical that the FEIR require the use of zero and near-zero emission technologies. Furthermore, the health risk analysis and potential impacts must be fully analyzed and disclosed, per above.

Sincerely,



Terry M. Roberts
Executive Director

Speech and CONCERNS submitted to the Moreno Valley Planning Commission, June 11, 2015

I'm Betty Masters, a **retired** teacher with deep ties to Moreno Valley. For 23+yrs I've lived in University City, an unincorporated neighborhood across from Box Springs Mt. served by MV School District, Police, and Fire Dept.

RECEIVED
JUN 11 2015
CITY OF MORENO VALLEY
Planning Division

The **WLC Project**, if approved, **will end my hopes and dreams for healthy living** in my home close to the 60/215 Fwy Eastbound. Trucks slow down on the long Box Springs grade and the narrow pass traps vehicle pollutants. Yes, new technology will **eventually** reduce or eliminate toxic emissions; but it's **NOT** the norm yet. The **REGION** will be impacted by **Significant ADVERSE AIR QUALITY and TRAFFIC and CIRCULATION EFFECTS** of this Project described in **Table 5.0 of the Draft Environmental Impact Report (DEIR) and FEIR-Final "Programmatic" Impact Report- (Framework for development-no specific Project Plans)**. The **WLC** as proposed is classified as a "project" of **REGIONAL SIGNIFICANCE** even though **NO ACTUAL SITE PLANS EXIST**. The **DEIR** was sent to the State Clearinghouse and the Western **Regional Council of Governments (WRCOG)** for review and comments.

I'm deeply appreciative of all the **letters concerned about air pollution and traffic and circulation** among many other concerns from governmental agencies, local cities, health and environmental organizations and private individuals. Their comments clarify just how **SERIOUS the WLC IMPACTS** will be if a simple majority (3) of MV Council members approve of the **WLC Specific Plan**.

Approval includes a **GENERAL PLAN AMENDMENT** to the **current Moreno Highlands Specific Plan; RE-ZONING** the area east of Redlands Ave.to the City border; **LAND-USE Re-Designation** that **commits future generations to LOGISTICS DEVELOPMENT** and as stated in the EIR "**fundamentally changes the character of the community**".

Purpose of the Draft EIR and Final "Programmatic" Final EIR have NOT been accomplished due to the massive amount of disorganized material and burying the DEVELOPMENT AGREEMENT in VOL. 2; APPENDIX H:Specific Plan and Project Information" (NO specific reference to "Development Agreement" in Table of Contents.

- **to inform government decision-makers and the public about potential significant environmental effects;**
- Identify ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governing agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project IF SIGNIFICANT ENVIRONMENTAL EFFECTS ARE INVOLVED. **The Council is required to adopt a" STATEMENT OF OVERRIDING CONSIDERATIONS"** explaining why benefits outweigh significant impacts of the Project.

The FEIR has **critical omissions, disorganization, ambiguities and unnecessary information**. It needs an **OVERVIEW Table of Contents that lists critical content by name, not hidden somewhere**.

Please, **REVISE and RE-CIRCULATE** the **WLC "Programmatic" FEIR** in a readable form.

- **New standards for vehicle emissions and water use must be included in the FEIR.**
- The **DEVELOPMENT AGREEMENT** document is **BURIED** within "**Vol. 2, Appendix H: Specific Plan and Project Information**" (NO specific reference to "Development Agreement" in Table of Contents)

- The Development Agreement “4.14 Air Filtration System” states that only three properties at Theodore St. and Dracaea Ave. will be offered these systems as a mitigation measure, but OMITs a Dracaea Ave. property east of Redlands in the listing below the paragraph. Will that property receive ≤\$25,000 filtration system?
- FEIR Section 5.0 “Other CEQA TOPICS” SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSED WLC PROJECT IS IMPLEMENTED (See attached FEIR Sect. 5.0 Table 5.A)
These SIGNIFICANT EFFECTS that cannot be mitigated to less than significant trigger the requirement for a “STATEMENT of OVERRIDING CONSIDERATIONS” by the City Council stating why benefits outweigh the impacts.

Skechers (Highland Fairview) employment practices and the WLC DEVELOPMENT AGREEMENT should be carefully examined to find inconsistencies between the World Logistics Center Project Objectives, actual employment practices and Development Agreement loopholes.

WLC PROJECT OBJECTIVE

- Create substantial employment opportunities for citizens of MV and surrounding communities
 - Highland Fairview CEO narrated a slide-show about modern Logistics warehouses (NO specific building plans exist for WLC). His narrative clearly supports an expectation of future decreasing employment per warehouse; therefore decreasing economic benefits directly and indirectly.
 - A “60 Minutes” report showed a highly automated warehouse with robots zipping around the aisles, few people in sight and only a few highly skilled, well-paid robotic engineers were needed to keep the robots operating smoothly. THINK, who will gain for generations to come? Trucks (even zero-emission type) will clog and damage roadways, tenants will pay lease fees to HF.
 - Skechers Warehouse=1.8 million sq ft. Highland Fairview promised job creation 1,000-2,000; at opening, about 600 transferred from a warehouse closed in Ontario; one MV resident hired; currently <300 employed; (net job loss; air pollution from truck traffic from Ports and commuter vehicle traffic FROM surrounding communities TO Skechers, pe.com article). On the night of the Council vote to approve Skechers, people were bussed from out of town to the City Hall parking lot, given T-shirts, fed and then many spoke in favor of Skechers warehouse overwhelming local opposition to Skechers. Legal, yes; ethical, ? HF PAC contributions supported City Councilmembers favorable to the WLC and other HF projects. These Council members initiated a City (taxpayer funded) lawsuit to block construction of March Life Care Hospital for over one year; thus blocking construction jobs and a wide variety of good, permanent jobs. HF contributions to campaigns supported Council members that voted on a moratorium delaying Prologis from building warehouses along the 60 fwy for years. On the night of the Council vote to approve Prologis, the spokesman asked not to compare him or Prologis with HF or its CEO. He stated that Prologis did not contribute to Council campaigns. These facts reveal situations where “jobs, jobs, jobs” could have been encouraged by Council members, recipients of HF contributions through PACs, but they chose to block job creation. Prologis does NOT attempt to influence votes through big \$ contributions. Prologis responded to many comments and concerns by SIGNIFICANTLY downsizing the project from six to four warehouses farther away from residences.
 - (Prologis Environmental Report states possible cumulative effect of too many warehouses in the region. See attached list of current or under construction warehouses in the area).

- **WLC DEVELOPMENT AGREEMENT loophole - NO GUARANTEE OF DEVELOPING PROPERTY OR HIRING LOCALS, only posting jobs one week before posting of openings to other agencies...**

4.1 Page 10 Highland Fairview (HF) shall have a vested right to develop the Property on its own timing... HF has sole, absolute discretion to develop portions or phases, ...

4.4 Timing of Development. HF cannot specify timing of development. HF will commence construction at earliest possible date consistent with market conditions.

The Development Agreement allows HF **NOT to develop the Property**, HF can sell, assign or transfer the Property in whole or in part.

4.11 HF will establish a Local Hiring Program to facilitate the hiring of MV residents and jobs not at WLC. HF will require its contractors, suppliers and tenants to participate in MV Employment Resource Center Programs. WLC employers will be "requested to submit job announcements to the ERC at least one week prior to announcements to other agencies or the general public.

These employment practices are commendable; however, estimated job numbers could be grossly over-estimated and there's **NO TURNING BACK** after signing the DEVELOPMENT AGREEMENT and CONCRETE is poured to build warehouses over 40.4 million sq ft or 3,710 acres or about 700 football fields.

Approval of the WLC Specific Plan by a majority of the City Council includes a **GENERAL PLAN AMENDMENT RE-ZONING**, and **LAND-USE REDESIGNATION** from the current Moreno Highlands Specific Plan. Highland Fairview Property would become valuable as Logistics Development (LD), Light Logistics (LL) and Logistics Support (LS). The **re-zoning and Land-Use re-designation changes irreversibly** the "fundamental character of the community". **WAREHOUSES** are **CONCRETE** storage boxes that last for generations. **THINK** about the natural beauty of the eastern valley. Will three Council members destroy the lives of the people living in the seven residences within the boundaries of the WLC Specific Plan and significantly impact hundreds of thousands in the REGION? Mayor Molina gave city officials advice regarding negotiating a DEVELOPMENT AGREEMENT, "Don't give away the farm." The AGREEMENT DOES JUST THAT, so VOTE "NO" on the WLC Project, reject the DEVELOPMENT AGREEMENT that gives HF the right to develop the property on his time schedule or NOT develop at all. Keep ZONING and LAND-USE Designations as specified in the Moreno Highlands Specific Plan prior to 2011. Let generations to follow live, play, purchase goods and receive services and even be buried in a cemetery once planned there. Do NOT perpetuate the problem of one developer dominating development decisions through a tangled web of relationships and contributions through Political Action Committees PACs. Such funding acts as a tsunami drowning voices of opposition to changing Moreno Valley into a warehouse district with NO guarantees that benefits outweigh Significant Adverse Impacts. Don't "give away" the land-use of the property to a developer with a "SKETCHY" track record. PLEASE MAKE A THOUGHTFUL DECISION. Protect the community and region.

**Final Programmatic Environmental Impact Report
Volume 2 – Revised Draft EIR (Track Changes)
World Logistics Center Project**

NOTE TO READERS. Revisions have been made to this section to reflect changes in Programmatic DEIR Sections 2 through 4 in response to comments on the DEIR and as a result of changes in the WLC project.

5.0 OTHER CEQA TOPICS

Section 15126 of the *CEQA Guidelines* requires that all aspects of a project must be considered when evaluating its impacts on the environment, including planning, acquisition, development, and operation. As part of this analysis, the EIR must also identify (1) significant environmental effects of the proposed WLC project; (2) significant environmental effects that cannot be avoided if the proposed WLC project is implemented; and (3) growth-inducing impacts.

5.1 SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSED WLC PROJECT IS IMPLEMENTED

Table 5.A illustrates the significant unavoidable impacts anticipated to result from the proposed WLC project, even with implementation of the project-specific mitigation measures identified in the Section 4.0 analyses.

Table 5.A: Significant Environmental Effects Which Cannot Be Avoided

Topic	Type of Impact	Impact
Aesthetics	Scenic Vistas	No <u>The DEIR originally indicated no</u> feasible mitigation <u>was available to mitigate for the direct impacts associated with the loss of existing viewsheds in the area. Mitigation was modified/added to help reduce these impacts.</u>
Aesthetics	Scenic Resources and Scenic Highways	<u>The DEIR originally indicated no</u> feasible mitigation was available to mitigate the changes to existing viewsheds from SR-60 and from Gilman Springs Road, both considered local scenic roads by the City. <u>Mitigation was modified/added to help reduce these impacts. With this mitigation,</u> these impacts are consistent with relevant General Plan policies regarding views in the General Plan.
Aesthetics	Substantial degradation of the existing visual character or quality of the site and its surroundings	<u>The DEIR originally indicated no</u> feasible mitigation was available to mitigate for the direct impacts associated with the substantial change in visual character from agriculture to high cube warehouse uses with building heights of 60 to 80 feet. <u>Mitigation was modified/added to help reduce these impacts.</u>
Aesthetics	Cumulative Aesthetic Impacts	The cumulative effect of development in the region will continue to result in the modification of existing viewsheds especially along SR-60. Construction of the proposed WLC project, in conjunction with other planned development, would contribute to the obstruction of existing views. <u>Even with the revised mitigation measures, the project's cumulative impact will not be reduced to a less than significant level.</u>
Agricultural Resources	Loss of State Designated Farmland	No mechanism for the mitigation of impacts to the loss of 25 acres of Unique Farmland and/or existing agricultural operations has been enacted by either the City of Moreno Valley or the County of Riverside. Therefore, impacts associated with the conversion of State Designated Farmland

Final Programmatic Environmental Impact Report
Volume 2 – Revised Draft EIR (Track Changes)
World Logistics Center Project

Table 5.A: Significant Environmental Effects Which Cannot Be Avoided

Topic	Type of Impact	Impact
		remain significant and unavoidable.
Agricultural Resources	Conversion to a Non-agricultural Use	No feasible mitigation is available to mitigate for the direct impacts associated with the conversion of existing agricultural operations and loss of locally important farmland. Therefore, impacts associated with the conversion of farmland to a non-agricultural use remain significant and unavoidable.
Agricultural Resources	Cumulative Loss of Agricultural Resources	The cumulative effect of development in the region will continue to result in the conversion of agricultural lands to non-agricultural uses. Construction of the proposed WLC project, in conjunction with other planned development within the cumulative study area, would contribute to the conversion of agricultural lands to non-agricultural uses. Therefore, cumulative impacts to agricultural resources would remain significant and unavoidable.
Air Quality	Construction Air Pollutant Emissions	Construction activities would result in exceedance of SCAQMD threshold for VOC, CO, NO _x , PM ₁₀ , and PM _{2.5} . Even after application of mitigation measures, estimated air pollutant emissions during construction activities would remain significant and unavoidable for NO _x , and PM ₁₀ , and PM _{2.5} and localized PM ₁₀ concentrations.
Air Quality	Architectural Coating Emissions	The amount of VOC generated per day during the application of architectural coatings would exceed the SCAQMD VOC threshold. Although the identified mitigation measures would reduce the amount of VOC generated, the SCAQMD threshold would still be exceeded. Impacts would remain significant and unavoidable.
Air Quality	Operational Air Pollutant Emissions	No feasible mitigation is available. Estimated air pollutant emissions during operation of the project will remain significant and unavoidable for VOC, CO, NO _x , PM ₁₀ , and PM _{2.5} and localized PM ₁₀ concentrations.
Air Quality	Consistency with Air Quality Management Plan (AQMP)	The project will produce significant amounts of air pollutants on a daily and cumulative basis, both during construction and operation. Even with implementation of proposed mitigation, emissions will result in exceedances that are not consistent with implementation of the current AQMP.
Air Quality	Cumulative Air Pollutant Emissions	The Basin is in nonattainment for PM ₁₀ and ozone at the present time. Construction of the proposed WLC project, in conjunction with other planned developments within the cumulative study area, would contribute to the existing nonattainment status. Therefore, the proposed WLC project would exacerbate nonattainment of air quality standards within the SCAQMD and contribute to adverse cumulative air quality impacts.
Air Quality	Sensitive Receptors	Residents inside the project boundary could be exposed to significant short-term and long-term PM ₁₀ concentrations on an ongoing basis. The health effects from short-term PM exposure include irritation of the eyes, nose, throat, coughing, and chest tightness; and aggravation of existing lung diseases. Long-term exposure can reduce lung functions; chronic bronchitis; changes in lung morphology; and/or death. Even with mitigation measures air quality impacts from the project will be significant and unavoidable.

**Final Programmatic Environmental Impact Report
Volume 2 – Revised Draft EIR (Track Changes)
World Logistics Center Project**

Table 5.A: Significant Environmental Effects Which Cannot Be Avoided

Topic	Type of Impact	Impact
Climate Change	Cumulative greenhouse gas emissions	Project contributions to cumulatively considerable greenhouse gas emissions are in excess of recommended SCAQMD standards.
<p><u>NOTE: Climate change was removed as a cumulative impact because the project can take credit for regional GHG emission reductions from the State's cap-and-trade program involving refineries and diesel truck fuel.</u></p>		
Land Use and Planning	Divide an existing neighborhood (impacts on existing residences)	The site contains seven rural residences that cannot be effectively buffered against the impacts of adjacent warehouse buildings and operations (i.e., air pollution and health risks). <u>Mitigation was added to help reduce noise, dust and other air pollutant-related impacts on the rural residences.</u>
Noise	<u>Short-Term Construction Noise</u>	<u>Project construction will create significant noise levels for on-site uses and off site away from the project site due to construction vehicle travel.</u>
Noise	<u>Operational Impacts to Surrounding Roadways</u> <u>Long-Term Traffic Noise</u>	Residential land uses along a number of local roadways will experience noise levels that are projected to exceed City standards from project-related traffic. Potential noise attenuation improvements may not be physically or economically feasible due to building and roadway constraints.
Noise	Cumulative Noise Levels	Noise from project-related traffic and cumulative development will eventually exceed City noise standards and the project will make a substantial contribution to that cumulative impact.
Transportation	<u>Opening Year (2013) with Project Level of Service</u> <u>Off-Site Impacts to TUMF Facilities</u>	<p><u>These are impacts requiring improvements and changes to roads that are part of the TUMF Regional System of Highways and Arterials, some of which are under the jurisdiction of Moreno Valley and others are located in other jurisdictions. The developer shall be responsible for paying the TUMF fees in effect at the time of approval. These payments shall constitute the developer's mitigation of project impacts to this category of roads.</u></p> <p><u>The City shall work with the other member agencies of WRCOG to program TUMF funds to implement the mitigation measures identified in 4.15.AT through 4.15.AY pertaining to TUMF facilities outside the jurisdiction of the City of Moreno Valley. To the extent that TUMF fees provided by the developer are used to implement the recommended improvements the project's impacts would be less-than-significant. However, because the City does not have direct control over TUMF funding the City cannot ensure that the identified improvements would be made. The project's impacts on these facilities must be considered significant and unavoidable.</u></p>
Transportation	<u>Off-Site Improvements to Roads Outside the Jurisdiction of the City and Not Part of the TUMF Program</u>	<p><u>These are impacts requiring improvements to transportation facilities that are under the jurisdiction of Riverside County, Caltrans, and other municipalities and that are not included in the TUMF Regional System of Highways and Arterials.</u></p> <p><u>The City does not have cooperative agreements with neighboring jurisdictions that would serve as a mechanism for collecting and distributing developer funds to cover the cost of cross-jurisdictions mitigation measures, other than the TUMF program. To the extent that the City is able to establish such a mechanism and the other jurisdiction constructs the recommended improvement, the project's impacts would be less-than-significant. However, because the City cannot guarantee that such a mechanism will be established and does not have direct control over facilities outside of its jurisdiction, the City cannot ensure that the identified</u></p>

**Final Programmatic Environmental Impact Report
Volume 2 – Revised Draft EIR (Track Changes)
World Logistics Center Project**

Table 5.A: Significant Environmental Effects Which Cannot Be Avoided

Topic	Type of Impact	Impact
		<p><u>improvements would be made. The project's impacts on these facilities must be considered significant and unavoidable.</u></p> <p><u>Similarly, the City has not entered into an agreement with Caltrans for the collection of developer funds for improvements to the state highway system other than freeway interchange improvements funded through the TUMF program. Nor has Caltrans established a program to collect fair-share contributions to freeway improvements such as those identified in EIR Tables 4.15.AX and 4.15.BA (TIA tables 40 and 68). The City shall work with Caltrans to establish a mechanism for collecting funds from developers for use in funding needed freeway improvements. However, since at the present time no such mechanism exists that would ensure that WLC funds contributed to Caltrans or any other state agency would be used to implement specific improvements that mitigate WLC impacts, and there is no mechanism by which the City can construct or guarantee the construction of any improvements to the freeway system by itself, the project's impacts on the state highway system must be considered significant and unavoidable.</u></p>
Transportation	Opening Year (2013) Cumulative with Project Level of Service	<p>If the improvements defined in Mitigation Measures 4.11.6.2A are constructed, then minimum level of service standards would be maintained for the opening year (2013) cumulative with project scenario and study area intersections and impacts would be reduced to a less than significant level. Because improvements to the freeway roadways and infrastructure are under the authority of Caltrans, it is uncertain if improvements to these roadways would be constructed prior to project opening and impacts to these intersections would be significant and unavoidable.</p>
Transportation	Interim Year (2017)	<p>Study area intersections will experience Levels of Service in excess of accepted standards as development occurs through 2017. Because improvements to the freeway roadways and infrastructure are under the authority of Caltrans, it is uncertain if improvements to these roadways would be constructed prior to project opening and impacts to these intersections would be significant and unavoidable.</p>
Transportation	Buildout Year (2023)	<p>Study area intersections will experience Levels of Service in excess of accepted standards as development occurs through 2023. Because improvements to the freeway roadways and infrastructure are under the authority of Caltrans, it is uncertain if improvements to these roadways would be constructed prior to project opening and impacts to these intersections would be significant and unavoidable.</p>

Answer

1 The DEIR originally indicated there was no mechanism for the mitigation of impacts to the loss of 25 acres of Unique Farmland and/or existing agricultural operations. The acquisition of an offsite agricultural conservation easement was added as mitigation which will reduce the project's impact to State Designated Farmland to a less than significant level.

Final Programmatic Environmental Impact Report
Volume 2 – Revised Draft EIR (Track Changes)
World Logistics Center Project

5.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE CAUSED BY THE PROPOSED PROJECT SHOULD IT BE IMPLEMENTED

Section 15126(c) of the CEQA Guidelines mandates that the EIR must address any significant irreversible environmental changes which would be involved in the proposed action should it be implemented. An impact would fall into this category if it resulted in any of the following:

1. The project would involve a large commitment of non-renewable resources;
2. The primary and secondary impacts of the project would generally commit future generations of people to similar uses;
3. The project involves uses in which irreversible damage could result from any potential environmental incidents associated with the project; and/or
4. The project will consume large amounts of energy that are produced from non-renewable fossil fuels, although the WLC Specific Plan indicates the proposed uses will efficiently consume energy and water resources.

OMITTED SIGNIFICANT AIR QUALITY IMPACTS

~~OMITTED CLEAR DESCRIPTION~~ OF AIR QUALITY IMPACTS

Determining whether the proposed WLC project may result in significant irreversible effects requires a determination of whether key resources would be degraded or destroyed in such a way that there would be little possibility of restoring them. The project site is generally fallen marginal agricultural land; however, as identified within the City's General Plan, the City anticipates the eventual conversion of agricultural uses to urban uses and the proposed WLC project would permanently alter the site by converting predominantly agricultural uses to urban warehousing. This is a significant irreversible environmental change that would occur as a result of project implementation. Because no significant mineral resources were identified within the project limits, no significant impacts related to this issue would result from development of the project site. Natural resources in the form of construction materials would be utilized in the construction of the proposed WLC project and energy resources in the form of electricity and natural gas would be used during the long-term operation of the project; however, their use is not expected to result in a negative impact related to the availability of these resources. Existing scenic vistas were identified as being visible from the project limits. Implementation of the proposed WLC project would result in the obstruction of views of the Badlands, Mt. Russell and Mystic Lake/San Jacinto Wildlife Preserve from the nearest sensitive visual receptors and those traveling along roadways in the project vicinity. This is a significant and irreversible environmental change that would occur as a result of project implementation. Cumulatively, future development along SR-60 would also result in the obstruction of the existing views of surrounding mountains and visual features.

OF AIR QUALITY IMPACTS

In addition, this logistics warehouse project, in concert with the other built or approved industrial warehouse projects to the north and west, will fundamentally change the character and land use pattern of this portion of the City. Many of the project-specific impacts are addressed, as outlined above, but the land use change represented by this and other industrial projects represents a substantial irreversible change in community character for this area.

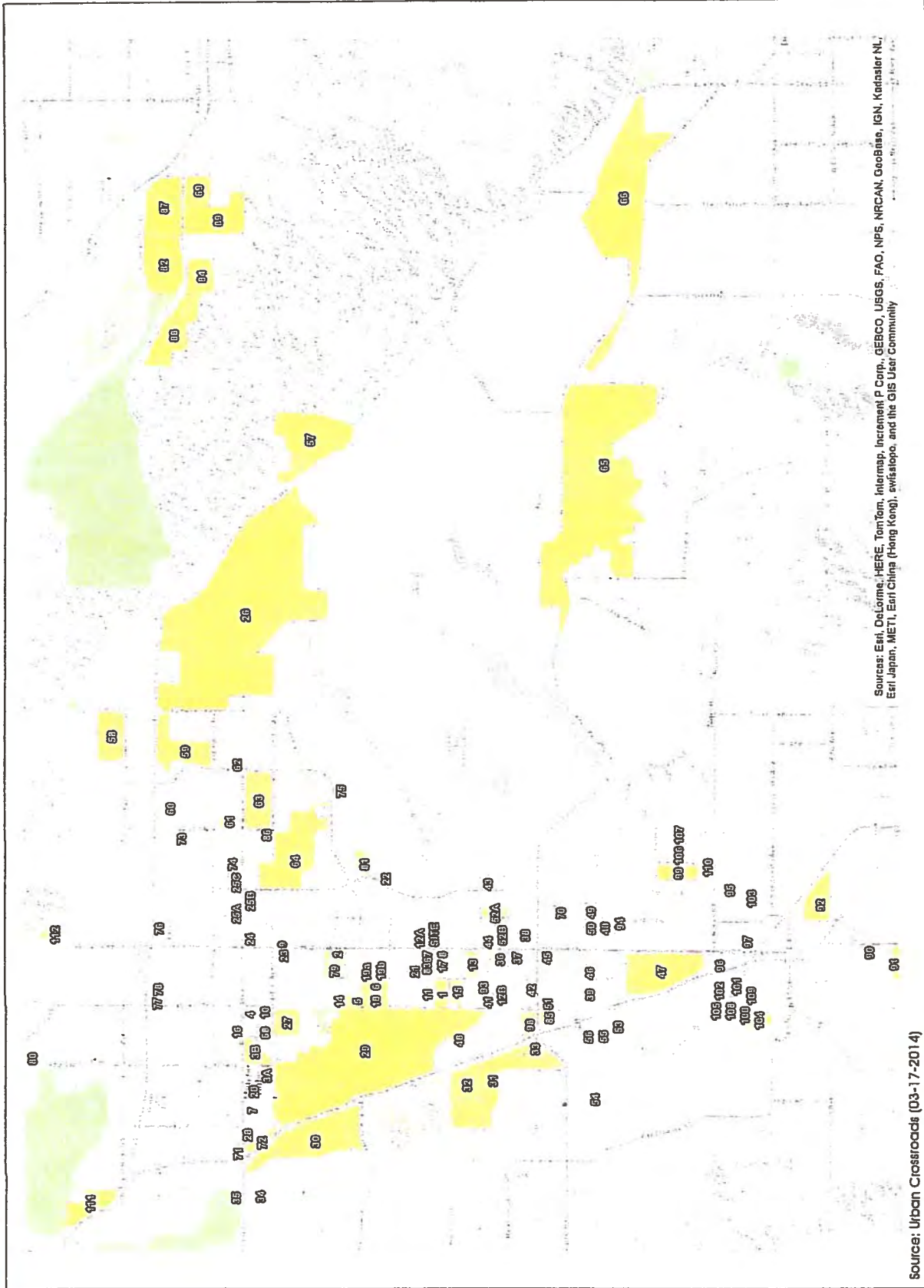
5.3 GROWTH-INDUCING IMPACTS

The project area is largely vacant undeveloped land, although there are seven existing single-family homes in various locations on the proposed WLC project site along with associated ranch/farm buildings. The site has been farmed since the early 1900s and has supported dry (non-irrigated) farming, livestock grazing, and limited citrus groves. Much of the site continues to be used for dry farming.

MODULAR LOGISTICS CENTER
ENVIRONMENTAL IMPACT REPORT

ENVIRONMENTAL ANALYSIS
4.0

*E of Fern's Blvd; W of Kitching
S of Edwin; N of Modjular Way*
2,617 TRUCK-TIPS/day
50.84-gross acres



Sources: Esri, DeLorme, HERE, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBasis, IGN, Kadaster NL, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, and the GIS User Community

Source: Urban Crossroads (03-17-2014)



Figure 4.0-1

Cumulative Development Location Map


**MODULAR LOGISTICS CENTER
ENVIRONMENTAL IMPACT REPORT**
4.0 ENVIRONMENTAL ANALYSIS
Table 4.0-1 Cumulative Project List

TAZ	Project Name	Land Use ¹	Quantity	Units ²
1	PA 06-0152 & PA 06-0153 (First Park Nandina I & II)	High-Cube Warehouse	1,182.918	TSF
2	Moreno Valley Walmart	Free-Standing Discount Store	189.520	TSF
		Gas Station	16	VFP
3A	PA 08-0072 (Overton Moore Properties)	High-Cube Warehouse	520.000	TSF
3B	Harbor Freight Expansion	High-Cube Warehouse	1,279.910	TSF
4	PA 04-0063 (Centerpointe Buildings 8 and 9)	General Light Industrial	361.384	TSF
5	PA 07-0035; PA 07-0039 (Moreno Valley Industrial Park)	General Light Industrial	204.657	TSF
		High-Cube Warehouse	409.920	TSF
6	PA 07-0079 (Indian Business Park)	High-Cube Warehouse	1,560.046	TSF
7	PA 08-0047-0052 (Komar Cactus Plaza) ³	Hotel	110	RMS
		Fast Food w/Drive Thru	8.000	TSF
		Commercial	42.400	TSF
8	First Inland Logistics Center	High-Cube Warehouse	400.130	TSF
9	TM 33607	Condo/Townhomes	54	DU
10	PA 08-0093 (Centerpointe Business Park II)	General Light Industrial	99.988	TSF
11	PA 06-0021; PA 06-0022; PA 06-0048; PA 06-0049 (Komar Investments)	Warehousing	2,057.400	TSF
12A	PA 06-0017 (Ivan Devries)	Industrial Park	569.200	TSF
12B	Integra Pacific Industrial Facility	High-Cube Warehouse	880.000	TSF
13	PA 09-0004 (Vogel)	High-Cube Warehouse	1,616.133	TSF
14	TM 34748	SFDR	135	DU
15	Modular Logistics Center	High-Cube Warehouse	1,109.378	TSF
16	PA 09-0031	Gas Station	12	VFP
17	First Park Nandina III	High-Cube Warehouse	691.960	TSF
	Moreno Valley Commerce Park	High-Cube Warehouse	354.321	TSF
		General Light Industrial	16.732	TSF
18	March Business Center	Warehousing	87.429	TSF
		High-Cube Warehouse	1,380.246	TSF
19A	TM 33810	SFDR	16	DU
19B	TM 34151	SFDR	37	DU
20	373K Industrial Facility	High-Cube Warehouse	373.030	TSF
21	TM 32716	SFDR	57	DU
22	TM 32917	Condo/Townhomes	227	DU
23	TM 33417	Condo/Townhomes	10	DU
24	TM 34988	Condo/Townhomes	251	DU
25A	TM 34216	Condo/Townhomes	40	DU
25B	TM 34681	Condo/Townhomes	49	DU
25C	PA 08-0079-0081 (Winco Foods)	Discount Supermarket	95.440	TSF
		Specialty Retail	14.800	TSF



**MODULAR LOGISTICS CENTER
ENVIRONMENTAL IMPACT REPORT**

4.0 ENVIRONMENTAL ANALYSIS

Table 4.0-1 Cumulative Project List

TAZ	Project Name	Land Use ¹	Quantity	Units ²
	Moreno Beach Marketplace (Lowe's)	Commercial Retail	175.000	TSF
	Auto Mall Specific Plan (Planning Area C)	Commercial Retail	304.500	TSF
	Westridge <i>ALDI Retriocrated? & 4 warehouses</i>	High-Cube Warehouse	937.260	TSF
	ProLogis	High-Cube Warehouse	1,916.190	TSF
26		Warehousing	328.448	TSF
		High-Cube Warehouse <i>40.4 m.</i>	41,400.000	TSF
	World Logistics Center	Warehousing	200.000	TSF
		Gas Station w/ Market	12	VFP
		Existing SFDR	7	DU
27	March Lifecare Campus Specific Plan ⁴	Medical Offices	190.000	TSF
		Commercial Retail	210.000	TSF
		Research & Education	200.000	TSF
		Hospital	50	Beds
		Institutional Residential	660	Beds
28	Alessandro Metrolink Station	Light Rail Transit Station	300	SP
29	Airport Master Plan	Airport Use	559.000	TSF
30	Meridian Business Park North	Industrial Park	5,985.000	TSF
31	SP 341; PP 21552 (Majestic Freeway Business Center)	High-Cube Warehouse	6,200.000	TSF
32	PP 20699 (Oleander Business Park)	Warehousing	1,206.710	TSF
33	Ramona Metrolink Station	Light Rail Transit Station	300	SP
		Office (258.102 TSF)	258.102	TSF
34	PP 22925 (Amstar/Kaliber Development)	Warehousing	409.312	TSF
		General Light Industrial	42.222	TSF
		Retail	10.000	TSF
35	P07-1028 (Alessandro Business Park)	General Light Industrial	652.018	TSF
36	P 05-0113 (IDI)	High-Cube Warehouse	1,750.000	TSF
37	P 05-0192 (Oakmont I)	High-Cube Warehouse	697.600	TSF
38	P 05-0477	High-Cube Warehouse	462.692	TSF
39	Rados Distribution Center	High-Cube Warehouse	1,200.000	TSF
40	Investment Development Services (IDS) II	High-Cube Warehouse	350.000	TSF
41	P 07-09-0018	Warehousing	170.000	TSF
42	P 07-07-0029 (Oakmont II)	High-Cube Warehouse	1,600.000	TSF
43	TR 32707	SFDR	137	DU
44	TR 34716	SFDR	318	DU
45	P 05-0493 (Ridge I)	High-Cube Warehouse	700.000	TSF
46	Ridge II	High-Cube Warehouse	2,000.000	TSF


Table 4.0-1 Cumulative Project List

TAZ	Project Name	Land Use ¹	Quantity	Units ²	
47	Harvest Landing Specific Plan	SFDR	717	DU	
		Condo/Townhomes	1,139	DU	
		Sports Park	16.700	AC	
		Business Park	1,233.401	TSF	
		Shopping Center	73.181	TSF	
		Perris Marketplace	Shopping Center	450.000	TSF
48	P 06-0411 (Concrete Batch Plant)	Manufacturing	2.000	TSF	
49	Jordan Distribution	High-Cube Warehouse	378.000	TSF	
50	Aiere	High-Cube Warehouse	642.000	TSF	
51	P 08-11-0005; P 08-11-0006 (Starcrest)	High-Cube Warehouse	454.088	TSF	
52A	Stratford Ranch Specific Plan	High-Cube Warehouse	1,725.411	TSF	
52B	Stratford Ranch Specific Plan	High-Cube Warehouse	480.000	TSF	
		General Light Industrial	120.000	TSF	
53	PP 18908	General Light Industrial	133.000	TSF	
54	Tract 33869	SFDR	39.000	DU	
55	PP 16976	General Light Industrial	85.000	TSF	
56	PP 21144	Industrial Park	190.802	TSF	
57	Quail Ranch Specific Plan	Private School (K-12)	300	STU	
		Golf Course	18	Holes	
		Hotel	500	ROOMS	
		Specialty Retail	66.667	TSF	
		General office	66.667	TSF	
		Assisted Living	500	Beds	
		Senior Living (Detached)	200	DU	
		SFDR	600	DU	
		a TR 32460 (Sussex Capital)	SFDR	58	DU
		b TR 32459 (Sussex Capital)	SFDR	11	DU
58	c TR 30411 (Pacific Communities)	SFDR	24	DU	
		SFDR	31	DU	
		SFDR	47	DU	
		a Westridge Commerce Center	High-Cube Warehouse	937.260	TSF
		b P06-158 (Gascon)	Commercial Retail	116.360	TSF
59	c Auto Mall Specific Plan (PAC)	Commercial Retail	304.500	TSF	
		d ProLogis	Warehousing	367.000	TSF
		High-Cube Warehouse	1,901.000	TSF	
		SFDR	262	DU	
		e TR 35823 (Stowe Passco)	Apartments	216	DU
60	TR 36340	SFDR	275	DU	


Table 4.0-1 Cumulative Project List

TAZ	Project Name	Land Use ¹	Quantity	Units ²
61	a TR 31771 (Sanchez)	SFDR	25	DU
	b TR 34397 (Winchester Associates)	SFDR	52	DU
	c TR 32645 (Winchester Associates)	SFDR	54	DU
62	Lowe's (Moreno Beach Marketplace)	Home Improvement Store	175.000	TSF
63	a Convenience Store/ Fueling Station	Gas Station w/ Market	30.750	TSF
	b Senior Assisted Living	Assisted Living Units	139	DU
	c TR 31590 (Winchester Associates)	SFDR	96	DU
	d TR 32548 (Gabel, Cook & Associates)	SFDR	107	DU
	e 26th Corp. & Granite Capitol	SFDR	32	DU
	f TR 32218 (Whitney)	SFDR	63	DU
	g Moreno Marketplace	Commercial Retail	93.788	TSF
	h Medical Plaza	Medical Offices	311.633	TSF
64	a Moreno Medical Campus	Medical Offices	80.000	TSF
	b Aqua Bella Specific Plan	SFDR	2,922	DU
	c TR 34329 (Granite Capitol)	SFDR	90	DU
	d Cresta Bella	General Office	30.000	TSF
65	a Villages of Lakeview	SFDR	860	DU
		Condo/Townhomes	1,920	DU
		Elementary School	1,200	STU
		Commercial Retail	100.000	TSF
		Soccer Complex	12	Fields
		City Park	8.900	AC
		County Park	8.100	AC
	Regional Park	107.100	AC	
	b Motte Lakeview Ranch	SFDR	847	DU
		Condo/Townhomes	686	DU
		Apartments	467	DU
		Elementary School	650	STU
		Middle School	300	STU
		Commercial Retail	120.000	TSF
Regional Park		177.000	AC	
66	Gateway Area Specific Plan	Commercial Retail	255.000	AC
		General Office	510.000	AC
		Business Park	595.000	AC
		Residential	340.000	AC
67	Moreno Valley Industrial Center (Industrial Area SP)	General Light Industrial	354.810	TSF
68	Centerpointe Business Park	General Light Industrial	356.000	TSF
69	ProLogis/Rolling Hills Ranch Industrial	Heavy Industrial	2,565.684	TSF
70	P05-0493	Logistics	597.370	TSF



**MODULAR LOGISTICS CENTER
ENVIRONMENTAL IMPACT REPORT**

4.0 ENVIRONMENTAL ANALYSIS

Table 4.0-1 Cumulative Project List

TAZ	Project Name	Land Use ¹	Quantity	Units ²
71	P07-1028, -0102; and P09-0416, -0418, -0419	General Light Industrial	652.018	TSF
72	Amstar/Kaliber Development, PP22925	General Light Industrial	42.222	TSF
		Heavy Industrial	409.312	TSF
		Commercial Retail	10.000	TSF
		General Office	258.102	TSF
73	TR 31305 / Richmond American	Residential	87	DU
74	TR 32505 / DR Horton	Residential	71	DU
75	TR 34329 / Granite Capitol	Residential	90	DU
76	TR 31814 / Moreno Valley Investors	Residential	60	DU
77	TR 33771 / Creative Design Associates	Residential	12	DU
78	TR 35663 / Kha	Residential	12	DU
79	TR 22180 / Young Homes	Residential	87	DU
80	TR 32515	Residential	161	DU
81	TR 32142	Residential	81	DU
82	Heartland	Residential	922	DU
83	San Michele Industrial Center (Industrial Area SP)	General Light Industrial	865.960	TSF
84	Hidden Canyon	General Light Industrial	2,890.000	TSF
85	Starcrest, P011-0005, 08-11-0006	General Light Industrial	454.088	TSF
86	Commercial Medical Plaza	Medical Offices	311.633	TSF
87	Mountain Bridge Regional Commercial Community	Commercial	1,853.251	TSF
88	Jack Rabbit Trail	Residential	2,000	DU
89	The Preserve / Legacy Highlands SP	Commercial	595.901	TSF
		Residential	3,412	DU
90	South Perris Industrial Phase 1	Logistics	787.700	TSF
91	South Perris Industrial Phase 2	Logistics	3,448.734	TSF
92	South Perris Industrial Phase 3	Logistics	3,166.857	TSF
93	P 04-0343	Warehousing	41.650	TSF
94	P 06-0228	General Light Industrial	149.738	TSF
95	P 06-0378	Senior Housing	429	DU
96	P 11-09-0011	Retail	80.000	TSF
97	P 12-05-0013	Apartments	75	DU
98	P 12-10-0005	High-Cube Warehouse	1,463.887	TSF
99	TR 30850	Residential	496	DU
100	TR 30973	Residential	35	DU
101	TR 31225	Residential	57	DU
102	TR 31226	Residential	82	DU
103	TR 31240	Residential	114	DU
104	TR 31407	Residential	243	DU
105	TR 31650	SFDR	61	DU
106	TR 31659	SFDR	161	DU
107	TR 32041	Residential	122	DU

Grace Espino-Salcedo

Subject: RE: Brent Whitehead 951.237.0632 - WLC

From: Cindy Miller
Sent: Thursday, June 11, 2015 4:01 PM
To: Richard Sandzimier; Mark Gross
Subject: FW: Brent Whitehead 951.237.0632 - WLC

From: Juliene Clay
Sent: Thursday, June 11, 2015 3:40 PM
To: D. LaDonna Jempson; Dr. Yxstian A. Gutierrez; George Price; Jeffrey J. Giba; Jesse L. Molina
Cc: Cindy Miller; Jane Halstead, CMC; Juliene Clay
Subject: Brent Whitehead 951.237.0632 - WLC

Mr. Whitehead stated he moved out of Moreno Valley. He stated Council can't justify building the WLC, and Moreno Valley doesn't have the infrastructure, and now Highland Fairview wants the City to pay for the infrastructure. He stated the roads are already dangerous. He stated when he saw what was being done to the city, he moved out of Moreno Valley. He stated the people of Moreno Valley should be the ones to vote on the project, not City Council. Mr. Whitehead stated all the Council Members are crooks. He stated he would like to speak to the Council Members, but he doesn't believe anyone will call him back.

Cindy Miller
Executive Assistant to Mayor/City Council
City Council Office
City of Moreno Valley
 p: 951.413.3006 | e: cindym@moval.org W: www.moval.org
 14177 Frederick St., Moreno Valley, CA 92553

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Grace Espino-Salcedo

Subject: RE: planning commissiivote

From: CATHERINE FORTIN [<mailto:cathyfortin@verizon.net>]
Sent: Thursday, June 11, 2015 8:50 AM
To: Jesse L. Molina; yxtiang@moval.com; grgep@moval.org; ladonaj@moval.com
Subject: planning commissiivote

Please vote NO to the zone change re the World Logistics Center. I bought my retirement home in 2002 in Moreno Valley near Cactus & Redlands. Please do not build the massive big box buildings. Isn't there some sort of compromise with the developer?. A mix of residential, office buildings, parks, and just a few of the storage buildings.???

Catherine Fortin
 14756 Eaglehead Mountain Drive
 Moreno Valley, CA 92555

Cindy Miller
Executive Assistant to Mayor/City Council
City Council Office
City of Moreno Valley
 p: 951.413.3006 | e: cindym@moval.org W: www.moval.org
 14177 Frederick St., Moreno Valley, CA 92553

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Grace Espino-Salcedo

Subject: RE: CDFW comments on the FEIR for the World Logistics Center Project (SCH No. 2012021045)

From: Gibson, Joanna@Wildlife [<mailto:Joanna.Gibson@wildlife.ca.gov>]
Sent: Thursday, June 11, 2015 6:49 PM
To: Mark Gross
Cc: state.clearinghouse@opr.ca.gov
Subject: CDFW comments on the FEIR for the World Logistics Center Project (SCH No. 2012021045)
Importance: High

Mr. Gross,

Please find attached the California Department of Fish and Wildlife's comments on the above-mentioned project.

If you have any questions, please feel free to contact me.

Joanna Gibson

Environmental Scientist
 CA Department of Fish and Wildlife
 Inland Deserts Region
 3602 Inland Empire Blvd., Suite C-220
 Ontario, CA 91764
 (909) 987-7449 (voice)
Joanna.Gibson@wildlife.ca.gov
www.wildlife.ca.gov

Every Californian should conserve water. Find out how at:



SaveOurWater.com · Drought.CA.gov

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)



State of California - Natural Resources Agency
 DEPARTMENT OF FISH AND WILDLIFE
 Inland Deserts Region
 3602 Inland Empire Blvd., Suite C-220
 Ontario, CA 91764
 (909) 484-0459
www.wildlife.ca.gov

EDMUND G. BROWN, Jr., Governor
 CHARLTON H. BONHAM, Director



June 11, 2015

Mr. Mark Gross
 Senior Planner
 City of Moreno Valley
 14177 Frederick Street
 Moreno Valley, CA 92553

Subject: Final Environmental Impact Report
 World Logistics Center Project
 State Clearinghouse No. 2012021045

Dear Mr. Gross:

The California Department of Fish and Wildlife (Department) has received and reviewed the Final Environmental Impact Report (FEIR) for the World Logistics Center Project (project) [State Clearinghouse No. 2012021045]. The Department reviewed the Draft Environmental Impact Report (DEIR) and provided comments to the City of Moreno Valley (City; the CEQA lead agency) in a letter dated April 8, 2013. The Department's April 8, 2013 letter expressed concerns related to the adequacy of the assessment of biological resources; impacts (including direct, indirect and cumulative) to biological resources, waters of the state, adjacent and surrounding lands, including the San Jacinto Wildlife Area; and the adequacy and appropriateness of proposed avoidance, minimization, and mitigation measures.

The Department appreciates that some of the concerns raised by the Department in its' April 8, 2013 comment letter were addressed in the FEIR, however the Department still finds the FEIR to be inadequate in its assessment of impacts to biological resources; surrounding and adjacent lands, including the San Jacinto Wildlife Area (Wildlife Area; SJWA); and in the adequacy and enforceability of avoidance, minimization, and mitigation measures proposed by the City. Based on the Department's assessment of the FEIR, the Department recommends that the City revise and recirculate the DEIR to ensure that impacts to biological resources and the habitats upon which they depend (including SJWA) are thoroughly identified and analyzed, and that adequate and enforceable avoidance, minimization, and mitigation measures are incorporated.

As stated in the Department's Notice of Preparation (NOP) comment letter (dated March 22, 2012) and the DEIR comment letter, the Department recommended that the project applicant and the lead agency consult with the Department, and in particular with land management staff from the SJWA for assistance with species occurrence information within the vicinity of the Project site and for assistance with avoidance, minimization, and mitigation measures. To date, the

City and the project applicant have not engaged in consultation with the Department.

COMMENTS AND RECOMMENDATIONS

The Department's comments and recommendations on the FEIR include:

Buffer and Setback Areas

Throughout the environmental document, the approximate 910 acres of State-owned land adjacent to the southern boundary of the project area is referred to as the "CDFW Conservation Buffer Area." Previously, the DEIR stated that *"the CDFW Conservation Buffer Area was originally purchased by the State to provide a buffer between SJWA/Mystic Lake and future development within the Moreno Highlands Specific Plan."* The Department's April 8, 2013 DEIR comment letter, clarified that the lands that comprise the "CDFW Conservation Buffer Area" include agricultural properties that were purchased by the Department from individual land owners through grants attained under the Safe Neighborhood Parks, Clean Water, Air & Coastal Protection Bond Act (Prop 12). The lands were purchased by the Department and incorporated into the SJWA to expand the existing wildlife area, provide upland refuge for Stephens' kangaroo rat during flooding events at Mystic Lake, and to contribute toward the preservation of a wildlife corridor between the SJWA and the San Timoteo Badlands (Badlands). The intent of the Department's DEIR letter was to make it clear that the additional lands are not a buffer area; rather they are an important part of the Wildlife Area

The FEIR has been updated to state that the *"land was purchased by the State...as additional upland habitat for the SJWA,"* it unfortunately still characterizes the function of this purchase as *"to act as a buffer between sensitive biological resources of the SJWA and the future urban development under the Moreno Heights Specific Plan,"* this is not an accurate portrayal of the intent of the purchase or function of the property. The FEIR identifies the 910 acres of the Wildlife Area, plus a minimally proposed setback of 250 feet to "buffer" the impacts of the project, and to provide mitigation for the loss of avian foraging habitat.

The Department agrees that these lands should be rezoned/designated as Open Space (as stated in the FEIR); however, the lands cannot be used to offset impacts associated with development of the Project, contribute to a setback/buffer from the Project, or to mitigate/minimize impacts resulting from the Project.

Mitigation Measure 4.4.6.1A provides for a 250-foot setback from the southerly property line. As this area includes maintained, engineered facilities required by the development, it cannot be considered as a setback or buffer from development and it certainly cannot be considered to provide mitigation to compensate for the loss of raptor foraging habitat, as proposed in Mitigation Measure 4.4.6.4C. Because this area will include maintained, engineered facilities, and other related uses necessary to the project, the area should be considered a component of the development.

Mitigation Measure 4.4.6.1A also states that logistics buildings may be located within 400 feet of the southerly property line. Given that the SJWA is an active hunting area the Department queries how the City can propose or allow for development within 450 feet of the property boundary line, without constraining the public's use of the SJWA. Note that Fish and Game Code Section 3004 prohibits the discharging of firearms within 150 yards (450 feet) of any building without express permission of the owner. As written Mitigation Measure 4.4.6.1A creates restraints on hunting with the Wildlife Area, and therefore the FEIR is deficient in its analysis of impacts on public access and recreational pursuits within the SJWA.

As previously stated (in the Department's April 8, 2013 comment letter), the Department recommends that the project provide a *minimum* 250-meter (825 feet) natural/undeveloped buffer within its own development footprint. The 250-meter setback/buffer area should not contain any manufactured structures, such as detention and water quality basins, walls and fences, or irrigated landscaping. The Department recommends that the City condition Mitigation Measures 4.4.6.1A, 4.4.6.1B, 4.4.6.4C, and 4.4.6.4H to require a *minimum* 250-meter natural/undeveloped buffer setback within the project's own development footprint from the SJWA. A minimum 250-meter natural/undeveloped buffer setback will provide for a sufficient distance between hunting activities on the SJWA and will also more appropriately buffer environmental impacts associated with proposed landscape areas, drainage and water quality facilities, barriers (walls and fencing), maintenance access drives, and other related uses. Given the size of the project development footprint, a minimum 250-meter natural/undeveloped buffer will also provide for more appropriate compensatory mitigation for the loss of raptor foraging habitat and will afford greater opportunity for wildlife movement between the SJWA and the Badlands.

Loss of Avian Foraging Habitat

The Department continues to disagree with the City's conclusion that avian foraging habitat currently available on the project site is "marginal," based on documented use of adjacent lands and the project site itself by a multitude of avian species, including but not limited to Bald Eagle, Golden Eagle, Loggerhead Shrike, California Horned Lark, White-tailed Kite, Ferruginous Hawk, Merlin,

Prairie Falcon, Peregrine Falcon, Barn Owl, Short-eared Owl, Red-shouldered Hawk, Red-tailed Hawk, American Kestrel, and Burrowing Owl. Based on the diversity of species found utilizing the Project area (recorded from biological surveys conducted by the Biological Monitoring program of the Western Riverside County Multiple Species Habitat Conservation Plan [MSHCP], and observations by SJWA land management staff), it is the opinion of the Department that the foraging habitat currently available on the Project site is superior to “marginal.”

As noted above, the Department has previously requested and is still available to consult with City staff and the project applicant to adequately identify, characterize and disclose project impacts, and more fully inform the impact analysis and assist in developing adequate avoidance, minimization, and mitigation measures.

Impacts to Sensitive Plant Species and Proposed Relocation to the 250-foot Setback Area

Mitigation Measure 4.4.6.2A proposes relocation of listed plant species to the 250-foot buffer area. Please note that the Department generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species as studies have shown that these efforts are experimental in nature and largely unsuccessful. Furthermore, the level of detail available in Mitigation Measure 4.4.6.1A is insufficient for the Department to assess this proposal. Note that plans for relocation of listed plant species should be prepared by persons with expertise in native plant relocation techniques and the plans should identify the assumptions used to develop the proposed relocation strategy.

The Department also queries the appropriateness of the relocation of listed plant species to the 250-foot buffer area as this area is proposed for “...landscape areas, drainage and water quality facilities, barriers (walls and fencing), maintenance access drives, and other related uses.” Both Mitigation Measure 4.4.6.1A and 4.4.6.2A fail to provide information on funding sources available for listed plant relocation efforts or the level of detail required in the “landscape plans” for enforceability of these mitigation measures by the City.

Focused Plant Surveys

Given that southern California is in its fourth year of drought, the Department recommends that Mitigation Measure 4.4.6.2A be conditioned to require updated focused plant surveys for all Plot Plan applications. The Department also recommends that Mitigation Measure 4.4.6.2A specifically require that floristic-based assessments of special status plants and natural communities follow the Department's *Protocols for Surveying and Evaluating Impacts to Special Status*

Native Plant Populations and Natural Communities (see <https://www.wildlife.ca.gov/Conservation/Plants>).

Impacts to Waters of the State

The Department appreciates that Mitigation Measure 4.4.6.3A requires the submission of a Notification of Lake or Streambed Alteration to the Department prior to the issuance of grading permits. However, the Department is concerned that the focus of Mitigation Measure 4.4.6.3A is limited to impacts to “riparian habitat.” Note that Section 1600 of the Fish and Game Code (FGC) was enacted by the Legislature to provide conservation to fish and wildlife resources associated with stream ecosystems. There is no mention in the FGC that Section 1600 *et seq.* is limited in application to only those streams that contain iconic riparian habitat.

The Department is also concerned that the FEIR fails to adequately identify impacts associated with the capture of offsite drainages (offsite debris basins), retention of those drainages, and subsequent controlled release of these waters to the adjacent SJWA. It is also unclear whether post-construction onsite storm-water runoff will be released from detention basins to downstream lands. The Department is concerned that State-owned land may be adversely impacted by the compounded point releases of flows that may have normally sheet flowed or traveled within numerous smaller drainages. The Department recommends the recirculated DEIR include specific and detailed plans for all drainage control facilities, including the offsite debris basins and any proposed outlet facilities. The recirculated DEIR should also disclose and analyze impacts associated with these facilities, and provide appropriate mitigation to offset impacts.

The Department opposes the elimination of all streams and their associated habitats and recommends avoiding streams and associated habitat to the greatest extent possible. Projects that anticipate impacts to streams should provide appropriate compensatory mitigation to offset permanent losses. Mitigation Measure 4.4.6.3A only identifies the need for compensatory mitigation for impacts to riparian habitat, and compensatory mitigation is proposed to be satisfied through the planting of iconic riparian vegetation in detention basins proposed for construction within the 250-foot buffer area. The Department finds this proposal unacceptable as it proposes mitigation in detention basins that will, in the Department’s experience, require in-perpetuity management. Furthermore, because in-perpetuity protection and in-perpetuity funding is not proposed for this area, the FEIR fails to identify in-perpetuity compensatory mitigation for the permanent loss of hundreds of feet of ephemeral streams within the project site. As such, the Department finds that Mitigation Measure 4.4.6.3A fails to describe adequate mitigation to reduce impacts to areas subject to FGC Section 1600 *et seq.* to a level less than significant. The Department recommends that Mitigation

Measure 4.4.6.3A be conditioned to require mitigation for impacts to all areas subject to FGC Section 1600 *et seq.*

Please note that the Department's issuance of an LSA Agreement is a "project" subject to CEQA (see Pub. Resources Code 21065). To facilitate issuance of an LSA Agreement, if necessary, the environmental document should fully identify the potential impacts to the lake, stream, or riparian resources, and provide adequate avoidance, mitigation, and monitoring and reporting commitments. Early consultation with the Department is recommended, since modification of the proposed project may be required to avoid or reduce impacts to fish and wildlife resources. To obtain a Lake or Streambed Alteration notification package, please go to <http://www.dfg.ca.gov/habcon/1600/forms.html>.

Impacts to Nesting Birds and Burrowing Owl

Mitigation Measure 4.4.6.4A identifies the breeding bird season as occurring between "...February 1 and August 31". Please note that some species of raptors (e.g., owls) may commence nesting activities in January, and passerines may nest later than August 31. The Department encourages the City to revise Mitigation Measure 4.4.6.4A to require nesting bird surveys regardless of time of year to ensure compliance with all applicable laws related to nesting birds and birds of prey.

The Department also recommends that Mitigation Measure 4.4.6.4A be conditioned to require pre-construction nesting bird surveys no more than three (3) days prior to vegetation clearing or ground disturbance activities, as instances of nesting could be missed if surveys are conducted sooner. Surveys should occur over the entirety of the project site, and not be limited to those areas with shrubs and trees, as some species nest directly on the ground.

Mitigation Measure 4.4.6.4D provides mitigation measures for impacts to burrowing owl. The Department recommends that Mitigation Measure 4.4.6.4D be revised to require consultation with the Department for any relocation (passive or active) of burrowing owls. We recommend notification to the Department if owls are found to be present onsite and the development of a conservation strategy in cooperation with the U. S. Fish and Wildlife Service, the Department, and the Western Riverside County Regional Conservation Authority.

The Department also recommends that Mitigation Measure 4.4.6.4D be revised to include MSHCP Burrowing Owl conservation requirements should the project site be found to support three or more pairs of burrowing owls.

Proposed Management of the 250-foot Setback Area

Mitigation Measure 4.4.6.4I details that the individual property owner and/or Property Owners Association (POA) will be responsible for maintaining the "...various onsite landscaped areas, open improved or natural drainage channels, and detention or flood control basins in a manner that provides for fuel management and vector control..." The Department requests clarification as to whether Mitigation Measure 4.4.6.4I will also apply to the 250-foot setback area. In the Department's experience, the land management activities described in Mitigation Measure 4.4.6.4I are not compatible with land managed for conservation purposes, and therefore, the Department is concerned that these activities are proposed in an area that is also proposed as mitigation to offset the loss of raptor foraging habitat. The Department has also found that conditioning such maintenance activities to Property Owners Associations may lead to deferred maintenance as funding is not always available to complete necessary activities.

Wildlife Movement

The FEIR states that the Project will not restrict wildlife movement to and from the Badlands and SJWA/Mystic Lake area. As proposed, the project will abut the Badlands along portions of its northern border as well as its nearly 2-mile long eastern border at Gilman Springs Road, creating an obstruction to wildlife movement between the Badlands and open areas to the south (Existing Core H of the MSHCP, Mystic Lake, Lake Perris, and SJWA). Though a narrow connection between the Badlands and open space areas to the south are anticipated through future acquisitions within Proposed Core 3 of the MSHCP, this limited connection is conceptual and has not been finalized. The proposed Project will create a nearly 2-mile long physical barrier between the Badlands and MSHCP Proposed Core 3 to the north, and the SJWA and existing Core H to the south.

As mentioned in the Department's DEIR comment letter, data collected from three culvert crossings under SR-60, located just north of the Project area, has demonstrated extensive wildlife movement activities adjacent to the proposed Project. Species observed using the crossings include: bobcat, badger, coyote, deer, long-tailed weasel, black-tailed jackrabbit, and desert cottontail. Future phased development of the Project, along with associated increases in traffic, lighting, and noise, will likely directly negatively impact wildlife through direct mortality, or alter movement patterns by forcing wildlife to move east or west, away from the Project, and by precluding the ability of wildlife to use the existing culverts under SR-60. Furthermore, the project and related growth-inducing effects will likely contribute to a need for the creation of new roads, new or improved interchanges, and widening of existing roadways, such as Gilman Springs Road and SR-60. These future road improvements will result in impacts

to the existing culverts that are used as wildlife crossings. The Department previously requested that studies be conducted to understand the potential impacts of the Project on wildlife movement within and adjacent to the Project site and that mitigation measures focusing on reducing impacts to wildlife (e.g., direct mortality) and wildlife movement within the geographic setting of the Project area be incorporated in the EIR. The City has chosen to ignore the Department's recommendations for analyses of impacts on wildlife movement as the FEIR infers that these analyses will be postponed until adjacent road improvement projects are proposed. In the Department's opinion improvements to adjacent roads will be a reasonably foreseeable future need, and as such an analysis of adjacent road upgrades should be included in this project's CEQA document.

Department Conclusions and Further Coordination

Due to the inclusion of landscape areas, drainage and water quality facilities, barriers (walls and fencing), maintenance access drives, and other related uses within the 250-foot setback from the southerly property line, the Department considers this area a direct impact of the proposed project, not an aspect of mitigation. The facilities to be constructed, the ongoing operation, and the future maintenance of the facilities within the setback area will impact the adjacent open space areas, including the SJWA. In effect, the project as proposed uses the adjacent open space areas and the SJWA as a buffer and mitigation for the project. The Department also finds that this area is insufficient as compensatory mitigation for impacts to foraging avian species, and given the proposed management of the area it is not a suitable location for the relocation of sensitive plant species. The Department strongly recommends that the City condition the project to incorporate a *minimum* 250-meter natural/undeveloped land setback area along its southern boundaries, and within the project footprint, where the project abuts open space areas (including the SJWA). Without revising the buffer distance and the development proposed within this area, including an analysis of reasonably foreseeable adjacent road upgrades, and completing a thorough analysis of the impacts of this project on wildlife movement, the Department does not agree that the project is being mitigated to a level less than significant for impacts to adjacent open space lands and associated wildlife species and habitat.

Final Environmental Impact Report
World Logistics Center Project
SCH No. 2012021045
Page 9 of 9

The Department appreciates the opportunity to comment on the FEIR for the World Logistics Center Project (SCH No. 2012021045) and recommends that the City of Moreno Valley address the Department's comments and concerns and recirculate the DEIR. If you should have any questions pertaining to the comments provided in this letter, please contact Joanna Gibson at (909) 987-7449 or at Joanna.Gibson@wildlife.ca.gov.

Sincerely,

(For)

Leslie MacNair
Acting Regional Manager

cc: State Clearinghouse, Sacramento



San Bernardino Valley
Audubon Society

Submitted via USPS and E-mail

June 10, 2015

Mark Gross
City of Moreno Valley
Community and Economic Development Department
14177 Frederick Street
Post Office Box 88005
Moreno Valley, California 92552
MarkG@moval.org

RE: Comments on the Final Environmental Impact Report for the World Logistics Center Project, State Clearinghouse No. 2012021045

Dear Mr. Gross:

These comments are submitted on behalf of the Center for Biological Diversity and San Bernardino Valley Audubon Society (collectively “Conservation Groups”) on the World Logistics Center Project (“Project”), located south of Interstate 60 on the eastern edge of Moreno Valley. The Project would be the largest master-planned warehouse development in U.S. history, totaling approximately 40.6 million square feet on 2,610 acres. The Project would result in significant impacts to air quality contributing tons of criteria pollutants into an area currently designated as non-attainment under the Clean Air Act, poses a significant impact to climate change, and threatens the adjacent San Jacinto Wildlife Area.

The Final Environmental Impact Report (“EIR”) fails to adequately describe the Project and the environmental setting, including the creation of a fictional “CDFW Conservation Buffer Area”, which effectively removes over 1000 acres from the San Jacinto Wildlife Area (“SJWA”) and core reserve lands under the Western Riverside County Multiple Species Habitat Conservation Plan (“MSHCP”). The FEIR also fails to analyze a range of environmental impacts, mitigation measures, and alternatives. At a minimum, the FEIR must be revised and recirculated to remedy these deficiencies. However, because of the permanent and irreconcilable conflicts with public health and environmental protection the Project should be denied.

Alaska • Arizona • California • Florida • Minnesota • Nevada • New Mexico • New York • Oregon • Vermont • Washington, DC

Jonathan Evans, Environmental Health Legal Director and Senior Attorney
1212 Broadway Suite 800 • Oakland, CA 94612 • 415-436-9682 x318 • Fax: 415-436-9683 • jevans@biologicaldiversity.org

The Center for Biological Diversity (“the Center”) is a non-profit environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center for Biological Diversity has over 900,000 members and e-activists throughout California and the western United States, including residents of western Riverside County. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in the Inland Empire.

The San Bernardino Valley Audubon Society (“SBVAS”) is a local chapter of the National Audubon Society, a 501(c)3 corporation. The SBVAS chapter area covers almost all of Riverside and San Bernardino Counties and includes the project area. It has about 2,000 members, about half of whom live in Riverside County. Part of our chapter’s mission is to preserve habitat in our area, not just for birds, but for other wildlife, and to maintain the quality of life in the Inland Empire.

It is well established that the purpose of an EIR is to provide public agency decision-makers and members of the public with an informational document that explains potentially significant environmental impacts and feasible mitigation measures. (Cal. Pub. Res. Code §§ 21002.1, 21061; Guidelines §§ 15121, 15151; *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 426-27; *Carmel Valley View, Ltd. v. Board of Supervisors* (1976) 58 Cal.App.3d 817, 821-822.) An EIR must include the full range of potentially significant impacts, as well as reasonably prudent avoidance, minimization, and mitigation measures in the EIR to comply with CEQA’s information disclosure requirements. (Pub. Res. Code § 21000 et seq.) CEQA requires the planning agency to “mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so.” (Pub. Res. Code §§ 21002.1(b); 15126.4.) Mitigation of a project’s significant impacts is one of the “most important” functions of CEQA. (*Sierra Club v. Gilroy City Council* (1990) 222 Cal.App.3d 30, 41.) Importantly, mitigation measures must be “fully enforceable through permit conditions, agreements, or other measures” so “that feasible mitigation measures will actually be implemented as a condition of development.” (*Federation of Hillside & Canyon Ass’ns v. City of Los Angeles* (2000) 83 Cal.App.4th 1252, 1261 ((quoting Pub. Res. Code § 21081.6(b)).)

I. THE FEIR MUST BE RECIRCULATED FOR PUBLIC REVIEW AND COMMENT

The FEIR must be recirculated since it is based on outdated or inapplicable studies and data, and significant new information substantially changes the FEIR’s analyses of the Project’s impacts, alternatives and required mitigation, as we explain below. (*Laurel Heights Improvement Assn. v. Regents of Univ. of Cal.* (1993) 6 Cal.4th 1112, 1132 (*Laurel Heights*)).

Under CEQA, an EIR must be re-circulated for review and comment whenever significant new information becomes known to the lead agency and is added to the EIR, after public notice of the availability of the draft document has been made, and before the EIR is certified. (Pub. Res. Code § 21092.1.) Under such circumstances the lead agency is specifically required to re-notice the environmental review document to the public and all responsible agencies, and is required to obtain comments from the same, before certifying the document's impacts, its alternatives analyses, and any mitigation measures. (*See id.*; *see also*, Cal Pub. Res. Code § 21153.) A lead agency's decision not to recirculate an EIR must be supported by substantial evidence. (CEQA Guidelines § 15088.5(e).)

“Significant new information” includes any information regarding changes in the environmental setting of the project under review. (CEQA Guidelines § 15088.5(a).) It also includes information or data that has been added to the EIR and is considered “significant” because it deviates from that which was presented in the draft document, depriving the public from a meaningful opportunity to comment upon a significant environmental effect of the project, or a feasible way to mitigate or avoid such an effect at the time of circulation of the draft. (*Id.*) Some examples a lead agency must re-circulate an EIR for further public comment are:

- (1) When the new information shows a new, substantial environmental impact resulting either from the project or from a mitigation measure;
- (2) When the new information shows a substantial increase in the severity of an environmental impact, except that recirculation would not be required if mitigation that reduces the impact to insignificance is adopted;
- (3) When the new information shows a feasible alternative or mitigation measure that clearly would lessen the environmental impacts of a project and the project proponent declines to adopt the mitigation measure; or
- (4) When the draft EIR was “so fundamentally and basically inadequate and conclusory in nature” that public comment on the draft EIR was essentially meaningless.

(CEQA Guidelines §15088.5.)

Recirculation is thus required when the addition of significant new information that substantially changes the FEIR's analyses of the Project's impacts, alternatives and required mitigation. (*Laurel Heights*, 6 Cal.4th at 1132.) Accordingly, “[t]he CEQA reporting process is not designed to freeze the ultimate proposal in the precise mold of the initial project; indeed, new and unforeseen insights may emerge during investigation, evoking revision of the original proposal.” (*County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 199 (citation omitted).)

Based on the comments below and our previous comments to the draft EIR, it is clear that the FEIR must be re-drafted and re-circulated. Conditions (1) and (2) above

will be met by meaningful and adequate discussion of the Project itself and the project's impact to the following: biological resources which were excluded from review, analysis of greenhouse gas emissions, water supply and availability, and water quality. Specifically, comments on the EIR provide new information about the following: the EIR's attempt to mask impacts to property owned by the California Department of Fish and Wildlife ("CDFW"), failure to disclose impacts to hydrological and riparian/riverine resources, failure to analyze the impacts of wastewater mitigation basins and special status species placed in a buffer zone adjacent to the San Jacinto Wildlife Area, failure to analyze the substantial increase in impacts to wildlife corridors, and the failure to properly analyze significant impacts disclosed in comments, new biological reports, including impacts to raptor habitat. The FEIR also fails to take into account all potential sources of greenhouse gas ("GHG") emissions from the Project and then ignores large emission sources when completing the FEIR's significance analysis. The FEIR improperly relies on AB 32's Cap and Trade Program to fully minimize and mitigate nearly 400,000 metric tons of CO2 emissions at full build out of the Project, despite readily available and feasible GHG emissions mitigation measures that would lower the Project's overall GHG emissions and contribution to climate change. Additionally, the FEIR fails to adequately account for the unreliability of water supply for this Project due to unprecedented drought and climate change conditions, and thus fails to disclose and analyze Project impacts on water supply in light of ongoing and worsening water scarcity. Condition (3) will be met because the EIR fails to incorporate feasible mitigation measures or alternatives that were provided by the public and responsible agencies after the circulation of the EIR such as realignment drainage 9 or adopting burrowing owl relocation programs. The combined effect of these omissions makes it clear that the fourth condition has also been met. Failure to address these impacts is inadequate and requires further analysis and recirculation.

II. THE PROJECT IS IMPROPERLY ANALYZED UNDER A PROGRAMMATIC EIR

The applicant should have prepared a project EIR instead of the current programmatic EIR for this Project. A project EIR is appropriately prepared for a "construction-level project, and 'should focus primarily on the changes in the environment that would result from the development project [and] examine all phases of the project including planning, construction, and operation.'" (*Citizens for a Sustainable Treasure Island v. City and County of San Francisco* (2014) 227 Cal.App.4th 1036, 1047 (quoting Guidelines § 15161) (*Treasure Island*); see also *In re Bay-Delta etc.* (2008) 43 Cal.4th 1143, 1169.) A programmatic EIR, on the other hand, "evaluates the broad policy direction of a planning document, such as a general plan, but does not examine the potential site-specific impacts of the many individual projects that may be proposed in the future consistent with the plan." (*Treasure Island*, 43 Cal.4th at 1047; see also Guidelines §15168.)

The “level of detail in an EIR is driven by the nature of the project, not the label attached.” (*Treasure Island*, 43 Cal.4th at 1051.) “An EIR on a construction project will necessarily be more detailed in the specific effects of the project than will be an EIR on the adoption of a local general plan” (CEQA Guidelines § 15146.) Since this Project proposes to develop a business park where specific information is known for each aspect of the Project, (FEIR at 1-6, 1-7), it necessarily requires the preparation of a project EIR to assess and mitigate the impacts consistent with the degree of specificity of the activities proposed. (*Treasure Island*, 43 Cal.App.4th at 1051-52.)

III. THE FEIR FAILS TO ADEQUATELY ANALYZE AND MITIGATE IMPACTS TO BIOLOGICAL RESOURCES

The FEIR fails in providing the level of analysis mandated by CEQA because it fails to address numerous aspects of how the Project will affect wildlife, as well as providing a thorough analysis of the Project’s impacts to sensitive species and ecological communities. Moreover, the EIR fails to adhere to CEQA’s substantive mandate to adopt mitigation measures and alternatives to reduce a project’s significant impacts wherever feasible. The FEIR maintains several of the deficiencies outlined in comments on the Draft EIR by conservation groups, US Fish and Wildlife Service, California Department of Fish and Wildlife (“CDFW”), and the public.

A. Failure to Properly Disclose and Analyze Impacts to Biological Resources

The FEIR fails to adequately disclose and analyze the Project itself, adjacent areas of biological importance, and impacts to biological resources. Importantly the FEIR continues to rely upon land held by the California Department of Fish and Wildlife in the San Jacinto Wildlife Area as a buffer for the development, instead of relying upon the Project area itself to mitigate for its impacts to biological resources. By representing the area to the south of the Project that is owned for conservation by CDFW as a buffer for the development the EIR fails to properly disclose the existing environmental conditions in the vicinity of the Project and disclose how the Project will impact those lands already set aside for permanent conservation in contravention of CEQA. (*San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus*, 27 Cal. App. 4th 713, 722.)

The FEIR also fails to adequately analyze, and disclose impacts of the wastewater detention basins placed into the 250 foot buffer zone adjacent to the San Jacinto Wildlife Area. These wastewater flood control basins are proposed as equivalent or superior to existing riparian resources under the DBESP. However, flood basins require maintenance such as mowing or dredging that could preclude replacement of the riparian values proposed in the DBESP. The basins may also inhibit sediment flow and de-water rare alkaline resources at the San Jacinto Wildlife Area. The FEIR also fails to analyze the impacts of relocation of sensitive wildlife species into the 250 buffer zone that is also proposed for wastewater detention basins or analyze the potential conflicts that the

multiple uses might pose. For example, transporting burrowing owls and the Los Angeles Pocket Mouse (“LAPM”) to the same location that also includes wastewater management poses conflicts between the mitigation features, including inter-species conflicts because burrowing owls may prey on LAPM. Moreover, the 250 foot buffer does not provide a sufficient spatial area to accommodate all of these mitigation uses.

The FEIR fails to adequately analyze the impacts to sensitive species, such as the burrowing owl and LAPM. As noted in previous comments the EIR fails to adequately disclose and analyze impacts to burrowing owl. The FEIR also fails to adequately analyze impacts to LAPM because the biological surveys purport to capture similar species, such as long tailed pocket mice and desert pocket mice even though the range of those species does not include the project area. The FEIR must disclose the survey results for those species in order to determine whether the EIR provides the substantial evidence required to demonstrate that the species captured were not LAPM, which is a protected species under the MSHCP.

The FEIR fails to disclose impacts to wildlife corridors or analyze conflicts between the MSHCP’s requirements for wildlife corridors. The Project has the potential to impact wildlife movement between the San Timoteo Badlands, the San Jacinto Wildlife Area, Core H of the MSHCP, and Lake Perris. The Project, including building developments, road construction, and traffic, creates an obstruction to wildlife movement between these regionally important wildlife areas. The EIR also fails to adequately describe how the existing drainage 9 or mitigation to that drainage will impact potential wildlife movement. The EIR engages in a cursory dismissal of those impacts and fails to disclose the conflict with the MSHCP.

As summarized by the US Fish and Wildlife Service and CDFW, who are implementing agencies on the MSHCP, the FEIR fails to conform with the MSHCP:

We cannot concur with the conclusion in the DBESP until [] questions regarding site hydrology, assessment of riparian/riverine resources, the presence of Los Angeles pocket mouse and redirection of wildlife movement around the site are resolved and a strategy [that] is equivalent or superior to avoidance has been identified.

(FEIR App. E-16, Comment 12.) The deficiencies in the FEIR must be addressed before final consideration of the Project.

i. The FEIR fails to adequately analyze biological impacts on riparian/riverine features and jurisdictional waterways

The FEIR fails to properly analyze the impacts to biological resources by failing to properly disclose riparian/riverine and hydrological features. The failure to properly disclose the impacts to several hydrological features also prevents the FEIR from

properly conforming to the Western Riverside County Multiple Species Habitat Conservation Plan (“MSHCP”), including the failure to perform an adequate Determination of Biologically Equivalent or Superior Preservation (“DBESP”) as required by the MSHCP. Failure to properly disclose the riparian/riverine and hydrological features is a necessary predicate to determining avoidance and mitigation measures that are necessary through both the programmatic and project level DBESP analysis.

The failure of the EIR to properly disclose and analyze the impacts to riparian/riverine features prohibits the Project’s compliance with the Western Riverside County MSHCP. The MSHCP requires a specific analysis for riparian/riverine resources. (MSHCP Section 6.1.2). The MSHCP defines riparian/riverine areas as lands which contain habitat dominated by plants which occur close to or which depend upon soil moisture from a nearby fresh water source, or areas with fresh water flow during all or a portion of the year. (MSHCP Section 6.1.2.) The biological studies for the Project recognize that riparian/riverine features occur in drainage features 7, 8, 9, and 12, and 15. (FEIR at 1-37, 4.4-87). Because the Project will impact these resources a Determination of Biologically Equivalent or Superior Preservation (“DBESP”) is required. (MSHCP Section 6.1.2). A DBESP analysis requires, at a minimum, a determination of whether avoidance is feasible, minimization measures for indirect impacts, mitigation that would fully offset any impacts, and a determination that mitigation proposed is biologically equivalent or superior. (MSHCP Section 6.1.2).

However, the FEIR fails to conduct the analysis of riparian/riverine features and DBESP analysis required by the MSHCP. Instead, the EIR only conducts a programmatic DBESP and defers a full analysis of the Project’s impacts on riparian/riverine features and a project-based DBESP analysis until the future. (FEIR at 4.4-87, 4.4-92.) As we stated previously, the applicant incorrectly conducted a programmatic EIR despite this proposed development clearly being one project. (*See* Section II above.) The programmatic DBESP analysis is also improper as it segments much of the Project’s impacts into smaller phases that will improperly mask the cumulative impacts of the Project. It further defers much of the analysis and mitigation to a later phase in contravention of CEQA. For example, the FEIR states that “impacts will be mitigated through a combination of riparian habitat creation on-site, creation of riparian habitat off-site, and/or purchase of credits at an approved mitigation bank.” Appendix E-7 DBESP Analysis at 27, 31, 40 (“Project-specific mitigation measures have not been created nor approved because a program level document cannot provide that level of specificity.”) In order for a programmatic analysis to be functional it must provide enough information to demonstrate that the mitigation strategy is equivalent or superior to avoidance, but the vague and deferred nature of the DBESP precludes this information from being disclosed to the public or decisionmakers. A more defined DBESP is needed to conform to the MSHCP and CEQA’s requirements for analysis and mitigation of impacts.

The FEIR contradicts itself in discussions regarding whether riparian habitats exist in the Project area. In analyzing consistency with applicable local General Plan Policies the FEIR states “[t]here is no riparian habitat within the Specific Plan area.” (FEIR Vol. 1 (Response to Comments) at 442.) However, the FEIR itself contradicts this statement in finding that five drainage features (Drainages 7, 8, 9, 12 and 15) were determined to be riparian/riverine under MSHCP guidelines and waters of the state subject to CDFW and RWQCB jurisdiction under Section 1600 of the Fish and Game Code and Porter Cologne Act. (FEIR at 4.4-59, 4.4-90; FEIR Vol. 1 (Response to Comments) at 438.)

Additionally, the FEIR claims that Drainage feature 14 contains “no native riparian habitat.” (FEIR at 4.4-90.) However, this is contradicted by other portions of the FEIR and the biological surveys for the project from the DEIR, which indicated that the native habitat of “southern willow scrub” occupied 0.86 acres of drainage feature 14 and provides habitat for least Bell’s vireo, and southwestern willow flycatcher. (FEIR at 4.4-14, 4.4-45; *see also* DEIR App. E at 54, 120; *but see* FEIR App. E at 67 (omitting size of southern willow scrub and dismissing habitat ability to support sensitive bird species without explaining discrepancy between this and previous study).) Attempts to dismiss the riparian areas in the text of the FEIR by asserting that it does not provide suitable habitat for riparian/riverine planning species, when other portions of the FEIR and studies for the DEIR acknowledge that the area contains habitat that could be used by native wildlife runs contrary to CEQA.

The FEIR also attempts to dismiss the impacts to this riparian habitat by citing to a portion of the MSHCP, which purports to minimize the requirements to analyze impacts to riparian/riverine resources that are artificially created. (FEIR Vol. 1 (Response to Comments) at 442.) However, this does not minimize the requirement to disclose, analyze, and mitigate impacts to sensitive habitat and wildlife as required under CEQA. The FEIR goes further in masking the conflict with applicable plans by claiming that the riparian areas containing riverside sage scrub, southern willow scrub, and mule fat scrub are not natural drainage courses requiring preservation under mitigation under the Moreno Valley General Plan Policy 7.4.3. The EIR’s failure to adequately disclose and analyze the Project’s impacts to riparian features conflicts with and prevents a proper analysis of impacts and mitigation for the regional MSHCP and local plans.

Finally, the FEIR fails to and must fully disclose and analyze the biological impacts to this jurisdictional waterway and discuss the potential alternatives and mitigation measures for this impact prior to project approval. Several drainage features, including drainage features 7, 8, 9, 12 and 15, are subject to the jurisdiction of the CDFW and Regional Water Quality Control Board (“RWQCB”), but site specific jurisdictional delineations, evaluations of impacts, and proposed mitigation measures are deferred. (FEIR at 4.4-90). Drainage features 12 and 15 are subject to the jurisdiction of the U.S. Army Corps of Engineers (“USACE”). (FEIR at 4.4-63.) Based on our previous comments to the DEIR, the FEIR now includes that a qualified biologist will prepare a

jurisdictional delineation for any drainage channels affected by the project on and off-site. (FEIR at 4.4-91, 4.4-92.) The FEIR states that this JD will be submitted to USACE and CDFW for concurrence, and that consultation with RWQCB and CDFW may still need to be required for these permits. (*Id.*) This measure still fails to meet the CEQA requirement to analyze and mitigate impacts to jurisdictional waterways and associated biological and hydrological resources, especially given that it already acknowledges that several drainages are under the jurisdiction of USACE, CDFW, and RWQCB. (FEIR at 4.4-90; CEQA Guidelines §§ 15126.2, 15126.4; Pub. Res. Code § 21081.6(b).)

B. Failure to Adopt Feasible Mitigation Measures and Deferral of Mitigation

The EIR's attempt to rely upon a programmatic analysis of the specific plan leads to an improperly vague deferral of mitigation measures. The FEIR states that "impacts will be mitigated through a combination of riparian habitat creation on-site, creation of riparian habitat off-site, and/or purchase of credits at an approved mitigation bank." (FEIR App. E-7 DBESP Analysis at 27, 31, 40 ("Project-specific mitigation measures have not been created nor approved because a program level document cannot provide that level of specificity.")) However, this fails to provide the level of detail required to determine whether the EIR will meet the standards for biologically or superior equivalence as required by the MSHCP and the EIR's commitment to those standards to mitigate impacts to biological resources.

The FEIR improperly rejects several specific mitigation measures proposed by the US Fish and Wildlife Service and CDFW. The FEIR fails to adopt feasible mitigation for the realignment of drainage 9 without any substantial evidence ("realignment of the entire drainage from Gilman Springs Road to the habitat associated with the SJWA is not feasible.") (FEIR App. E-16, Response to Comment 10.) The lead agency cannot simply dismiss CEQA's substantive mandate to mitigate impacts with conclusory statements. The EIR also rejects fencing along Gilman Springs Road in order to address the impacts from the Project on wildlife movement due to obstructions and increased traffic. (FEIR App. E-16, Response to Comment 4.) The FEIR asserts that it cannot coordinate with the County of Riverside on fencing the area northeast of Gilman Springs Road because the Project owner is not the owner of that property. However, there is no evidence that the project proponent or lead agency even approached the County about implementing such a mitigation measure. This mitigation measure would also be a proper subject for any annexation proceedings that are necessary for the Project.

The EIR also fails to adopt feasible mitigation measures to reduce the Project's impacts to special status species, such as the burrowing owl. The US Fish and Wildlife Service and CDFW requested that a relocation plan be developed for any burrowing owls that may be found on the project site because burrowing owls have been found on the project site in the past. (FEIR App. E-16, Comment 4.) However, the EIR takes the legally untenable position that the FEIR and specific plan are "not a vehicle to

establish/enforce environmental mitigations nor does the City of Moreno Valley... place conditions on th[ese] documents.” (FEIR App. E-16, Response to Comment 4.) This clearly misinterprets CEQA’s requirements that mitigation measures be concrete and enforceable.

IV. THE FEIR’S GREENHOUSE GAS EMISSIONS ANALYSIS IS INADEQUATE AND INCOMPLETE

The FEIR’s analysis of the Project’s greenhouse gas (“GHG”) emissions is woefully inadequate and is misleading to the public and decisionmakers about the true scope of the Project’s GHG emissions. (See FEIR Sec. 4.7.) The FEIR fails to take into account all potential sources of GHG emissions from the Project and then ignores large emission sources when completing the FEIR’s significance analysis. Most troublingly, the FEIR refuses to take responsibility for and minimize a large portion of the Project’s GHG emissions. (FEIR at 4.7-40-49.) This approach violates CEQA requirement that an EIR fully analyze and attempt to mitigate all significant direct and indirect impacts of a project. (CEQA Guidelines § 15126.2; Pub. Res. Code § 21002.) The FEIR, however, fails to adopt all feasible mitigation measures to address *all* of the Project’s tremendous GHG emissions and instead addresses only a small fraction of the Project’s overall GHG emissions with meager and insufficient mitigation measures. (Compare 19,237 metric tons (“mt”) of CO₂ with 490,010 mt of CO₂; FEIR 4.7-40.) Therefore, the FEIR’s significance analysis and mitigation measures for the Project’s anticipated GHG emissions are inadequate under CEQA. The FEIR should be revised to comply with CEQA and recirculated to the public and decisionmakers.

Action to address climate change becomes ever more urgent with each passing day. The National Oceanic and Atmospheric Administration (“NOAA”) and National Aeronautics and Space Administration (“NASA”) confirmed that 2014 was the hottest year ever recorded. (NASA 2015.) In the National Climate Assessment released by the U.S. Global Change Research Program, experts make clear that “reduc[ing] the risks of some of the worst impacts of climate change” will require “aggressive and sustained greenhouse gas emission reductions” over the course of this century. (Melillo 2014.) Indeed, humanity is rapidly consuming the remaining “carbon budget” necessary to preserve a likely chance of holding the average global temperature increase to only 2°C above pre-industrial levels. According to the Intergovernmental Panel on Climate Change, when non-CO₂ forcings are taken into account, total cumulative future anthropogenic emissions of CO₂ must remain below about 1,000 gigatonnes (Gt) to achieve this goal.¹ Some leading scientists—characterizing the effects of even a 2°C

¹ IPCC 2013 (“Limiting the warming caused by anthropogenic CO₂ emissions alone with a probability of >33%, >50%, and >66% to less than 2°C since the period 1861–1880, will require cumulative CO₂ emissions from all anthropogenic sources to stay between 0 and about 1570 GtC (5760 GtCO₂), 0 and about 1210 GtC (4440 GtCO₂), and 0 and about 1000 GtC (3670 GtCO₂) since that period, respectively. These upper amounts are reduced to about 900 GtC (3300 GtCO₂), 820 GtC (3010 GtCO₂), and 790 GtC (2900 GtCO₂), respectively, when accounting for non-CO₂ forcings as in RCP2.6. An amount of 515 [445

increase in average global temperature as “disastrous”—have prescribed a far more stringent carbon budget for coming decades. (Hansen 2013.) Climate change will affect California’s climate, resulting in such impacts as increased temperatures and wildfires, and a reduction in snowpack and precipitation levels and water availability, as we detail below.

In order to help stabilize the climate and avoid catastrophic impacts to our environment, the California legislature and Governor Brown have taken important steps. California has a mandate under AB 32 to reach 1990 levels of GHG emissions by the year 2020, equivalent to approximately a 15 percent reduction from a business-as-usual projection. (Health & Saf. Code § 38550.) Based on the warning of the Intergovernmental panel on Climate Change and leading climate scientists, Governor Brown issued an executive order in April 2015 requiring GHG emission reduction 40 percent below 1990 levels by 2030. (Executive Order B-30-15 (2015).) The Executive Order is in line with a previous Executive Order mandating the state reduce emission levels to 80 percent below 1990 levels by 2050 in order to minimize significant climate change impacts. (Executive Order S-3-05 (2005).) In enacting SB 375, the state has also recognized the critical role that land use planning plays in achieving greenhouse gas emission reductions in California.²

The state Legislature has found that failure to achieve greenhouse gas reduction would be “detrimental” to the state’s economy. (Health & Saf. Code § 38501(b).) In his 2015 Inaugural Address, Governor Brown reiterated his commitment to reduce greenhouse gas emissions with three new goals for the next fifteen years:

- Increase electricity derived from renewable sources to 50 percent;
- Reduce today’s petroleum use in cars and trucks by 50 percent;
- Double the efficiency of existing buildings and make heating fuels cleaner.

(Brown 2015 Address.) Although some sources of GHG emissions may seem insignificant, climate change is a problem with cumulative impacts and effects. (*Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, (9th Cir. 2008) 538 F.3d 1172, 1217 (“the impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis” that agencies must conduct).) One source or one small project may not appear to have a significant effect on climate change, but the combined impacts of many sources can drastically damage California’s climate as a whole. Therefore, CEQA requires that an EIR consider both direct and indirect impacts of a project and fully disclose those impacts to adequately inform the public and decisionmakers. (CEQA Guidelines, § 15064.) Here, the FEIR failed to meet this requirement.

to 585] GtC (1890 [1630 to 2150] GtCO₂), was already emitted by 2011.”). *See also* UNEP 2013 (describing emissions “pathways” consistent with meeting 2°C and 1.5°C targets).

² See <http://www.arb.ca.gov/cc/sb375/sb375.htm>.

A. The FEIR Significance Analysis of the Project's GHG Emissions Should Take into Account All GHG Emissions from the Project

At full build out the Project is anticipated to emit 415,991 mt of CO₂ without mitigation measures. (FEIR Air Quality, Greenhouse Gas, and Health Risk Assessment Report: 294 [hereinafter "HRA Report"].) However, when analyzing the significance of the Project's GHG emissions and considering potential mitigation, the FEIR looked only at portion of these emissions. Specifically, the FEIR examines the significance and potential mitigation of only 19,237 mt of CO₂. The FEIR justifies ignoring the remaining 396,754 mt of emissions by arguing these emissions are independently covered by AB 32's Cap and Trade Program. (FEIR HRA Report at 284-5.) Emissions disregarded by the FEIR are the vast majority of the emissions resulting from the Project, including mobile, electricity, construction fuel, yard trucks, electricity to convey water, generator, forklifts used on the site. (FEIR HRA Report at 294.) Instead, the FEIR focuses on so-called uncapped emissions which include waste, land use change, refrigerants that result in 19,237 mt of emissions. (FEIR, App, D at 284-5.) This approach allows the FEIR to focus only on approximately 21% of the Project's GHG emissions and conclude the Project with only a few mitigation measures will result in no significant impacts. This approach is flawed, misleading and violates CEQA.

The FEIR justifies its significance threshold and analysis by citing to San Joaquin Valley Air Pollution Control District's and South Coast Air Quality Management District's use of a similar approach when they were acting as lead agencies on other projects. (FEIR at 4.7-41.) However, while the significance threshold and analysis may have been based in part of existing thresholds, compliance with the law is not enough to make a finding of less than significant under CEQA. (*See Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal. App. 4th 1099, 1107.) Instead "the EIR's discussion of impacts must "provide[] sufficient information and analysis to allow the public to discern the basis for the agency's impact findings. Thus the EIR should set forth specific data, as needed to meaningfully assess whether the proposed activities would result in significant impacts." (*Sierra Club v. Tahoe Reg'l Planning Agency* (2013) 916 F. Supp. 2d 1098, 1146-1147 (*Sierra Club*)). The FEIR fails to meet this CEQA requirement and instead leaves the public and decisionmakers uncertain on the Project's true environmental impacts and avoid necessary steps to reduce those impacts.

The FEIR anticipates emissions for the Project as far as 2030 and at full build out of the Project beyond. However, AB 32 Cap and Trade program currently runs only until 2020. (*See* <http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm>.) Currently, there are no provisions for the Cap and Trade program to extend beyond 2020 and the scope of the program beyond 2020 is uncertain. Nonetheless, the FEIR relies on AB 32's Cap and Trade Program to fully minimize and mitigate nearly 400,000 mt of CO₂ emissions at full build out of the Project. This reliance by the FEIR is without any evidentiary basis and should either be removed or substantially revised.

The FEIR also fails to adequately explain how it categorizes certain categories as capped and others as uncapped. For example, the FEIR fails to take into account vehicles miles traveled into its GHG significance analysis or adoption of mitigation measures. (FEIR at 4.7-47-48.) The FEIR acknowledges that vehicles miles traveled is the Project's biggest contributor to GHG emissions but disregards it completely when discussing the significance of the Project's impacts. The FEIR justifies this determination by citing to SJVAPCD determination in an independent and unrelated context. The FEIR must include a clear description of the Project's impacts and provide a detailed explanation of its analysis of those impacts. (*Sierra Club, supra*, 916 F. Supp. 2d at 1146-47.) Simply citing to other regulatory approaches in the state is insufficient. The FEIR explanation of other "capped" sectors is similarly vague and inadequate. The FEIR should further explain its classification of "capped" and "uncapped" sectors and recirculate a revised GHG analysis.

As noted above, the goal of AB 32 is to reduce California greenhouse gas emissions to 1990 levels by 2020. (Health & Saf. Code § 38550.) Recent science, however, indicates that far steeper reductions are necessary to avoid the most significant impacts of climate change. Even to stabilize atmospheric CO₂ concentrations at 450 parts per million ("ppm") and limit global average temperature increases to 2°C—a level at which devastating effects may still occur—industrialized countries will have to reduce emissions by 25-40% below 1990 levels by 2020. Many scientists believe that avoiding the worst impacts of climate change will require reducing the concentration of CO₂ in the atmosphere to 350 ppm or below, which will require even steeper and more rapid reductions. The FEIR must analyze the cumulative significance of the Project's emissions in light of reductions needed to avoid contributing to these physical impacts, not just measure them against the AB 32 Scoping Plan, regional significance thresholds and the state's renewable generation goals. This was further emphasized in the Scoping Plan itself which emphasized the steep reductions in GHG emissions that must occur after 2020 to stabilize the climate. (2008 Scoping Plan at 33; *see also* Climate Change Scoping Plan 2014 Update.) The FEIR cannot rely on AB 32 Cap and Trade Program to avoid its own obligation to fully analyze and mitigate *all* of the Project's GHG emissions.

B. The FEIR Fails to Consider Mitigation Measures and Alternative to Minimize All Sources of GHG Emissions from the Project

Mitigation of a project's environmental impacts is one of the "most important" functions of CEQA. (*Sierra Club v. Gilroy City Council* (1990) 222 Cal.App.3d 30, 41.) Therefore, it is the "policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures which will avoid or substantially lessen the significant environmental effects of such projects." (Pub. Res. Code § 21002.) Here however, the FEIR adopts only a few mitigation measures, all of which are inadequate to address the Project's massive GHG emissions. (FEIR at 4.7-48.)

Additionally, to comply with CEQA, mitigation measures must be “fully enforceable through permit conditions, agreements, or other legally-binding instruments.” (CEQA Guidelines § 15126.4(a)(2).) The measures must be “incorporated into the project or required as a condition of project approval in such a way that [would] ensure their implementation.” (*Fed’n of Hillside and Canyon Assoc. v. City of Los Angeles*, (2000) 83 Cal. App. 4th 1252, 1262 (*Federation*)). CEQA also requires the adoption of all feasible mitigation measures that would reduce the environmental impacts of a project. (Pub. Res. Code § 21002; CEQA Guidelines § 15126.4(c); *City of Marina v. Bd. of Trs. of the Cal. State University* (2006) 39 Cal.4th 341, 369-70.)

Although the Project includes a curtailed list of measures directed at reducing emissions and promoting sustainability, these strategies are severely limited and do not include many feasible mitigation measures. (FEIR at 4.7-47.) The meager steps incorporated into the Project includes no enforcement mechanisms and leaves many feasible mitigation measures out completely. (FEIR at 4.7-48.) The mitigation measures are often vague with no specific quantities or binding obligations. (*Id.*) The FEIR justifies this approach in part by stating that it must mitigate only *uncapped* emissions resulting from the Project. (FEIR at 4.7-47-49.) However, as noted above, this approach is flawed and without evidentiary or legal support. The FEIR cannot simply ignore 80% of the Project’s GHG emissions and their resulting environmental impacts when adopting mitigation measures. The FEIR subsequent conclusion that its limited mitigation measures will ensure the Project’s GHG emissions will have significant impacts is misleading. The Project will in fact *do nothing* to mitigate 396,754 mt of CO2 emissions resulting from the Project.

Available and feasible mitigation measures during construction and operation of the Project would lower the Project’s overall GHG emissions and contribution to climate change. California Air Pollution Control Officers Association (“CAPCOA”) has identified existing and potential mitigation measures that could be applied to projects during the CEQA process to reduce a project’s GHG emissions. (CAPCOA 2010.) The California Office of the Attorney General also has developed a list of reduction mechanisms to be incorporated through the CEQA process. (CA AG 2010.) These resources provide a rich and varied array of mitigation measures that should be incorporated into the revised Project.

For example, as it stands now, rooftop solar power is the most energy efficient, least-environmentally damaging form of renewable energy available for the Project and is ideal for the Project’s location. The Project’s current on-site renewable energy goals are, however, too modest in scope with only 5.2% of electricity from the Project coming from solar at the end of build out. (FEIR at 4.7-50.) The conservation group urges firm requirements that onsite renewable energy be used to meet at a minimum 30% of the Project’s energy use and each subsequent 5 year period include growing reliance on onsite renewable energy to meet its energy demands. These renewable energy use targets

should be required mandates to ensure the necessary measures are incorporate into future design plans for the Project. New construction, like this Project, has a unique opportunity to full embrace and incorporate the use of renewable energy in its design, construction and operation. Mitigation measures to reduce vehicle miles traveled, energy use, waste, water consumption, greater use of solar power, hybrid vehicles, LEED certification and others could also all lower the Project's impact on climate change. (CAPCOA 2010; CA AG 2010.)

The FEIR acknowledges that the Project will result nearly 400,000 mt of CO₂ emissions but does little to fully analyze, minimize or mitigate the environmental impacts resulting from the Project's GHG emissions. The FEIR's GHG significance analysis and determination on what mitigation measures are necessary was flawed and raises serious concerns about the Project and its impacts on the region as well as the state. The FEIR's determination that with mitigation, the Project will result in no significant GHG emissions is grossly misleading to the public and decisionmakers and violates CEQA. We urge that the FEIR be revised and recirculated to address these concerns and ensure that the Project's substantial GHG emissions are clearly disclosed, adequately analyzed and fully mitigated.

V. THE FEIR FAILS TO ESTABLISH AN ADEQUATE AND ACCURATE ENVIRONMENTAL BASELINE REGARDING WATER SUPPLY

The FEIR presents an improper environmental baseline regarding the availability of water resources in the region, alluding to the unreliability of water supply as well as current and likely future water scarcity in California while still relying on unsubstantiated and outdated assumptions. (Guidelines § 15125 (EIR must include description of physical environmental conditions in the vicinity of the Project at the time of the notice of preparation is published or at the time when environmental analysis is commenced).) This failure violates the EIR's fundamental purpose to serve as an informational document to inform decision-makers and the public of any significant adverse effects on the physical environment. (Guidelines §§ 15121, 15125; *Neighbors for Smart Rail v. Exposition Metro* (2013) 57 Cal.4th 439, 447 (*Neighbors*).) The FEIR discusses existing water supply conditions based on the Project's Water Supply Assessment, which relies on the 2010 Urban Water Management Plan ("UWMP") provided by the Eastern Municipal Water District ("EMWD") that is responsible for supplying water for the Project. (FEIR at 3-45; FEIR, App. M (Water Supply Assessment) at 19, 22-23 (hereinafter "WSA").) In turn, the UWMP relies in large part on the Metropolitan Water District ("MWD")'s 2010 Regional Urban Water Management Plan ("RUWMP"), since EMWD imports at least 65% of its water from MWD. (WSA at 5, 21.)

Specifically, in establishing water supply estimates in the 2010 RUWMP MWD "assumed a new Delta conveyance [i.e. Bay Delta Conservation Plan, or Twin Tunnels project] is fully operational by 2022 that would return supply reliability similar to 2005 condition." (2010 RUWMP at 2-16.) The draft BDCP and associated

EIR/Environmental Impact Statement (“DEIS”) was not released until almost two years after the notice of preparation for this EIR. (2013 Public Review Draft BDCP.) The BDCP has still yet to be approved as of the writing of this comment letter, and will not deliver additional water supply even if it is approved in 2015 since the tunnels will take at least 11-12 years to construct. (BDCP 2013 at 6-3; BDCP 2015.) Based on the reliance on this false assumption the FEIR overestimates the actual availability of water resources in the area, thwarting agencies’ and the public’s ability to evaluate whether Project impacts on these resources are significant. (Guidelines §§ 15121, 15125; *Neighbors, supra*, 57 Cal.4th at 447.) The FEIR must be revised in order to provide an accurate description of actual instead of theoretical environmental conditions regarding water supply for the Project. Additionally, the environmental baseline must be revised to incorporate significant new information regarding the ongoing drought crisis and future water scarcity due to climate change, which we discuss in the following section.

VI. THE FEIR FAILS TO ADEQUATELY ANALYZE AND MITIGATE IMPACTS ON WATER SUPPLY

The FEIR conducts an inadequate analysis replete with inconsistencies and contradicting conclusions regarding water supply impacts that will result from the Project. Furthermore, the FEIR provides contradicting statements regarding mitigation measures are required to address Project water supply impacts, proposes unenforceable mitigation measures, and defers formulation of mitigation measures.

A. Failure to Properly Disclose and Analyze Impacts on Water Supply

A firm water supply is required for a project to gain approval. (Govt. Code § 66473.7; *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 432 (EIR must demonstrate a reasonable likelihood that a water source the provider plans to use will be available at least in substantial part to supply project’s needs) (*Vineyard*); *Santa Clarita Org. for Planning v. County of Los Angeles* (2003) 106 Cal.App.4th 715, 723-24 (EIR’s water supply impacts analysis cannot rely upon demonstrably illusory supplies).)

The Project will use approximately 1991 acre-feet of potable water per year mainly for landscape irrigation purposes. (FEIR App. M (Water Supply Assessment) at 19; FEIR at 4.16-19.) The WSA does not provide the specific water sources for the Project except that groundwater will not be used. (WSA at 9.) This quantity of water has been determined by the Project WSA to be within the limits of projected demand accounted for in the 2010 EMWD UWMP. (WSA at 19, 22-23.)

Based on this WSA the FEIR concludes that there is adequate, reliable water supply for this Project for industrial uses, and no significant water supply impacts regarding industrial uses will result from this Project and no mitigation measures will be

required. (FEIR at 4.16-14; 4.16-20.) However, the FEIR acknowledges that potable water supply is unreliable and MWD is “engaged in planning processes that will identify solutions” to meet Project demands, and that Project impacts on regional water supplies may be significant and mitigation measures are required. (*Id.*) Similarly, although the FEIR states that water supply impacts will be less than significant with mitigation based on the EMWD water supply assessment, it also provides that “*the supply of water imported from the State is not currently guaranteed, so there may be significant impacts related to long-term water supply.*” (FEIR at 1-85, 4.16-21 (emphasize added).)

The acknowledgment of the FEIR that there is no guaranteed supply of imported water is significant and concerning since the WSA states that EMWD imports 65% of its water supply through the MWD and is expected to satisfy future demands from the Project. (WSA at 5, 21.) In reality, EMWD imports 68% of water from MWD. (EMWD 2015c at 5.) Additionally, water supplies from MWD are even less reliable than the FEIR and WSA allude to for the following reasons that the FEIR fails to but must address.

First, in April 2015 MWD reduced its water delivery by 15% in light of the current drought, which amounts to a 300,000 AF reduction in deliveries to member agencies. (MWD 2015; *see also* MWD Water Cuts LA Times 2015.) The Water Shortage Contingency Plan (“WSCP”) and the MWD 2010 RUWMP that the WSA relies on to conclude that EMWD will be able to meet projected demands under “a repeat of historic drought scenarios,” (WSA at 21,) is inadequate to address unprecedented current and future drought situations. (2010 RUWMP at A.4-50-51 (incorporating drought planning based on 1991 & 1992 drought conditions).) Furthermore, in light of the Governor’s drought executive order, the State Water Resources Control Board (SWRCB) has mandated that EMWD reduce water use by 28%, which EMWD has begun to implement by requiring a 50% reduction in outdoor irrigation within the district. (EMWD 2015b; EMWD 2015c.)

Additionally, the FEIR also fails to take into account the current as well as likely worse and extended drought conditions in the context of climate change in order to accurately assess Project impacts on water supply. Numerous studies have shown that southwestern United States, which includes California, is very likely in or will very likely enter a megadrought over the length of 10 years due to climate change. (Ault 2014; *see also* Rice 2014.) Additionally, there is an 80% chance that the Southwest will experience an unprecedented megadrought that would last more than three decades, between 2050 and 2099. (Cook 2015.) In the mean time, this region will experience additional droughts leading up to the megadrought. (Cook 2015.) A recent study regarding droughts in California concluded that anthropogenic climate change has resulted in and will continue to result in the co-occurrence of warm and dry periods in California, which in turn will exacerbate water shortages, groundwater overdraft, and species extinction. (Diffenbaugh 2015.)

EMWD's plan to supplement existing supplies at the local level to reduce Project impacts on water supply via developing additional local water resources and efficiency measures are also based unsubstantiated promises. (FEIR at 4.16-14 & 4.16-17-18; WSA at 7 & 8.) The Project proposes to use recycled water to meet its non-potable water demands, but EMWD has limited capability to produce recycled water, and future expansions of recycling water in the district is only theoretical or in planning stages. (FEIR at 4.16-18 (majority of irrigated landscaped areas within the Project will be designed to use recycled water "to the greatest extent possible when it becomes available"); *but see* WSA at 13, 22 ("recycled water may be available for the project" in the future.)

Furthermore, the FEIR anticipates that imported water supplies could be reduced on the condition that MWD's ability to deliver water is reduced, (FEIR at 4.16-18), but fails to take into account the fact that this condition has occurred where MWD has reduced deliveries to its member agencies by 15% due to the drought, and that the BDCP will not provide additional water for the Project at build out even if it is approved in the near future. (MWD 2015; *see* Section V above.) For these reasons, the FEIR fails to address and must be recirculated to adequately analyze Project impacts on water supply in light of on-the-ground drought and climate change conditions that have resulted in significantly less water supply to EMWD and therefore Project impacts on water supply. (CEQA Guidelines §§ 15088.5, 15121, 15125; *Neighbors, supra*, 57 Cal.4th at 447; *Laurel Heights Improvement Assn. v. Regents of University of California* (1989) 6 Cal.4th 1112, 1136

B. Failure to Adopt Feasible Mitigation Measures and Deferral of Mitigation

The FEIR provides contradicting statements regarding whether mitigation measures for water supply impacts are required in order to reduce impacts on water supply to a less than significant level. Mitigation measures include the use of drought tolerant landscaping, "dry" cleaning equipment, a recirculation system of any outdoor feature, and use of reclaimed water for irrigation "if it becomes available." (FEIR, at 1-20; *see also* 4.16-20 & 4.16-21.) Yet the FEIR also provides that no water supply mitigation measures are necessary because EMWD will supply sufficient water to meet existing and future potable water demands (but only once planned groundwater storage improvement are completed). (FEIR at 1-83.)

The FEIR also improperly defers formulation of mitigation measures, to a later time when the development of specific plots is considered. This deferral of developing feasible and enforceable mitigation measures for additional water supply impacts frustrates informed decision-making and violates CEQA. (CEQA Guidelines § 15126.4(a)(1), (2).) The EIR's admission that the Project would result in significant water supply impacts required the adoption of all "feasible alternatives or mitigation measures available which would substantially lessen" these impacts. (Pub. Res. Code §

21002; CEQA Guidelines § 15021(a); *Napa Citizens for Honest Gov't v. Napa County Bd. of Supervisors* (2001) 91 Cal.App.4th 342, 360.) Mitigation measures must be feasible and enforceable. (CEQA Guidelines § 15126.4(a)(1), (2); CEQA § 21081 (mitigation measures must be fully enforceable).) Similarly, the EIR must contain performance criteria upon which mitigation measures will be based. (CEQA Guidelines § 15126.4(a)(1)(B) (formulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the Project and which may be accomplished in more than one specified way.); *City of Long Beach v. Los Angeles Unified Sch. Dist.* (2009) 176 Cal.App.4th 889, 915 (“Impermissible deferral of mitigation measures occur when the EIR puts off analysis or orders a report without either setting standards or demonstrating how the impact can be mitigated in the manner described in the EIR.”); *Preserve Wild Santee v. City of Santee* (2012) 210 Cal.App.4th 260, 281 (a performance standards (in this case draft habitat conservation plan for managing a preserve) can be relied on if it contains specific details including assurance that standards will be satisfied at a particular time and manner).)

Instead, the FEIR instructs that the developer “shall submit landscape plans that demonstrate compliance with the World Logistics Center Specific Plan” and state laws only prior to the approval of each individual grading permit for each plot, without providing any criteria for which to evaluate how these plans would be required to reduce Project impacts to less than significant levels. (FEIR at 1-85, 4.16-20.) Similarly, the FEIR provides that the applicant will only need to implement water-efficiency designs for each building “to the satisfaction of the Land Development Division/Public Works,” (*Id.* at 1-86, 4.16-21) and wash down and all irrigation systems will use recycled water “if it comes available.” (*Id.* at 1-87, 4.16-21.) None of these mitigation measures satisfy CEQA requirements to establish feasible, measurable, and enforceable mitigation measures at the EIR level. (Guidelines § 15126.4(a)(1)(B).)

Importantly, the WSA states the developer is required to meet with EMWD staff to develop a plan of service, and that the service plan could reduce the amount of water available for the Project through on-site improvements. (WSA at 22; FEIR at 3-45, 4.16-18.) However, since this service plan has not been prepared to date, the FEIR has improperly deferred the first step to establishing feasible, enforceable mitigation measures. (FEIR at 4.16-18.) Even if additional water supplies materialize, Project water supply will still be inadequate since the WSA and FEIR explicitly state that EMWD depends on MWD to supply water for future development as well as additional water during dry years, as discussed earlier. (FEIR at 4.16-16 (“the EMWD depends on Metropolitan to supply additional water during dry years”) & 4.16-18 (“the majority of water for future development would be supplied by imported water from Metropolitan”).) Furthermore, the FEIR has failed to assess the impacts of developing additional local water resources and efficiency measures. (*Napa Citizens for Honest Government v. Napa County Bd. of Supervisors* (2001) 91 Cal.App.4th 342, 373 (in light of uncertainty of

Project water supplies, the EIR must analyze and disclose the environmental consequences of tapping other resources.)

The FEIR also does not incorporate the mitigation measure of requiring gray water systems as promised by the WSA. (CEQA § 15126.4.) Although the WSA states that the Project may be conditioned to construct separate potable and recycled water systems, and to construct off-site recycle water facilities, this recommendation is not incorporated in FEIR (WSA at 22; FEIR at 4.16-20 & 21.) Even if the Project applicant decides to build indoor gray water systems, EMWD does not have capacity to produce sufficient recycled water to satisfy Project water demands given that the use of recycling systems will occur only if recycled water becomes available as stated above. (*Id.*) Furthermore, even if it becomes feasible using recycled water for irrigation will not be implemented prior to the activities, violating the CEQA requirement that mitigation measures should be implemented by the start of the Project. (*POET, LLC v. State Air Resources Bd.* (2013) 218 Cal.App.4th 681, 740 (agency improperly delayed implementing mitigation measures while project went forward.); *see* FEIR at 1-87, 4.16-21.)

Finally, the WSA provides that it will be reviewed every three years until the Project begins construction to ensure that the information in the WSA are accurate and updated. (WSA at 22.) Since the WSA was finalized in March 2015, the FEIR must be revised to include an updated WSA based on this statement alone.

VII. THE FEIR FAILS TO ADEQUATELY ANALYZE AND MITIGATE PROJECT IMPACTS REGARDING HYDROLOGY, DRAINAGE, AND WATER QUALITY

The FEIR provides an inadequate impact analysis and defers or proposes unenforceable mitigation measures regarding Project impacts on hydrology, drainage, and water quality. The FEIR concludes that impacts to hydrology, drainage, and water quality will not be significant and do not require mitigation. (FEIR at 1-17.) Yet in the same paragraph and other portions it discusses mitigation measures for these impacts. (*Id.*; *see, e.g.*, FEIR at 1-20 (concluding that potential impacts to storm water drainage requirements and adequate water supply will be mitigated to a less than significant level).)

The FEIR states that the Project will not require the construction of new storm water drainage facilities or expansion of existing storm water drainage facilities, (FEIR at 4.16-25,) yet provides that five new drainage systems will be constructed to accommodate additional runoff that will result from the Project. (FEIR at 4.16-24.)

Additionally, the FEIR acknowledges that the Project will be required to create a Storm Water Pollution Prevention Plan (“SWPPP”), a Water Quality Management Plan (“WQMP”), and a Water Quality Sampling Program (“WQSP”) to protect the San Jacinto

Wildlife Area (“SJWA”). (FEIR at 1-17, 1-63 & 1-64, 4.9-52.) None of these plans have been developed except for a programmatic WQMP, constituting a deferral of feasible mitigation measures and depriving planning agencies’ and the public their ability to adequately assess the water quality impacts of the Project. (CEQA Guidelines § 15126.4(a)(1)(B) & (a)(2).) The EIR’s attempt to rely upon a programmatic WQMP leads to an improperly vague deferral of specific, enforceable mitigation measures to alleviate water quality impacts. (*Federation, supra*, 83 Cal. App. 4th at 1262.)

Moreover, the FEIR acknowledges that the Project will introduce a substantial amount of impervious surfaces on the site that could result in significant increases in off-site runoff. (FEIR at 1-87, 4.16-22.) Yet it merely defers any drainage-related mitigation measures to the individual plot planning, which makes it impossible to assess the impacts and cumulative impacts of these measures. (*Id.*; FEIR at 4.16-25.) Additionally, the FEIR only requires that the drainage plan for each plot design “existing sediment carrying *capacity* of the drainage courses existing the Project area is similar to the existing condition,” and that the sheet flow after the implementation of the Project is “comparable” to current conditions to minimize erosion. (*Id.*) However, this mitigation measures fails to actually propose methods to reduce off-site runoff to a less than significant level, e.g. mandating that the average rate, peak flow, and total quantity of runoff after project implementation does not exceed current rates and quantities. Thus, the FEIR’s conclusion that drainage impacts will be less than significant after mitigation is unsubstantiated.

CONCLUSION

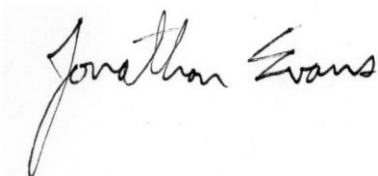
Thank you for your attention to these comments. We look forward to working with you to assure that the EIR conforms to the requirements of CEQA to assure that all significant impacts to the environment are fully analyzed, mitigated or avoided. Should you have any questions feel free to contact Jonathan Evans at the contact information listed below.

The Center for Biological Diversity and San Bernardino Valley Audubon Society wish to be placed on the mailing list for all future notices regarding this project. Please mail all notices to CBD at the address listed (via email at jevans@biologicaldiversity.org); and San Bernardino Valley Audubon Society at drewf3@verizon.net and P. O. Box 10973, San Bernardino, California 92423-0973.

Sincerely,

(signatures on next page)

RE: World Logistics Center FEIR Comments
June 10, 2015
Page 22 of 25



Jonathan Evans
Environmental Health Legal Director and Senior Attorney
Center for Biological Diversity
1212 Broadway, Suite 800
Oakland, CA 94612
jevans@biologicaldiversity.org



Drew Feldman
Chapter President
San Bernardino Valley Audubon Society

REFERENCES
 (included on CD)

ARB 2011. California Air Resources Board. Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document. Aug. 2011.

ARB 2014. California Greenhouse Gas Inventory for 2010-2012.

Ault 2014. Ault, T.R., et al. Assessing the Risk of Persistent Drought Using Climate Model Simulations and Paleoclimate Data. 2014. Available at: <http://journals.ametsoc.org/doi/pdf/10.1175/JCLI-D-12-00282.1>.

BDCP 2013. Public Draft Bay Delta Conservation Plan EIR/EIS. November 2013. p.6-3. Available at: http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Public_Draft_BDCP_Chapter_6_-_Plan_Implementation.sflb.ashx.

BDCP 2015. DWR Announces Modified Preferred Alternative. April 30, 2015. Available at: <http://baydeltaconservationplan.com/2015News.aspx>.

Brown 2015 Address. California Governor Edmund G. Brown, Inaugural Address (Jan. 6, 2015). Available at: <http://gov.ca.gov/news.php?id=18828>.

Cal Air Res Board 2014. California Air Resources Board. Addendum to the Final Statement of Reasons for Rulemaking: 2013 Amendments to the California Cap on Greenhouse Gas Emissions and Market-based Compliance Mechanisms. 2014.

Cal EPA Statement of Reasons 2010. California Environmental Protection Agency Air Resources Board Final Statement of Reasons. 2010.

Cal NRA Statement of Reasons 2009. California Natural Resource Agency's Final Statement of Reasons. 2009.

CAPCOA 2008. California Air Pollution Control Officers Association. CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Project Subject to CEQA. 2008.

CAPCOA 2009. California Air Pollution Control Officers Association. Model Policies for Greenhouse Gases in General Plans.

CAPCOA 2010. California Air Pollution Control Officers Association. Quantifying Greenhouse Gas Mitigation Measures. Aug. 2010.

RE: World Logistics Center FEIR Comments
 June 10, 2015
 Page 24 of 25

CA AG 2010. California Office of the Attorney General. Addressing Climate Change at the Project Level. 2010.

Climate Change Scoping Plan 2014 Update. First Update to the Climate Change Scoping Plan. May 2014.

Cook 2015. Cook, B.I., et al. Unprecedented 21st-Century Drought Risk in the American Southwest and Central Plains. 2015. Available at:
<http://advances.sciencemag.org/content/1/1/e1400082>.

Diffenbaugh 2015. Diffenbaugh, N.S., et al. Anthropogenic Warming Has Increased Drought Risk in California. 2015. Proceedings of the National Academy of the United States of America. Available at:
<http://www.pnas.org/content/early/2015/02/23/1422385112.full.pdf+html>.

EMWD 2015a. News Release: Metropolitan Board Restricts Wholesale Water Deliveries to Member Agencies for Fourth Time in District's History. Apr. 14. 2015. Available at:
http://www.mwdh2o.com/PDF_NewsRoom/Metropolitan_allocates_supplies.pdf.

EMWD 2015b. Water Shortage Contingency Plan: EMWD Is Currently in Stage 4a: Mandatory Outdoor Reduction. Available at: <http://www.emwd.org/use-water-wisely/water-shortage-contingency-plan>.

EMWD 2015c. Eastern Municipal Water District Board of Directors Regular Meeting June 3, 2015. p.5. Available at:
<http://emwd.iqm2.com/Citizens/FileOpen.aspx?Type=1&ID=1158&Inline=True>.

Hansen 2008. J. Hansen, et al., *Target Atmospheric CO₂: Where Should Humanity Aim?*, 2 OPEN ATMOS. SCI. J. 217. 2008.

Hansen 2013. J. Hansen, et al., *Assessing "Dangerous Climate Change": Required Reduction of Carbon Emissions to Protect Young People, Future Generations and Nature*, 8 PLOS ONE e81648. Dec. 2013.

IPCC 2013. Intergovernmental Panel on Climate Change, Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change; Summary for Policymakers (2013).

Mden Elzen and Hohn 2008. M. den Elzen & N. Höhne, *Reductions of greenhouse gas emissions in Annex I and non-Annex I countries for meeting concentration stabilization targets*, 91 CLIMATIC CHANGE 249. 2008.

RE: World Logistics Center FEIR Comments
 June 10, 2015
 Page 25 of 25

Melillo 2014. Melillo, J., et al., *Chapter 1: Overview and Report Findings* in *Climate Change Impacts in the United States: The Third National Climate Assessment 14-15*. 2014. Available at: <http://nca2014.globalchange.gov/downloads>.

MWD Water Cuts LA Times. Boxall, Bettina. Water Supplier OKs 15% Cut to Cities, Water Districts in Southland. April 14, 2015. Los Angeles Times. Available at: <http://www.latimes.com/local/lanow/la-me-water-supplier-approves-cut-20150414-story.html>.

NASA 2015. National Aeronautics Society of America, *NASA, NOAA find 2014 Warmest Year in Modern Record*, Release 15-010. Jan. 16, 2015. Available at: <http://www.nasa.gov/press/2015/january/nasa-determines-2014-warmest-year-in-modern-record/>

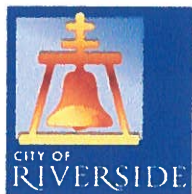
Rice 2014. Rice, Doyle. California's 100-year Drought: Megadroughts a Threat to Civilization. 2014. Available at: <http://www.usatoday.com/story/weather/2014/09/02/california-megadrought/14446195/>.

UNEP 2013. United Nations Environment Programme, *The Emissions Gap Report*. pp.13-22. 2013.

2008 Scoping Plan. Climate Change Scoping Plan. 2008. Available at: http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf.

2010 RUWMP. The Metropolitan Water District of Southern California. *The Regional Urban Water Management Plan*. November 2010. Available at: http://www.mwdh2o.com/mwdh2o/pages/yourwater/RUWMP/RUWMP_2010.pdf.

2013 Public Review Draft BDCP. Available at: <http://baydeltaconservationplan.com/2013-2014PublicReview/2013PublicReviewDraftBDCP.aspx>.



Community & Economic Development
Department

City of Arts & Innovation

June 10, 2015

City of Moreno Valley Planning Commission
14177 Frederick Street
Moreno Valley, California 92533

Re: *World Logistics Center Final Programmatic Environmental Impact Report*
(SCH # 2012021045)

To Whom It May Concern:

The City of Riverside ("Riverside") appreciates the opportunity to comment on the Final Programmatic Environmental Impact Report ("FEIR" or "Final EIR") for the World Logistics Center ("WLC" or "Project") prepared by the City of Moreno Valley ("City"). Riverside has reviewed the Project from the outset, and previously submitted comments on the Draft Environmental Impact Report released in 2013 ("Draft EIR").¹ Riverside has thoroughly reviewed the Final EIR, a considerable task given the extensive rewriting of the FEIR, and remains concerned about the serious impacts the Project will have on Riverside and Moreno Valley, and their citizens. The traffic and air quality analyses alone identify ten significant unavoidable impacts that must be mitigated to the extent feasible, including impacts to hundreds of local roadways, intersections and area freeways, as well as air quality exceedances of criteria pollutants and toxic air contaminants. Of the approximately 70,000 daily vehicle trips generated by the Project, more than 50 percent would traverse Riverside, with attendant effects on the daily life of our citizens, including impacts to traffic, noise, air quality and health. Most of those trips will be made by heavy trucks, which will paralyze the freeways serving the people of Moreno Valley.

The California Environmental Quality Act ("CEQA", Pub. Resources Code § 21000 et seq.) requires that all feasible mitigation is adopted. As currently drafted, the Final EIR fails to meet this standard. Riverside respectfully comments herein that the Final EIR is legally inadequate. Therefore, the City of Moreno Valley must revise and recirculate the FEIR. Our specific comments are set forth in more detail below.

I. THE FINAL EIR INCORPORATES SIGNIFICANT NEW INFORMATION AND MUST BE RECIRCULATED FOR ADDITIONAL PUBLIC REVIEW

CEQA is at its heart a disclosure statute, designed to inform the public about the environmental consequences of agency actions. An EIR "serves not only to protect the environment but also to demonstrate to the public that it is being protected." (CEQA

¹ Draft EIR Comment Letter from Steve Hayes, City Planner, City of Riverside, to Mark Gross, Senior Planner, City of Moreno Valley, April 8, 2013, incorporated in full by this reference, and attached as Exhibit A.

Guidelines § 15003(b) (citing *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795).) Since the EIR was originally circulated for public review in 2013, the City has made many changes to the document, including the addition of new data, new methodologies, new analysis and new mitigation measures in a majority of the chapters. Based on the totality of these changes, the City's failure to recirculate the document would deprive the public of a meaningful opportunity to comment.

Recirculation is triggered when significant new information changes the EIR in a way that "deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement." (Pub. Resources Code § 21092.1; CEQA Guidelines § 15088.5(a).) The CEQA Guidelines specify that new information may include changes in the project or environmental setting as well as additional data or other information. (*Id.*)

The CEQA Guidelines provide four examples of "significant new information" requiring recirculation. These include a disclosure showing that:

1. A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
2. A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
3. A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponents decline to adopt it.
4. The Draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

(*Laurel Heights Improvement Ass'n v Regents of Univ. of Cal.* (1993) 6 Cal.4th 1112, 1130 (*Laurel Heights II*); CEQA Guidelines § 15088.5(a).)

The Final EIR describes numerous substantial changes and additions made to the Draft EIR after the close of the public review period in 2013, confirmed by the massive amount of underlined text in the document. (See Final EIR, Volume 2 (track changes version).) These changes include revisions to the project description and objectives (see Final EIR Volume 1, pp. 2-11), the technical studies (see Final EIR Volume 1, pp. 12-18, and the analysis in the Draft EIR itself (see Final EIR Volume 1, pp. 18-22)). While the Final EIR summarily concludes that the vast list of identified changes does not constitute significant new information (see, e.g., Final EIR Volume 1, p. 22), this statement is contrary to the evidence.

Significant changes and additions to the Draft EIR include:

- Project Description:
 - Change in Specific Plan boundary resulting in loss of 100 acres and 1 million square feet of potential development.

- Phasing extended from 10 to 15 years, resulting in completion of Phase 1 in 2022 rather than in 2017, as was assumed in the Draft EIR. Scenarios for 2017 eliminated and 2022 scenario revised to analyze Phase 1 only, not full Project build-out.
- Addition of the City's Economic Development Action Plan Objectives.
- Air Quality:
 - Substantial revisions to reflect new traffic analysis, including updated trip lengths.
 - Changes in emissions to reflect change in Project construction phasing from 10 to 15 years.
 - Updated air quality analysis and methodologies based on CalEEMod, EMFAC2014 and OEHHA Health Risk Assessment Guidelines.
 - Substantial changes to the Project Health Risk Assessment, including expanded model with freeway segments to the Ports of Los Angeles and Long Beach, revisions to construction emissions and traffic volumes, organic gas emissions from gasoline and diesel vehicles, calculation of the cancer population burden attributed to Project's diesel PM emissions, maximum exposure duration for sensitive/residential receptors and workers, inclusion of school receptors, and buffer analysis.
- Biological Resources:
 - Existing setting information added to reflect revised survey area.
 - Updated vegetation summary.
 - Additional discussion of burrowing owl impacts and expansion of applicable mitigation measures.
 - Expanded discussion of riparian habitat and potential wildlife species.
 - Detailed information added about on-site drainages.
 - Full suite of updated mitigation measures included based on revisions to the MSHCP report.
 - New discussion of nitrogen deposition.
 - Additional revisions to mitigation measures based on comments from USFWS.
- Greenhouse Gas Emissions and Climate Change:
 - Revisions to GHG inventory including revisions to construction and operational mobile assumptions, addition of onsite equipment emissions, addition of black carbon emissions estimation, new waste generation factors and land use changes.
 - Revised analysis of the Project's generation of greenhouse gas emissions.

- Revisions to mitigation measures to reduce solid waste and GHG emissions from project construction and operation.
- Revisions to tables with year by year operational emissions.
- Noise:
 - Substantial revisions to reflect new traffic analysis and construction phasing.
 - Addition of new mitigation measure MM 4.12.6.2D.
 - Substantial revision of mitigation measures MMs 4.12.6.2A and 4.12.6.2B.
- Traffic:
 - Analysis of freeway impacts from the WLC to the Ports of Los Angeles and Long Beach, covering more than 60 additional centerline miles of freeway.
 - Analysis of the feasibility of shipping cargos between the WLC and the Ports of Los Angeles and Long Beach by rail instead of by truck.
 - Analysis of safety impacts of Project traffic on local schools.
 - New traffic analysis to look at Existing Plus Phase 1 (only) conditions.
 - Substantial revisions to EIR's analysis of impacts to intersections, roadway segments and freeway segments, including expansion of the Project study area.
 - Substantial revisions to Year 2035 analysis.
 - Substantial revisions to mitigation measures MM 4.15.7.4A, 4.15.7.4E and 4.15.7.4F.
 - Re-alignment of internal roads and addition of a fire station.

This list is not exhaustive. Given the scope and magnitude of these (and other) revisions, the City must recirculate the Final EIR.

II. THE FINAL EIR DOES NOT REMEDY THE DEFICIENCIES OF THE DRAFT EIR OR ADEQUATELY RESPOND TO COMMENTS REGARDING THE DRAFT EIR'S ANALYSIS OF TRAFFIC IMPACTS

Riverside continues to have serious concerns about the adequacy of the EIR's traffic analysis and its assessment of impacts on Riverside's road system. As discussed in our 2013 Draft EIR comment letter, a majority of the approximately 70,000 daily Project trips will travel through Riverside, where they will have numerous detrimental environmental effects. These effects have not been adequately addressed in the Final EIR, as further described below, and in the attached comment letter from Linscott, Law & Greenspan (LLG), Engineers, attached as Exhibit B. To the extent that the Final EIR's air quality, noise, and greenhouse gas/climate change impact analyses rely on the inadequate traffic analyses, they too, are inadequate.

A. The Final EIR's Traffic Methodology Remains Inadequate

1. The Final EIR Must be Recirculated Due to the Disclosure of a Substantial Increase in the Severity of Numerous Intersection Impacts

As discussed at some length in Riverside's Draft EIR comment letter, due to the placement of an artificial numerical ceiling on the reported delay, the traffic analysis failed to adequately disclose the Project's impacts to intersections. By concluding simply that an intersection would be severely congested with or without the Project, i.e., ">50" seconds without the Project, and ">50" seconds with the Project, the EIR gave decision makers and the public insufficient information with which to evaluate its significant impacts. Such analysis has been disavowed by the courts, which have held that lead agencies may not simply label an effect significant without analyzing its actual extent. (*Berkeley Keep Jets over the Bay Committee v. Board of Port Com. of the City of Oakland* (2001) 91 Cal.App.4th 1344, 1371.)

The City addressed Riverside's comment by revising the upper limit for reported delay from 50 seconds to 180 seconds. The resulting intersection impact analysis now identifies numerous "LOS F" intersections which will experience delays significantly upwards of the 50 second ceiling used in the Draft EIR, and some even upwards of the Final EIR's new 180 second ceiling; disclosing a substantial increase in the severity of an identified significant impact. (See, e.g., Final EIR, Volume 2, Table 4.15.AK-1, Intersections 10, 20, 36, 37, 45, 62, 83, 94, 103, 124, 125, 132, 133, 134; Table 4.15.AK-2, Intersections 10, 13, 20, 45, 60, 72, 74, 94, 95, 124, 125, 132, 133, 134.) This disclosure constitutes significant new information as defined by CEQA, which mandates recirculation.

2. The Project's Trip Peaking Characteristics Outside of Peak Hours Remain Unaddressed

The Final EIR's traffic analysis continues to rely on an a.m. and p.m. peak hour analysis for its assessment of the Project's traffic impacts. As revised, the Final EIR concludes that "the project is estimated to generate a net total of approximately 69,542 daily trips with approximately 4,590 occurring during a.m. peak hour and 5,010 occurring during the p.m. peak hour." (Final EIR, Volume 2, p. 4.15-47.)

Rather than rely solely on a traditional peak hours analysis, which takes less than 14% of Project-generated trips into account, the Final EIR should include an Average Daily Trips ("ADT") analysis, which would provide data on the average traffic generated by the Project on affected roadway segments over a 24-hour period. The requested information would be significantly more valuable to the public and decision makers than simply providing peak hour data, as it would disclose the true impacts of the Project's total daily trip generation on area roadways, rather than focusing only on the small percentage of Project trips that occur in peak hours. The City of Riverside's Traffic Impact Analysis Preparation Guide, cited in the City's response, requires that a Roadway Link analysis be prepared for a TIA analyzing a general plan amendment, specific plan, or specific plan amendment.² (See Section 6.0 at p. 4.) Response to Comment E-2A-5 also states that a 24-hour traffic analysis was done for the Final

² <http://www.riversideca.gov/traffic/pdf/traffic-impact-analysis.pdf>

EIR's air quality analysis; clearly such an analysis can, and should, be completed for the traffic study as well.

Riverside reiterates its request that the EIR be revised to include an ADT analysis. Upon completion of this additional analysis, the EIR should be recirculated for additional public review and comment.

3. The Final EIR Fails to Remedy Cumulative Growth Assumptions

Response to Comment E-2A-4 states that the traffic analysis utilized a separate incorporation of growth based on other known and foreseeable projects, in addition to a 2% per annum assumed growth rate. Section 4.15.3 of the Final EIR generally describes the transportation improvement projects included in the analysis of 2022 and 2035 conditions (Final EIR, Volume 2, p. 4.15-40 through 43), but fails to note where their source, SCAG's 2012-2035 Regional Transportation Plan ("RTP"), may be publicly accessed and reviewed, as required by CEQA Guidelines § 15130(b)(1)(B).

The response also notes that the 2017 scenarios have been replaced with 2022 scenarios due to extension of the Project's construction schedule from 10 to 15 years. This response does not remedy the issue identified by Riverside with respect to growth assumptions. At best, it demonstrates the need to recirculate the EIR due to significant changes in the project description which have required revisions to all of the analyses in the document.

4. The Final EIR Provides Insufficient Information Regarding Trip Diversion

Response to Comment E-2A-9 claims that the traffic impact analysis used the RivTAM model to forecast traffic diversion, but provides no information about the assumptions used for that analysis nor, for that matter, any information about the analysis at all. As pointed out in Riverside's Draft EIR comment letter, the extreme congestion forecasted for area intersections and roadway segments will undoubtedly result in trip diversions. The Final EIR must be revised to account for that phenomenal problem.

Response to Comment E-2A-9 also misidentified the figures showing distribution of car and truck traffic, as well as truck routes. Truck routes are illustrated in TIA Figure 14, while car and truck distribution are shown in Figures 39 and 44, respectively. The level of detail included in these trip distribution figures, however, is inadequate to inform readers where, and on what roadways, the immense volume of Project-generated trips would be likely to travel. This generic level of analysis undermines the Final EIR's conclusions regarding impacts to area intersections, roadway segments and freeway facilities, as well as the mitigation required to avoid or reduce these impacts. Riverside requests that the trip distribution figures be revised and expanded, so that we may adequately assess the City's rationale for the significance conclusions reached in the traffic chapter, and the sufficiency of its mitigation requirements.

B. The Final EIR Does Not Allow for Informed Comparison of Project Alternatives by the Public and Decision Makers

An EIR's analysis of alternatives must be specific enough to allow informed decision making and public participation. (*Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal.* (1988))

47 Cal 3d 376, 406.) The analysis must contain concrete information about each alternative sufficient to allow a fact-based comparison of the alternatives with the project. (CEQA Guidelines § 15126.6(d).) The Draft EIR failed to meet this standard, and the Final EIR fails to remedy this deficiency.

As stated in Riverside's Draft EIR comment letter, the trip distribution assumptions that apply to a logistics center would not be applicable to the existing general plan alternative, nor would they be applicable to the non-logistics uses included in other alternatives, such as Mixed Use A. It is not reasonable, therefore, for the traffic analysis for the existing general plan alternative to state only that the increase in traffic (based on a 72 percent increase in trips) "may cause an existing intersection or roadway segment to operate at a deficient LOS." (Final EIR, Volume 2, at p. 6-21.) This statement gives decision makers and the public no useful information with which to perform the "fact-based comparison" mandated by CEQA. The alternatives analysis must be revised to include additional information about the specific intersections and roadway segments which would be affected by each alternative identified in the Final EIR, and recirculated for public review.

C. The Traffic Mitigation Measures in the Final EIR are Inadequate

1. The Final EIR Fails to Adequately Identify Feasible Mitigation Measures

The data in an EIR must be presented in a manner that is designed to adequately inform the public and decision makers. (*Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 442.) An EIR should be written in a way that readers are not forced "to sift through obscure minutiae or appendices" to find important components of the analysis. (*San Joaquin Raptor Rescue Ctr. v. County of Merced* (2007) 149 Cal.App.4th 645, 659.) As currently drafted, the Final EIR makes it extremely difficult to discern which traffic-related mitigation measures are feasible and will be incorporated into the Mitigation Monitoring and Reporting Program ("MMRP"), and which have been dismissed as infeasible.

Response to Comment E-2A-11 refers the reader to Tables 72 through 77 in the revised TIA, contained in Final EIR Volume 2 Appendix L-1. The reference to L-1 is unclear, as the TIA is actually contained in Appendix L. That confusion aside, the identified tables are difficult to locate and, once located, difficult to review. For example, Table 72, which precedes the TIA mitigation chapter, appears to include mitigation measures required to reduce freeway ramp impacts to less than significant. Table 73, however, lists projects using DIF and Transportation Uniform Mitigation Fee ("TUMF") in combination with other funding sources, and does not include mitigation measures. In the spirit of CEQA, Riverside again suggests that the EIR be revised to provide a concise listing of readily identifiable and feasible mitigation measures.

2. The Final EIR Erroneously Relies on Transportation Uniform Mitigation Fee Payments to Mitigate the Project's Significant Impacts

Riverside disagrees with the Final EIR's contention that payment of fees under the TUMF program adequately mitigates the Project's significant effects to facilities already included in the TUMF. As described in detail in our Draft EIR comment letter, the estimates contained in the TUMF do not comport with the travel distribution assumptions in the EIR and, for this reason, payment of the TUMF would be inadequate to mitigate the significant impacts of the Project.

Instead, as additional mitigation, the applicant must pay the Western Riverside Council of Government for a reevaluation of the TUMF Nexus Study based on the approximately 4,000 acres of changed land use and zoning designations that would result from the Project.

Riverside has not suggested, as contended by Response to Comment E-2A-12, that the applicant should not be required to pay fees into the TUMF. We do, however, dispute the EIR's conclusion that this fee payment may be relied upon to reduce significant traffic impacts to less than significant.

III. THE FINAL EIR DOES NOT REMEDY THE DEFICIENCIES OF THE DRAFT EIR OR ADEQUATELY RESPOND TO COMMENTS REGARDING THE DRAFT EIR'S ANALYSIS OF NOISE IMPACTS

A. The Final EIR Fails to Analyze the Project's Consistency with Riverside's Noise Standards

The Final EIR fails to address the City of Riverside's noise standards in its analysis of project-related noise impacts, despite acknowledging, in Response to Comment E-2A-14, that areas of Riverside would be affected by noise from project-generated traffic. Given the massive number of daily vehicle trips that would be generated by the project, the City's rationale for rejecting the proposed threshold is flawed. Contrary to the City's assertion, Riverside's noise standards are not limited to noise generated on single parcels within the City but apply, more broadly, to all sources of external noise, including noise generated by traffic on public roadways. (See, e.g., Riverside Municipal Code Section 7.25.010; Riverside General Plan Noise Element, Objective N-4, Figure N-10.) The analysis in the EIR, therefore, could and should have included a discussion of whether the project is consistent with these noise standards. (CEQA Guidelines § 15064.7(c) (lead agency may consider thresholds adopted or recommended by other agencies).)

B. The Final EIR Fails to Analyze Whether Project Noise Would Result in Sleep Disturbance

Response to Comment E-2A-15 does not represent a good faith reasoned response. (CEQA Guidelines § 15088(c).) The fact that the sleep disturbance analysis in *Berkeley Keep Jets Over the Bay v. Board of Port Commissioners* (2001) 91 Cal.App.4th 1344 was related to aircraft noise is not sufficient reason to simply dismiss the comment as irrelevant, particularly given that roadway noise would have a significant effects on sensitive receptors under the Community Noise Equivalent Level ("CNEL") metric. Highway traffic noise is a major contributor to environmental noise, and can result in undesirable effects to nearby land uses, including sleep disturbance.³ While the original FICAN 1997 sleep awakening curve may have been based on aircraft noise, the City fails to address the comment's second point; that more recent methodologies, including ANSI S12.9-200/Part 6 (2008), are based, in part, on *other* transportation noise sources, including cars and trucks. The massive volume of Project-related traffic that will travel on local roadways, 24 hours a day, including an estimated nine years of construction, mandates a complete analysis of the Project's effects on sleep disturbance.

³ *Road Traffic Noise: Annoyance, Sleep Disturbance, and Public Health Implications*, American Journal of Preventive Medicine, October 2012, available at: [http://www.ajpmonline.org/article/S0749-3797\(12\)00444-8.pdf](http://www.ajpmonline.org/article/S0749-3797(12)00444-8.pdf)

IV. THE PROJECT'S AIR QUALITY ANALYSIS FAILS TO INCORPORATE FEASIBLE MEASURES RECOMMENDED TO MITIGATE THE PROJECT'S SIGNIFICANT EFFECTS

CEQA requires an EIR to describe feasible mitigation measures to minimize a project's significant effects. (CEQA Guidelines § 15126.4(a)(1).) MM 4.3.6.3C should be revised to require the installation of additional alternative fueling infrastructure on the Project site, and construction of these facilities prior to the issuance of the first certificate of occupancy for the site, in order to reduce the Project's significant air quality effects.

MM 4.3.6.3C currently requires a single alternative fueling facility for the entire 3,814 acre project site, and Response to Comment E-2A-16 provides no rationale or evidentiary support for its failure to amend the measure to require additional facilities, save the statement that "there is not anticipated to be enough demand to necessitate (them) at each building." MM 4.3.6.3C also requires that the alternative fueling station be installed no later than the end of Phase 1 which, per the revised project description, includes approximately 20,300,000 square feet of warehouse development. As noted previously, this trigger would allow development of a substantial portion of the Project without an alternative fuel facility, along with attendant significant air quality impacts. Response to Comment E-2A-16 states that the developer will install the station as soon as "they determine it is feasible." This language, which leaves implementation to the discretion of the developer, is directly at odds with CEQA's requirement that mitigation measures be enforceable. (CEQA Guidelines § 15126.4(a)(2).)

Response to Comment E-2A-16 also points out that MM 4.3.6.4A requires electric charging stations to be provided at each building, but this measure does not specify when these stations must be constructed and operational. In fact, it specifically notes that "(o)nly sufficient sizing of conduit and service capacity to install Level 2 Electric Vehicle Supply Equipment (EVSE) or greater are required to be installed at the time of construction." (Final EIR Volume 2, p. 4.3-117.) The lack of a timing mechanism in the measure is problematic, as it allows for a Project development, and accompanying air quality impacts, without ensuring that these impacts will be mitigated.

V. THE FINAL EIR DOES NOT REMEDY THE DEFICIENCIES OF THE DRAFT EIR OR ADEQUATELY RESPOND TO COMMENTS REGARDING THE DRAFT EIR'S ANALYSIS OF IMPACTS TO BIOLOGICAL RESOURCES

A. The Final EIR Does Not Analyze Impacts to Birds from Collisions with Project Structures

Response to Comment E-2A-20 does not address the significant impacts to birds that would result from collisions with project buildings, particularly those with glass and reflective surfaces. The Response acknowledges that the potential for bird strikes is "real," but fails to provide any evidentiary support for its claim that impacts would be less than significant.

The Final EIR perfunctorily asserts that project design features would reduce the potential for bird strikes, but identifies only one such feature: a specific plan requirement that buildings along the project perimeter be no more than 60 feet tall, with the highest buildings no more than 80 feet tall. (Final EIR Volume 1, p. 291.) However, building heights ranging from 60 to 80 feet would not reduce bird mortality, according to a recent study conducted by the Smithsonian Migratory Bird Center and the U.S. Fish and Wildlife Service's Division of Migratory

Birds.⁴ The study found that building collision mortality was one of the top sources of bird deaths in the United States, and that the majority of bird deaths (roughly 56 percent) result from collisions with buildings between four and 11 stories tall. Collisions with residences – including detached houses and multi-unit buildings ranging from one to three stories in height – account for more than 40 percent of avian deaths, while high-rises – buildings at least 12 stories tall – account for less than one percent. (Id.)

The Final EIR also asserts that mitigation for impacts to sensitive avian species, including golden eagle and Cooper’s hawk, is covered under the Multiple Species Habitat Conservation Plan (“MSHCP”) and lists several measures it claims will reduce the project related impacts to less than significant, including MMs 4.4.6.1A-B, 4.4.6.2A-B, 4.4.6.3A-C and 4.4.6.4A-I. (Final EIR Volume 1, p. 291.) None of these measures, however, address bird mortality from building collisions.

As pointed out in Riverside’s Draft EIR comment letter, the project’s proximity to the San Jacinto Wildlife Area (“SJWA”), recognized for its bird population, would only exacerbate the effects of bird collisions. The EIR must be revised to identify and analyze significant effects to birds from collisions with glass windows and reflective surfaces on the project site. In the revised analysis, as noted previously, the City should identify feasible mitigation measures to reduce or avoid impacts to birds from project buildings, including physical barriers that completely cover reflective surfaces and windows.

B. The Final EIR Does not Remedy the Draft EIR’s Failure to Explain Why Compliance with Applicable Regulations Would Ensure that Impacts are Less than Significant

The proposed revisions to MMs 4.4.6.4A and 4.4.6.4B do not address the concerns expressed by Riverside in its Draft EIR comment letter. Because the mitigation creates an exception for non-special status birds, it does not ensure compliance with the Migratory Bird Treaty Act (“MBTA”), which protects all migratory bird species, including those which are relatively common. By identifying circumstances under which no mitigation would be required, i.e., in the event “no special status avian species are identified within the limits of disturbance,” the measure may allow destruction of an active nest during nesting season, which would be an unpermitted take under the MBTA. Riverside reiterates its request that the exception for non-special status birds be eliminated.

C. The Final EIR Fails to Substantiate the Claim that Air Pollution Impacts on the San Jacinto Wildlife Area Would Be Less than Significant

The Final EIR’s response to comments that the 250-foot setback and California Department of Fish and Wildlife (“CDFW”) buffer would not adequately mitigate air pollutant impacts to wildlife within the SJWA is inadequate. Response to Comment E-2A-22 refers the reader to Response to Comment G-69-2, but that response simply asserts that the issue of direct and indirect air quality impacts on the SJWA was evaluated in the Draft EIR and that, with recommended mitigation, impacts would be less than significant. The response does not

⁴ *Bird-building collisions in the United States: Estimates of annual mortality and species vulnerability*, The Condor, Volume 116, 2014, pp. 8-23, published January 2, 2014, available at: http://nm.audubon.org/sites/default/files/documents/loss_et_al_bird-building_collisions_condor_2014.pdf

identify which mitigation measures it relies upon for this statement, nor does it explain how they would ensure that the Project's air pollution emissions would not have significant effects on wildlife in the SJWA.

The Final EIR concedes that the Project would have significant impacts on wildlife within the SJWA from Project air pollution, including diesel truck exhaust (Final EIR, Volume 2, p. 4.4-86), but concludes that with the required 250-foot setback and the CDFW buffer, impacts would be mitigated. This claim lacks evidentiary support. As discussed in some detail in Riverside's Draft EIR comment letter, the continued presence of wildlife within the buffer area negates its effectiveness for mitigation of diesel particulates, citing Draft EIR Section 4.4.1.5, and the Final EIR does not respond to this assertion. Interestingly, the language acknowledging the presence of wildlife in the buffer has been deleted from the Final EIR (see Final EIR, Volume 2, strikethrough text on pp. 4.4-16 through 4.4-18) without explanation or revised analysis. This does not solve the identified deficiency. Riverside continues to urge the City to incorporate additional mitigation to address the impacts of Project air pollution on SJWA wildlife, including the previously recommended restrictions on trucks, and landscape plans that include trees or other vegetation to filter particulate matter. In conjunction with this mitigation, MM 4.4.6.1A should incorporate a timing mechanism, to ensure that the required landscape plans are implemented by issuance of the first certificate of occupancy, and not just prepared and approved prior to issuance of building permits.

D. The Final EIR Fails to Remedy the Inadequate Geographic Scope of the Cumulative Analysis of Biological Resources

Response to Comment E-2A-23 states that the "geographic scope of analysis in the EIR was not specifically associated with the MSCHP area or limited by County boundaries." However, this statement is directly contradicted by the Final EIR itself, which states that "(t)he cumulative area for biological resources is the Western Riverside County MSHCP area." (Final EIR, Volume 2, p. 4.4-105.) The reader is left without a clear understanding of the geographic scope of the cumulative analysis, leading to the EIR's failure as an informational document.

The Final EIR's analysis of cumulative impacts to biological resources is flawed in other respects as well. Response to Comment E-2A-23 asserts that habitat loss is not "anticipated to occur" within adjacent jurisdictions, but provides no evidentiary support for this statement. In response to Riverside's comments regarding impacts on special status species, the City references a series of Moreno Valley General Plan mitigation measures which relies upon to reduce these impacts to less than significant. However, many of these measures are not sufficiently specific or defined to gauge their effectiveness in mitigating cumulative impacts, and therefore fail to meet CEQA's requirement for legally adequate mitigation. For example, MM 4.4.6.2A allows, at the applicant's discretion, for payment of an impact fee to the Western Riverside County Regional Conservation Authority ("RCA") or "other appropriate conservation organizations" to offset the loss of sensitive plants. The measure provides no detail about what would constitute an appropriate organization for such a payment, the amount of the payment or a methodology for its calculation, and the timing requirements for a payment, leaving the reader to wonder how its imposition could possibly mitigate identified impacts to sensitive plants. Other measures suffer similarly.

Finally, the Final EIR relies on the fee payment program of the MSHCP to mitigate the Project's contribution to cumulative impacts, but fails to provide evidentiary support for the conclusion that these fees will, in fact, mitigate the impacts to less than significant. While CEQA permits an EIR to find that a project's contribution to a significant cumulative impact will not be cumulatively considerable based on appropriate mitigation, including a requirement to implement or fund its fair share of a mitigation measure designed to alleviate the cumulative impact, the EIR must include facts and analysis supporting the finding that the project's contribution will be less than cumulatively considerable. (CEQA Guidelines §15130(a)(3); see *Preserve Wild Santee v. City of Santee* (2012) 210 Cal.App.4th 260, 277.) The Final EIR fails to do so.

VI. THE FINAL EIR FAILS TO INCORPORATE FEASIBLE MEASURES TO REDUCE THE PROJECT'S IMPACTS ON GHG AND CLIMATE CHANGE

Additional feasible mitigation is available to further reduce the Project's GHG and climate change impacts. The Final EIR continues to identify water conveyance and waste water disposal as sources of GHG emissions. (Final EIR, Volume 2, p. 4.7-39.) The Project should be required to install graywater systems for beneficial reuse of wastewater. Response E-2A-25 states that the Project's water usage would be minimal, but that must be reconciled with the 25,000 jobs recited in the Project description, with their accompanying indoor water use.

Response E-2A-25 does not adequately respond to recommendations that the Project be required to install photovoltaic ("PV") panels in parking lots and cool pavements in parking lots and other paved areas. While the response notes that the Project would be required to install roof-mounted PV, this does not address the issue of increased radiation absorption due to changes in ground cover, discussed in detail in Riverside's Draft EIR comment letter, and not addressed in the Final EIR's analysis of GHG and climate change. Riverside notes the Final EIR's inclusion of cool pavement in the list of options set forth MM 4.16.4.6.1A, but without incorporation of a specific performance standard, this measure does not meet CEQA's requirement for legally adequate mitigation. (See CEQA Guidelines § 15126.4(a)(1)(B).) Response E-2A-25 contends that it is not feasible to specify performance standards for cool pavement, but the document it cites for this proposition actually includes a set of standards for measuring solar reflectance and thermal emittance, used to evaluate a specific pavement product's level of "cool."⁵

As previously recommended in Riverside's Draft EIR comment letter, and given the large scale of the Project, it is also feasible for the developer to implement Ice Storage Air Conditioning ("ISAC") systems. The California Attorney General's office recommends this measure to reduce global warming related impacts of individual projects⁶ and Riverside urges the City to consider requiring implementation of such a system for the WLC. Riverside disagrees with the assertion in Response to Comment E-2A-25 that private cogeneration is prohibited on the Project site by California Public Utilities Code Section 218. Section 218 defines the term "electrical corporation" and specifies that this definition does not apply to cogeneration, unless the cogenerator is selling the power to an immediately adjacent property, owned by another entity, and separated by an intervening public street.

⁵ Reducing Urban Heat Islands: Compendium of Strategies, Cool Pavements, U.S. EPA, available at: <http://www.epa.gov/heatislands/resources/pdf/CoolPavesCompendium.pdf>, at p. 7.

⁶ http://www.ag.ca.gov/globalwarming/pdf/GW_mitigation_measures.pdf

Riverside reiterates its recommendation that the Project be required to install LED lights in all exterior and interior fixtures. Response to Comment E-2A-25 indicates the MM 4.16.4.16.1B has been revised to incorporate this suggestion, but LEDs are not included in the measure's list of options.

VII. THE FINAL EIR CONTINUES TO IMPROPERLY IDENTIFY THE ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Response to Comment E-2-26 asserts that consistency with the Project's objective to substantially improve the City's jobs/housing ratio is an "appropriate environmental yardstick against which to measure the project as part of the alternatives analysis." Riverside does not disagree that the City may take Project objectives into consideration when determining the feasibility of various alternatives. We disagree, however, with the City's contention that compliance with Project objectives is an appropriate consideration when identifying the environmentally superior alternative. By definition, identification of the environmentally superior alternative must be limited to determining which alternative, if implemented, would be least impactful on the physical environment. The alternatives analysis should be revised to eliminate all consideration of Project objectives from the selection of the environmentally superior alternative.

VIII. CONCLUSION

Riverside appreciates the City's consideration of its comments on the Final EIR. We urge the City to postpone any consideration of this Project until the EIR is revised in compliance with CEQA and recirculated for public review and comment.

Very truly yours,

Emilio Ramirez
Interim Community and Economic Development Director⁷

Attachments:

Exhibit A: Draft EIR Comment Letter from Steve Hayes, City Planner, City of Riverside, to Mark Gross, Senior Planner, City of Moreno Valley, April 8, 2013

Exhibit B: Comment letter from Linscott, Law & Greenspan (LLG), Engineers dated June 10, 2015

⁷ This comment letter was also prepared with the assistance and expertise of Gilbert Hernandez (City of Riverside, Traffic Engineer), Keil Maberry (Linscott, Law & Greenspan, Engineers, Principal), Daniel Kloos (Linscott, Law & Greenspan, Engineers, Senior Transportation Engineer), Kristi Smith (City of Riverside, Supervising Deputy City Attorney), and The Sohagi Law Group, PLC.

CC:

William "Rusty" Bailey, III, Mayor

Riverside City Council Members

John Russo, City Manager

Al Zelinka, Assistant City Manager

Deanna Lorson, Assistant City Manager

Gary Geuss, Riverside City Attorney

Kristi J. Smith, Supervising Deputy City Attorney

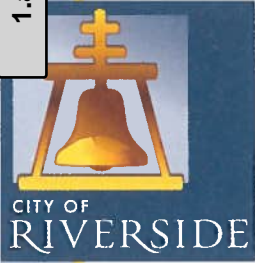
Tom Boyd, Public Works Director

Gilbert Hernandez, City Traffic Engineer

Jay Eastman, Interim City Planner

Juan Perez, Riverside County TLMA Director

Anne Mayer, Riverside County Transportation Commission, Executive Director



Community Development
Department
Planning Division

April 8, 2013

Mark Gross, AICP
City of Moreno Valley
Community and Economic Development Department - Planning Division
14177 Frederick Street
Moreno Valley, CA 92553

SUBJECT: World Logistics Center Project - Draft Environmental Impact Report (SCH# 2012021045)

Dear Mr. Gross:

The City of Riverside ("Riverside") appreciates the opportunity to comment on the World Logistics Center ("WLC") Draft Environmental Impact Report ("Draft EIR" or "DEIR") prepared by the City of Moreno Valley ("City"). The proposed World Logistics Center Project analyzed in the Draft EIR includes 41.6 million square feet of new logistics development and the associated infrastructure on 3,918 acres ("Proposed Project" or "Project"). The Draft EIR concludes that the Proposed Project would have numerous significant and unavoidable impacts to Traffic and Circulation, Aesthetics, Agriculture, Air Quality, Cultural Resources, Greenhouse Gases and Global Climate Change, Land Use and Planning, and Noise.

While the Proposed Project would undoubtedly provide economic benefits to the region, Riverside would like to ensure that health of its citizens and the environment have been adequately considered and mitigated in the Draft EIR. As described in greater detail below, Riverside has serious concerns regarding the adequacy of several analyses, particularly the traffic analysis. The Proposed Project will generate approximately 71,000 daily trips, many of which will travel through the City of Riverside. Riverside is concerned that this project will produce cut-through traffic on Riverside's road system, particularly Alessandro Blvd. and Van Buren Blvd., as freeways become overburdened by significant increases in truck traffic.

The Draft EIR uses incorrect and internally inconsistent growth assumptions for the traffic analysis and only accounts for a small fraction of the project's trip generation. Notwithstanding these errors, the Draft EIR concludes there would be numerous significant and unavoidable impacts to many of the intersections, some of which would increase delay at intersections by a factor of 40. Riverside believes there are numerous additional feasible mitigation measures

which should be made conditions of approval. For the reasons described in greater detail below and the attached comment letter from Riverside's Traffic Consultants, Linscott, Law & Greenspan, Engineers (Attachment 1), the Draft EIR should be revised and recirculated for additional public/agency review.

TRAFFIC

1. Traffic Methodology

a. The Draft EIR Traffic Impact Analysis Uses Incorrect and Inconsistent Cumulative Growth Assumptions

The Draft EIR Traffic Impact analysis uses incorrect and internally inconsistent cumulative growth assumptions which have understated the project's traffic impacts. Because the project's traffic impacts have been understated, all DEIR impact analyses that were based upon the traffic analysis have been understated as well, including but not limited to, air quality, greenhouse gas, and the noise analysis. (DEIR Page 4.15-30.)

The traffic analysis on page 4.15-28 of the Draft EIR states:

Per the City of Moreno Valley Traffic Impact Analysis Preparation Guideline ["TIAPG"] ...opening year cumulative traffic volumes were developed by adding a 2 percent per annum growth rate to existing baseline traffic volumes; therefore, a total ambient growth of 12 percent of the existing baseline conditions was added to develop opening year cumulative conditions.

This language is based upon the language in Exhibit B of the TIAPG which states "...assume growth rate of 2% per year..." However, the use of 12% (6 years \times 2%) for total growth over the six year period is an incorrect value for an annual 2% growth rate. If the analysis had actually applied the stated 2% annual growth rate, it should have assumed a total growth rate of 12.62% (i.e., 1.02⁶) in the year 2017 in comparison to 2012. The analysis, therefore, understates the cumulative traffic impacts. Furthermore, the 2% annual growth assumption is internally inconsistent with the growth assumptions from the City's General Plan which the Draft EIR relies upon. Draft EIR Section 2.10.2 states:

Table 2.D summarizes the cumulative growth information from the Final Program EIR for the City General Plan Update from July 2006 (Section 7, Cumulative Impacts). Table 2.D shows that the City expects to grow at an average annual rate of 2–3 percent from 2000 to 2030. (Emphasis added.)

Table 2-D in fact shows an average annual population growth rate in the City of Moreno Valley of 2.24% and average annual household growth rate of 2.75%. Regional growth rate projections for Riverside County are also shown at 2.33%. Even assuming the smaller 2.33% average annual regional growth rate provided in this table, this yields a 14.82% (1.0233⁶) growth rate in the year 2017 in comparison to 2012, rather than the 12% growth rate assumed

in the traffic analysis. Because the cumulative traffic analysis used the incorrect growth assumptions, the cumulative impacts of the project have been understated. The traffic analysis should, therefore, be revised to use internally consistent annual growth assumptions.

b. The Traffic Analysis Fails to Address the Project's Trip Peaking Characteristics Outside of the AM and PM Peak Hours

The traffic analysis in Draft EIR Section 4.15.6 inappropriately relies upon an a.m. and p.m. peak hour analysis,¹ based upon the existing peak hours in the City. The Draft EIR should be revised to provide additional traffic analyses: (1) based upon the project's peak trip generation time periods, and (2) based upon the ADT ("Average Daily Traffic") methodology. The Draft EIR concludes that "[t]he project is estimated to generate a net total of approximately 71,085 daily trips with approximately 4,672 occurring during a.m. peak hour and 5,101 occurring during the p.m. peak hour." (Draft EIR page 4.15-31.) In fact, the Draft EIR recognizes that "The WLC would create approximately 25,000 new jobs; nearly doubling the number of jobs in Moreno Valley," meaning that the project will be the single largest trip generator in the City. (Draft EIR page 4.15-32.) While, an a.m. and p.m. peak hour analysis might be appropriate in other contexts, it is not appropriate here given the nature and magnitude of this project. Use of the traditional a.m. and p.m. peak hour analysis has resulted in an understatement of the project's impacts. As described in greater detail below, the project will be the largest single trip generator in the City and will likely result in a new peak traffic hour which has not been analyzed in the Draft EIR.

The current traffic analysis has only analyzed 13.7% of the project's trip generation (i.e., trip generation in the a.m. and p.m. peak hours), the remaining 86.3% (61,312 trips), which occurs outside these peak hours, has not been analyzed. (Draft EIR page 4.15-31.) Just 13.7% of the project trips are sufficient to nearly double the delay at numerous intersections and result in a nearly a fortyfold increase at others. If only 13.7% of the project's trips can result in nearly a fortyfold increase in delay at intersections, imagine the amount of delay that would occur if the additional 61,312 trips had been accounted for in the traffic impact analysis.

For example, Table 4.15.AD-1 indicates that Intersection 10 (Redlands Blvd./Locust Ave.) is currently operating at a delay of 26.7 seconds. The project will result in a delay greater than 50 seconds (Level of Service ("LOS") F) at this intersection during the a.m. peak hour; at a minimum, doubling the delay. (Similar intersections would see a doubling of their delay during the a.m. peak hour in the 2012 scenarios, including Intersections 13, 14, 20, 46, 123, 124, 132, 133, 134.) In fact, intersection 27 (Redlands Blvd./Cactus Ave.) would result in a nearly fivefold increase in the delay during the a.m. peak hour and a nearly fortyfold increase during the p.m. peak hour in the 2012 scenarios. (Draft EIR Table 4.15-AD-2.) Similar increases are shown in

¹ While the time periods associated with the a.m. and p.m. peak hours do not appear to be included in the text of the Section 4.15 of the Draft EIR, Figure 28 in Appendix I suggests the a.m. peak hour occurs from 6 a.m. to 9 a.m., and the p.m. peak hour occurs from 3 p.m. to 6 p.m.

the 2017 scenario a.m. peak hour analysis [including but not limited to Intersections 12, 27, 122], the 2022 scenario am peak hour analysis [including but not limited to Intersections IN-6, IN-12, IN-19, IN-27, IN-19, IN-27, IN-46, IN-135], and the General Plan Buildout analysis [including but not limited to Intersections IN-6, IN-10, IN-11, IN-12, IN-18, IN-19, IN-27, IN-35, IN-132].

As described in the previous paragraph, just 13.7% of the project's daily trip generation (combined a.m. and p.m. peak hour trip generation) constitutes the primary source of trip generation and delay at numerous intersections. Typical² logistics centers have a truck trip maximum peak hour well outside of the a.m. and p.m. peak hours analyzed in the Draft EIR; from approximately 1 p.m. to 2 p.m. (Draft EIR Appendix I, Figure 28.) Furthermore, there are two additional smaller peak time periods from approximately 4 a.m. to 6 a.m. and from 10 p.m. to 12 a.m. Given that (1) 86.3% of the project's trip generation occurs outside the peak hours and have not been taken into account in the impact analysis and (2) the project will be the single largest trip generator in the City of Moreno Valley, it is important for the City to analyze the impacts of the *project's* peak hour, rather than the *traditional* peak hours which occurred before the project's implementation.

In addition to the traffic analysis based upon the Project's peak hours, an ADT analysis should also be included in the Draft EIR.³ The ADT methodology provides a total daily average of the various roadway segments' capacity. This would allow the City to determine whether the roadway segments have sufficient capacity for 100% of the Project's trip generation, rather than just 13.7.

The Draft EIR should be revised to (1) explain the project's traffic peaking characteristics assumptions, (2) the rationale for those assumptions, (3) additional traffic analysis that is based upon the Project's peak hours, (4) an ADT analysis, and (5) incorporation of feasible mitigation measures. Upon completion of these revisions, the Draft EIR should be recirculated for public and agency review. Additional comments regarding peaking characteristics and suggested methodology are included in the attached comments from Riverside's Traffic Consultants Linscott, Law & Greenspan, Engineers. (Attachment 1.)

c. The Draft EIR Fails to Disclose the Project's Impacts at Numerous Intersections

The Draft EIR measures the Project's traffic impacts based upon the delay caused by the Project. However, in many instances, the Draft EIR places an artificial numerical ceiling on the analysis and states that the delay is "> 50" seconds without the project, and "> 50" seconds with the project (e.g., Table 4.15.A1-1 [Intersections 9, 13, 20, 36, 45, 62, 103, 124, 125, 132,

² The Draft EIR does not actually provide the traffic peaking characteristics assumptions for the World Logistics Center Project. This information should be included in the DEIR and recirculated for public/agency review and comment.

³ As noted in the Riverside County Transportation Department Traffic Impact Analysis Preparation Guidelines (April 2008), ADT analysis is appropriate where "...intersection analyses are not the controlling factor or for general planning purposes." (Page 3.)

133, 134, 135, 136, etc.], Table 4.15.A1-2 [Intersections 10, 13, 20, 45, 60, 74, 94, 95, 122, 124, 125, 132, 133, 134, 135, 136, etc.]). This type of analysis fails to disclose the project's traffic impacts. The courts have held that a lead agency cannot travel the "legally impermissible easy road to CEQA compliance" by "simply labeling the effect 'significant' without accompanying analysis of the project's impact." (*Berkeley Keep Jets Over the Bay Committee v. Board of Port Commissioners of the City of Oakland* (2001) 91 Cal.App.4th 1344, 1371.) Yet this is precisely what has been done here. The public and decision makers have no way of ascertaining whether the project is resulting in an increase or decrease in delay in these situations, or the severity of the change in delay. The traffic analysis should be revised to eliminate this artificial ceiling and recirculated for public/agency review.

d. The Draft EIR Traffic Impact Analysis Uses an Incorrect Geographic Scope

The Draft EIR artificially limits the geographic scope of the traffic analysis. As described in greater detail below, the analysis stops short of analyzing the impacts of routes to the Port of Los Angeles/Long Beach, and eliminates a huge portion of the analysis along Highway 215. The geographic scope of the traffic analysis should be revised.

CEQA Guidelines Section 15130(b)(3) states that "Lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used." The only discussion of the geographic scope of the traffic analysis is provided on Draft EIR page 4.15-2 through 4. While the discussion explains that surface street analysis was limited to streets where the project would "add 50 or more peak hour trips,"⁴ no such explanation was provided for the freeway analysis. The geographic scope of the freeway segment analysis is shown in Draft EIR Figure 4.15.3 but no rationale is provided for its selection.

The Draft EIR acknowledges that "The project would be bringing cargo containers from the Port of Los Angeles or the Port of Long Beach ["Ports"]" (Draft EIR page 4.7-43), however, the geographic scope of the freeway segment analysis stops well before the Port of Los Angeles/Long Beach, by nearly 34 miles (by line of site). It is reasonably foreseeable that these truck trips will drive to the Ports, therefore, the Draft EIR should expand the geographic scope of the traffic analysis to include freeway segments to the Ports.

It is unclear why the geographic scope of the freeway segment analysis did not include portions of the 215 between the 60 to the north and the 74 to the south (see DEIR Figure 4.15.3). Freeway segments along this southern portion of the freeway are significantly impacted; for example freeway segment F-70 on the 215 (DEIR Table 4.15.AK-2). There is a high likelihood other components of the freeway system will be significantly impacted, but these impacts have

⁴ As noted in the previous Section to this comment letter, Riverside believes that supplemental analysis should also be provided based upon the project's peak traffic hours rather than a.m. and p.m. peak hours. Given that the geographic scope of the surface street analysis was based upon the a.m. and p.m. peak hour trip generation, the geographic scope of the project's peak analysis should also be revised based upon 50 or more peak hour trips for the project.

not been addressed because they have been inexplicably left out of the analysis by artificially limiting the geographic scope.

We request that the geographic scope of the traffic analyses be revised, consistent with the discussion provided above and recirculated for public and agency review. Additional comments regarding geographic scope are included in the attached comments from Riverside's Traffic Consultants Linscott, Law & Greenspan, Engineers. (Attachment 1.)

e. The Draft EIR Fails to Disclose the Cumulative Transportation Improvements

While the Draft EIR purports to use growth projections for the cumulative analysis, as described earlier in this letter, the analysis also partially relies upon a list of projects approach, as it incorporates a number of specific future roadway improvements. For example, Draft EIR Section 4.15.3.1 states that the cumulative future year scenarios (including 2017, 2022, and 2035), include "improvements funded through local and regional transportation mitigation fee programs..." However, no specific regional roadway improvements are identified in the Draft EIR. This approach fails to comply with the requirements of CEQA Guidelines Section 15130(b)(1)(A). These roadway improvement assumptions should be identified, including the year these improvements will be completed and their funding sources.

Additional comments regarding cumulative transportation improvements are included in the attached comments from Riverside's Traffic Consultants Linscott, Law & Greenspan, Engineers. (Attachment 1.)

f. The Draft EIR Fails to Disclose the Trip Distribution Assumptions

While CEQA permits the use of reasonable assumptions, those assumptions must be based upon substantial evidence. (See Pub. Resources Code § 21080(e).) The Draft EIR states that "[t]he proposed project's trip distribution was developed for both passenger cars and trucks." (Draft EIR page 4.15-31.) While a general qualitative description of these assumptions is provided in the Draft EIR, none of the specific assumptions or supporting evidence is included.

For example, the Draft EIR page 4.15-33 states that "...all trucks must use established truck routes within the City of Moreno Valley..." however, no description of these established truck routes or their destinations (with the exception of the Ports) is provided in the Draft EIR, nor is this information provided in Appendix L. Detailed trip distribution assumptions should be incorporated into the Draft EIR. The Draft EIR should also be revised to account for trip diversions when intersections and roadway segments become so congested that individuals re-route. For example, the Draft EIR states that one intersection will have an average delay of 862.9 seconds (14.4 minutes). (See Draft EIR Table 4.15-AD-2.) Individual drivers are unlikely to continue the use of routes which have a 14 minute delay for an individual intersection.

Additional comments regarding trip distribution assumptions and diversions are included in the attached comments from Riverside's Traffic Consultants Linscott, Law & Greenspan, Engineers. (Attachment 1.)

2. Alternatives' Analysis of Traffic Impacts

a. The Draft EIR Alternatives' Analysis Provides an Insufficient Level of Detail

The Draft EIR provides inadequate analysis of the alternatives' impacts to traffic. CEQA Guidelines Section 15126.6(d) requires the alternatives analysis to "...include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project." However, very little information is provided regarding the alternatives' significant traffic impacts.

For example, the No Project/Existing General Plan analysis (Draft EIR page 6-19) provides the total average daily trip generation for each alternative and notes "[i]t is reasonable to assume that an increase of 25 percent of traffic trips would increase traffic on local roadways and intersections." Such an assumption is not reasonable for these alternatives because the Proposed Project's traffic impact analysis is based upon unique trip distribution assumptions for a logistics center. As discussed on Draft EIR page 4.15-32:

The truck trip distribution patterns have been developed based on the anticipated travel patterns for the proposed project's high-cube logistics warehousing trucks. Since the internal trips, the port-related trips, and the majority of external trips (all but those on I-10) use routes west of the project site, it is anticipated that a large majority of the WLC truck traffic will be oriented to the west of the project, with a much smaller amount to and from the east.

These trip distribution assumptions are not applicable to residential/mixed-use/retail-uses included in the existing general plan alternative, and the other types of uses proposed in the various alternatives. These different uses will have vastly different peaking characteristics and distribution patterns (i.e., residential uses are unlikely to be driving to the Ports). While some intersections may be increased due to higher trip generation under this existing general plan alternative, other significantly impacted intersections/segments/freeways may be vastly improved because of the change in likely trip destinations. The level of detail provided in the analysis is insufficient to allow the public and decision makers the ability to determine which traffic impacts would be reduced by the selection of the various alternatives. The Alternatives' traffic analysis should be revised to fully describe the levels of service and delay for individual intersections/segments/freeways.

3. Traffic Mitigation Measures

The Proposed project creates numerous significant traffic impacts. For example, under the 2035 scenario the project would result in significant impacts at 39 intersections, 2 roadway segments, 53 freeway segments, and 15 freeway weaving segments. (Draft EIR Section 4.15.6.) While Section 4.15.7 contains discussion of several mitigation measures, many of these mitigation measures are dismissed as "infeasible." (For example, see Draft EIR page 4.15-189, Intersection IN-95.) Riverside believes there are additional feasible mitigation measures which should be incorporated into the Mitigation Monitoring and Reporting Program ("MMRP").

Furthermore, the Draft EIR should be revised to provide a concise listing of the suggested transportation improvements which have been determined to be feasible and which will be incorporated into the MMRP. The discussion of mitigation measures in Section 4.15.7.3 (“Required Improvements”) includes discussion of feasible *and infeasible* transportation improvements.

Additional comments regarding mitigation measures are included in the attached comments from Riverside’s Traffic Consultants Linscott, Law & Greenspan, Engineers. (Attachment 1.)

a. The Proposed Transportation Uniform Mitigation Fee (“TUMF”) (Mitigation Measure 4.15.7.4D) is Inadequate to Fully Address the Project’s Significant Impacts

The EIR states that “if the identified facility was already part of the TUMF or DIF Program, then payment into the TUMF or DIF program constitutes mitigation of impacts to the TUMF and DIF facilities.” (Draft EIR Section 4.15.7.)

MM 4.15.7.4D proposes to mitigate the project’s significant traffic impacts to facilities already included in the TUMF Program through payment of TUMF fees. This payment is insufficient to mitigate the project’s significant traffic impacts. TUMF fees are allocated based upon specific assumptions, with 48.7% of the funds generated in each zone going back to that zone to be programmed for projects, and 48.7% of the funds allocated to regional inter-zone projects programmed by the Riverside County Transportation Commission (“RCTC”). The City of Moreno Valley is in the Central Zone, thus 48.7% of the project’s TUMF fees will be allocated within the zone, while 48.7% will be distributed regionally. Additionally, fee revenues are split between the backbone network, or facilities of regional significance, and the secondary network, or facilities of zonal significance. (ES.4, 2009 TUMF Nexus Study.⁵) The split of fee revenues between the backbone and secondary highway networks is related to the proportion of highway vehicle travel that is local, i.e., between adjacent communities, and regional, i.e., between more distant communities within western Riverside County. (2009 TUMF Nexus Study, page 40.) A future travel forecast estimate was conducted to determine the appropriate distribution of fees between networks. (*Id.*) Based upon the travel forecast estimates of the vehicle trips in 2035, 65.5% of the trips originating in the Central Zone will remain within the zone, and 12.6% of the trips starting in the Central Zone will be to the Northwest Zone.

These estimates do not comport with the travel distribution assumptions in the Draft EIR. As noted in Section 4.15.3.1 of the Draft EIR, 82% of the project’s truck trips would be to the west on one or more freeways. Presumably, a substantial portion of these trips would be destined for the Ports of Long Beach and Los Angeles, which would require travel outside the Central Zone. (See Draft EIR page 4.7-43.) As a result, the traffic distribution assumptions used in the TUMF Nexus Study are inconsistent with the traffic distribution assumed in the Draft EIR. This inconsistency means that the payment of TUMF, which are specifically allocated between

⁵ [http://www.wrcog.cog.ca.us/downloads/TUMFNexusStudy\(100210\).pdf](http://www.wrcog.cog.ca.us/downloads/TUMFNexusStudy(100210).pdf)

zones, as well as the backbone and secondary network, is inadequate to mitigate the significant traffic impacts of the project.

While Riverside agrees that fees should be paid into the TUMF mitigation program, these fees should not be relied upon to reduce significant traffic impacts to less than significant. Furthermore, given the number of significant and unavoidable traffic impacts resulting from the project, as additional mitigation, the applicant should be required to pay Western Riverside Council of Governments (“WRCOG”) for a reevaluation of the TUMF Nexus Study based upon the project’s changed land use designations/zoning on approximately 4,000 acres. This reevaluation would allow the County to re-prioritize transportation improvement to better mitigate the significant and unavoidable traffic impacts where mitigation was deemed infeasible.

Noise

Construction and operational noise/vibration associated with the Proposed Project have the potential to significantly affect Riverside’s Residents. Unwanted noise can interfere with our resident’s enjoyment of the community, interfere with their businesses, result in sleep deprivation, and if sufficiently loud, can result in hearing loss. Riverside would like to ensure that all noise impacts have been adequately analyzed and mitigated, and, therefore, provides the comments below.

1. Noise Significance Thresholds

a. The Draft EIR Fails to Analyze Whether the Proposed Project Would Conflict with Other Jurisdictions’ Noise Regulations

The Draft EIR includes a significance threshold which states that “Exposure of persons to or generation of noise levels in excess of standards established in the City of Moreno Valley General Plan, Moreno Valley Municipal Code, or *applicable standards of other agencies.*” (Emphasis added.) However, the associated text provides that “the applicable noise standards and guidelines governing the project are those specified previously in Sections 4.12.2.1 through 4.12.2.4.” These referenced sections only include the City of Moreno Valley’s noise standards and fail to address any of the noise standards from other agencies, such as the City of Riverside. (See City of Riverside Municipal Code, Title 7;⁶ see also City of Riverside General Plan Noise Element.⁷) Section 4.12.6.2 of the Draft EIR acknowledges that there will be noise increases near sensitive receptor locations in the City of Riverside (e.g., see Canyon Crest Drive & Country Club Drive), the analysis, therefore, should have included a discussion of whether the project is consistent with those noise standards.

⁶ <http://riversideca.gov/municode/pdf/07/title-7.pdf>

⁷ http://www.riversideca.gov/planning/gp2025program/GP/11_Noise_Element.pdf

b. The Draft EIR Fails to Analyze Whether the Proposed Project's Traffic Noise Would Result in Sleep Disturbance and the Associated Physiological Effects and Annoyance

Roadway noise from truck and car trips was described as having a significant impact on sensitive receptors under the Community Noise Equivalent Level ("CNEL") metric. (See Draft EIR Section 4.12.6.2.) However, no noise analysis was provided to address whether this increase in nighttime noise level would result in sleep disturbance/deprivation or the associated physiological response/annoyance. (See *Berkeley Keep Jets Over the Bay v. Board of Port Commissioners* (2001) 91 Cal.App.4th 1344.) While the sleep disturbance analysis performed in *Berkeley Keep Jets* was related to aircraft noise, there is no reason to distinguish between the sources of the noise. While the original FICAN 1997 sleep awakening curve⁸ was based upon aircraft noise, subsequent methodologies acknowledge that transportation noise can result in sleep disturbance. The more recent ANSI S12.9-200/Part 6 (2008)⁹ sleep disturbance curve is based on 75 data points associated with awakening due to aircraft noise intrusions in bedrooms, and 16 data points for other transportation noise sources.

The Draft EIR's noise analysis provides no explanation why these late night truck/car trips would not disturb the sleep of sensitive receptors, despite the fact that the Draft EIR acknowledges that construction would occur 24 hours a day for nine years, and the project's operations would occur 24 hours a day. (Draft EIR page 4.12-32 and Appendix I, Figure 28.) The Draft EIR should be revised to provide an analysis which determines whether the project would have a significant impact related to sleep disturbance.

Air Quality

As the City is aware, the South Coast Air Basin is in "Extreme Nonattainment" for O₃ and "Serious Nonattainment" for PM₁₀ under Federal Standards and in Nonattainment under State Standards for Ozone, PM₁₀, PM_{2.5}, NO₂. (Draft EIR Table 4.3.C.) The Draft EIR concludes that the Proposed Project would have significant and unavoidable impacts to Air Quality and would be inconsistent with the Air Quality Management Plan. These significant impacts will result in health effects to the citizens of Riverside, including the potential to result in respiratory illnesses, pulmonary dysfunction, cardiovascular disease, and premature death. (Draft EIR page 4.3-7 through 12.) Consequently, Riverside would like to see the Project's air quality impacts mitigated to the greatest extent feasible, and offers the recommendations provided below.

⁸ See Federal Interagency Committee on Aviation Noise (FICAN), June 1997, Figure 1; available at: http://www.fican.org/pdf/Effects_AviationNoise_Sleep.pdf

⁹ American National Standards Institute, Quantities and Procedures for Description and Measurement of Environmental Sound—Part 6: Methods for Estimation of Awakenings Associated with Outdoor Noise Events Heard in Homes.

2. Construction and Operational Mitigation Measures

a. Mitigation Measure MM 4.3.6.3C Should be Revised to Provide Alternative Fueling Stations at Each Individual Warehouse, and Constructed Concurrently With the Project's Impacts

MM 4.3.6.3C requires the establishment of onsite alternative fueling infrastructure (electric charging stations and/or natural gas fueling), which purportedly will help facilitate the use of low emissions trucks. The alternative fueling facility, however, need only be developed prior to the issuance of building permits for 25 million square feet of logistics warehouse.

This mitigation measure should be revised to require both electric charging stations and natural gas fueling. Currently, the project applicant has discretion to determine whether electric charging stations and/or natural gas fueling should be included. The mandatory inclusion of both electric charging stations and natural gas fueling would more effectively facilitate the use of low emissions trucks because it would provide trucking companies with the option of using either electric or natural gas trucks, thereby reducing the project's significant air quality impacts.

The timing of the development and placement of the alternative fueling facility is problematic. MM 4.3.6.3C provides that the facility must be "in place prior to the issuance of building permits for more than 25 million total square feet of logistic warehousing within the WLC Specific Plan." This trigger would allow development of a substantial portion of the project prior to the placement of the alternative fuel facility, especially given the plan to develop the project site in phases. However, the project's air quality impacts would be significant immediately, as shown in Draft EIR Table 4.3.W. The mitigation measure should be revised to require construction of alternative fueling facilities prior to the issuance of the first certificate of occupancy for the site.

The inclusion of a single alternative fueling facility within the 3,814 acre site, as currently proposed, would be ineffective at providing alternative fuel for many of the on-site operators. The mitigation measure should be revised to require alternative fueling facilities for *each individual* warehouse facility. Given the long periods of time required to recharge electric vehicles, providing on-site facilities would further encourage alternative fuel vehicles, as it would allow vehicles to be recharged while the vehicles are being unloaded. Given the comments in this and previous paragraphs above, this mitigation measure should be revised as follows:

The 2012 Regional Transportation Plan includes a zero/near-zero emissions truck corridor along State Route 60. The WLC project shall provide for the establishment of onsite alternative fueling infrastructure (electric charging stations and/or natural gas fueling) for each individual logistics warehouse facility, which will help facilitate the use of these low-emitting trucks. An alternative fueling facility to serve the WLCSP will be in place and operational prior to the issuance of the first certificate of occupancy ~~building~~

~~permits for more than 25 million total square feet of logistics warehousing~~ within the WLC Specific Plan. This facility may be on or offsite, subject to review and approval by the City.

Similar revisions are recommended for Mitigation Measure 4.3.6.3D, which requires on-site sale of food, fuel, and convenience items.

b. Mitigation Measure 4.3.6.2A Should be Revised to Require Tier 4 Construction Equipment at the Start of Project Construction

MM 4.3.6.3A(a) states that “Prior to the year 2017, off-road diesel-powered construction equipment greater than 50 horsepower shall meet or exceed United States Environmental Protection Agency (EPA) Tier 3 off-road emissions standards.”

EPA Tier 4 emissions standards are currently being phased in between 2008 and 2015,¹⁰ and thus a mitigation measure requiring the use of Tier 4 equipment before 2017 is feasible and should be incorporated into MM 4.3.6.2A. We, therefore, recommend deletion of subsection (a), and revisions to subsection (b) as follows:

~~In the year 2017 and thereafter,~~All off-road diesel-powered construction equipment greater than 50 horsepower shall implement one of the following: meet EPA Tier 4 emissions standards, meet EPA Tier 4 Interim emissions standards, or meet EPA Tier 3 standards with California Air Resources Board verified Level 3 filters to reduce 85 percent diesel particulate matter. If a good faith effort to rent Tier 4 equipment within 200 miles of project has been conducted but has been unsuccessful, then Tier 3 equipment (without filters) can be used. Written verification of the Tier 4 equipment search of three or more rental companies shall be provided by the project applicant to the City verifying the results of the search prior to the use of Tier 3 construction equipment.

Incorporation of this revised mitigation measure would reduce the project’s significant air quality impacts which begin in the year 2013.

Biological Resources

Biological resources in the region are important to Riverside’s residents. Diverse biological resources are an essential part of a healthy ecosystem. Riverside is committed to working with the County and adjacent cities to preserve, protect, and enhance open space and natural resources. (City of Riverside General Plan Policy OS-1.3.) The City is also committed to promoting open space and recreation resources as a key reason to live in Riverside. (Id. Policy OS-1.9.) Protecting biological resources and diversity in the region is key to achieving these commitments. Biological resources in the region, including, for example, resources within or

¹⁰ <http://www.gpo.gov/fdsys/pkg/FR-2004-06-29/pdf/04-11293.pdf> (69 Fed. Reg. 38958 (June 29, 2004)).

reliant on the San Jacinto Wildlife area (“SJWA”), contribute to a natural aesthetic, and provide hunting, fishing, bird watching and recreation opportunities. The biological resources will be significantly compromised by the Proposed Project.

1. The DEIR Fails To Evaluate Potentially Significant Impacts to Birds that Will Result from Collisions

The DEIR fails to examine the project’s impact to birds that would result from bird collisions with glass windows and reflective surfaces. The Specific Plan Design Guidelines indicate that onsite buildings will include [window] glazing, atriums, skylights and internal courtyards, thus ensuring that onsite development will include features known to pose hazards to birds. (Specific Plan Design Guidelines, Sec. 5.2.3.) While these are attractive design features, collisions with glass windows and other reflective building surfaces are a significant cause of bird mortality. Although bird mortality estimates vary widely, even at the low end of a published United States Fish and Wildlife Service (“USFWS”) range the cumulative impact should be considered significant.¹¹ These estimates address bird mortality from building collisions on a national scale. The Draft EIR should be revised and recirculated to provide more information and analysis regarding bird collisions. Given the proximity to the SJWA (which “is recognized nationally and internationally for its bird population” DEIR p. 4.4-15), the Project’s effects on bird collisions should not have been overlooked. In this revised analysis, particular attention should be paid to special status bird species, including species which meet the CEQA definition of endangered, rare or threatened. (See CEQA Guidelines §15380.) The proposed project’s contribution to this cumulative impact should also be evaluated within an appropriate geographic scope, as described in greater detail below. The geographic scope of analysis for cumulative impacts to biological resources is inappropriately and arbitrarily restricted to the Multiple Species Habitat Conservation Plan (“MSHCP”) area.

In addition to the Project itself, mitigation measure 4.12.6.2B, has the potential to result in significant bird mortality impacts. This measure, intended to reduce noise impacts at the closest residences within and adjacent to the WLCSP area, calls for removal of existing wrought iron fencing and replacement with a soundwall, specifically allowing that a glass barrier could be used to implement this measure.

Potential mitigation is available that would reduce this impact. Feasible mitigation for this impact includes requiring physical barriers that completely cover reflective surfaces and windows, uniform, patterned surface coverings, and potentially uniform coverings or

¹¹ USFWS estimates that building window strikes account for 97 to 976 million bird deaths each year. (<http://www.fws.gov/birds/mortality-fact-sheet.pdf>. See also Klem, D., Avian Mortality at Windows: The Second Largest Human Source of Bird Mortality on Earth, Proceedings of the Fourth International Partners in Flight Conference: Tundra to Tropics, pp. 244 – 251, also available from the USFWS at http://training.fws.gov/CSP/Resources/mig_birds/handouts/avian_mortality_at_windows.pdf).

embedded patterns that are visible to birds, but not humans. (See Avian Mortality at Windows, supra, pp. 246 – 247 for discussion of potentially feasible mitigation.)

2. The DEIR Fails to Explain Why Compliance with Applicable Regulations is Adequate to Ensure that Impacts Would Be Less Than Significant

The Draft EIR relies upon regulatory compliance in several instances to reduce impacts to less than significant. (Draft EIR page, 4.4-80.) A determination that regulatory compliance will provide adequate mitigation must be based on a project specific analysis of potential impacts and the effect of regulatory compliance. (*Californians for Alternatives to Toxics v. Dept. of Food and Agriculture* (2005) 136 Cal.App.4th 1.) The DEIR fails to provide this analysis in multiple instances. The following examples illustrate some of these failures, as well as other flaws in the analyses.

a. Nesting birds

Mitigation for impacts to birds addresses only impacts to nesting birds, but does not address non-special status birds and does not ensure compliance with the migratory bird treaty act. (Mitigation Measures 4.4.6.4A and 4.4.6.4B.) Mitigation measure 4.4.6.4A relies on compliance with the Migratory Bird Treaty Act (“MBTA”) and California Fish and Game code to reduce impacts to migratory and nesting birds to less than significant. However, the measure identifies circumstances under which no mitigation would be required, i.e., in the event “no special status avian species are identified within the limits of disturbance.” This exception means that compliance with California Fish and Game Code and the MBTA is not ensured. The exception should be eliminated. Fish and Game Code Section 3503 prohibits “needless” destruction of any nest, and the MBTA protects all migratory bird species, including relatively common species. Destruction of an active nest during nesting season could result in an unpermitted “take” under the MBTA. (See USFWS MBPM-2 (April 15, 2003) Migratory Bird Permit Memorandum.)

3. The Draft EIR Inadequately Addresses Air Quality Impacts on Wildlife

The DEIR indicates that diesel particulates and toxic air contaminants would have a significant effect on wildlife, and notes that diesel particulate deposition may occur within approximately 1,000 feet of truck activities within the project. (Draft EIR page 4.4-70.) The analysis concludes that the 250-foot setback and the California Department of Fish and Wildlife (“CDFW”) conservation buffer area will effectively mitigate potential indirect impacts of air pollutants, including diesel PM, on wildlife within the SJWA. This conclusion inappropriately attributes the entire CDFW conservation buffer area as mitigating the effects of diesel particulates on wildlife. However, as disclosed in (Draft EIR Section 4.4.1.5), wildlife will continue to use the CDFW conservation buffer area and thus the existence of a CDFW conservation buffer area, in and of itself, does not provide mitigation for this impact. In addition to the 250-foot development setback, additional mitigation should be considered, including restrictions on trucks and landscape plans that include trees or other vegetation to filter particulate matter. In

conjunction with the 250-foot setback, appropriate tree plantings (e.g., appropriate species, planting density) would help filter particulates that would otherwise disperse into the CDFW conservation buffer and the SJWA (in the absence of prevailing winds). Research conducted by UC Davis researchers indicates that the foliage characteristics of conifer species (needle shaped leaves, stickiness, and roughness) can effectively “capture” particulate matter. (<http://dn.engr.ucdavis.edu/images/AQMit-Report5.pdf>)

4. The Geographic Scope of the Cumulative Biological Resource Analysis is too Narrow

The geographic scope of analysis in Section 4.4.7 is inappropriately limited to the Western Riverside County MSHCP area. The project will affect a variety of biological resources that are not confined by the County’s boundaries, let alone the MSHCP area within the County. The analysis should be revised to take into account related effects on these resources within a more appropriately defined geographic scope. For example, habitat loss as a result of development in adjacent jurisdictions will contribute to cumulative impacts to wildlife movement, and impacts to sensitive species that are also affected by this project.

Greenhouse Gases and Climate Change

Greenhouse gas (GHG”) emissions have the potential to alter wind patterns, storms precipitation, and temperature. The secondary effects associated with GHG emissions have the potential to adversely affect Riverside’s water supply, wildfire hazards, food supply, biodiversity, air quality. (Draft EIR page 4.7-5.) Consequently, Riverside would like to see the Project’s climate change impacts mitigated to the greatest extent feasible, and offers the recommendations provided below.

1. The Draft EIR Should Incorporate Additional Mitigation Measures to Further Reduce the Project’s Significant and Unavoidable Impacts to Greenhouse Gases and Climate Change

The Draft EIR concludes impacts to Greenhouse Gas Emissions (“GHG”) and Climate Change would be significant and unavoidable. (Draft EIR Section 4.7.6.1 and 4.7.6.2.) Riverside believes additional feasible mitigation measures should be incorporated to further reduce this impact.

The transportation of potable water and the disposal of wastewater is a huge source of electricity demand, which the Draft EIR notes is a source of GHG emissions for the Proposed Project.¹² (Draft EIR Table 4.7.G) Therefore, to further reduce this significant impact, mitigation should be imposed requiring installation of waterless urinals in addition to low-flow fixtures provided under Mitigation Measure 4.16.1.6.1B rather than providing an option for installation of low water use urinals. The Proposed Project should also be required to install graywater systems for beneficial reuse of wastewater.

The Draft EIR also provides mitigation measures for “...solar ready building for possible PV facilities on project roofs.” The Proposed Project should be required to install electricity

¹² <http://www.epa.gov/region9/waterinfrastructure/waterenergy.html>

generating photovoltaic panels on the roofs and parking lots for these facilities as well as solar panels on roofs to provide hot water, rather than just making the project “solar ready.” Installation of PV panels in parking lots would also have the benefit of reducing radiation (heat) absorption, which is also a cause of climate change.¹³ Similarly, the project should be required to install low radiation absorption pavements (“Cool Pavements”) for the parking lots and other paved areas *with specific performance standards*.

The EPA notes that cool pavements would also have the added benefit of reducing aquatic wildlife impacts by reducing “thermal shock” of hotter runoff water and reducing “tire noise by two to eight decibels.” (*Id.*) While the project description notes that “light colored pavements” would be installed, no specific performance standards have been incorporated into mitigation measure 4.16.4.6.1A; this measure should be revised to provide minimum standards for cool pavement solar absorption.

The Project should also be required to install LED Lights in exterior and interior fixtures rather than relying upon the option of installing “*high pressure sodium or light-emitting diodes*” (Draft EIR page 4.1-74; see also Mitigation Measure 4.16.4.6.1B.) Numerous Cities have installed exterior LED lighting, and interior LED lighting is readily available at the consumer level.¹⁴ For example, the City of Los Angeles is currently replacing 140,000 streetlights with LED lighting.¹⁵

Given the large scale of the development, it is feasible for the developer to implement Ice Storage Air Conditioning (“ISAC”) systems. This is one of the measures suggested by the California Attorney General’s office,¹⁶ and which is being implemented in large projects such as Los Angeles World Airport’s Central Utility Plant which includes a 1.6 million gallon thermal-energy storage tank.¹⁷ ISAC systems would allow the Proposed Project to generate and store ice at night with off-peak electricity that would otherwise have gone to waste,¹⁸ thereby reducing peak hour electricity demand and its associated GHG and Air Quality emissions.

¹³ Climate Change is also caused by changes in ground cover which affect the absorption, scattering, and emission of radiation within the atmosphere and the Earth’s surface. See Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis*, page 21.) The changes in ground cover associated with the Proposed Project were not taken into consideration in the Draft EIR’s Climate Change analysis. IPCC Report available at: http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4_wg1_full_report.pdf

¹⁴ <http://www.usa.philips.com/c/led-light-bulbs/30033/cat/en/>

¹⁵ <http://bsl.lacity.org/led.html>

¹⁶ http://ag.ca.gov/globalwarming/pdf/GW_mitigation_measures.pdf (See page 6.)

¹⁷ http://www.lawa.org/uploadedFiles/LAXDev/News_for_LAXDev/Fact%20Sheet%20-%20CUP%20Replacement.pdf

¹⁸ Many electrical generating facilities do not cease power generation during nighttime hours because of prolonged start up times. Consequently, use of off-peak electricity to generate stored air conditioning capacity allows the use of energy that may have otherwise gone to waste and precludes peak hour electricity demand, which, during summer heat waves, results in GHG and Air Quality emissions from Peaker Plants (quick start electrical facilities).

Mitigation Measure 4.16.4.6.1B should be revised to require installation of this technology, or to create a centralized thermal storage location to serve multiple warehouses.

Alternatives

1. The Draft EIR Uses Impermissible Factors in Determining the Environmentally Superior Alternative

One of the key factors in determining the environmentally superior alternative in the Draft EIR is whether the alternatives would “worsen [] the jobs/housing ratio” (Draft EIR page 6-44), this also happens to be one of the project objectives (Draft EIR page 6-3). While compliance with project objectives may be an appropriate ground for rejecting alternatives as infeasible, compliance with project objectives is inappropriate for determining the *environmentally superior* alternative. As discussed under CEQA Guidelines Section 15126.6(a), the purpose of the alternatives is to analyze alternatives which “avoid or substantially lessen any of the significant effects of the project,” and compliance with project objectives is not a significant impact on the environment. By including compliance with project objectives as a factor for determining the environmentally superior alternative, the alternatives comparison is artificially skewed in favor of alternatives that most closely resemble the proposed project. The determination of the environmentally superior alternative should be revised, eliminating all discussion of the ability to meet project objectives.

The Draft EIR should be revised and recirculated consistent with the comments above and the comments from Riverside’s Traffic Consultants Linscott, Law & Greenspan, Engineers. (Attachment 1.) Riverside looks forward to continued discussion and coordination with the City of Moreno Valley on this Project.

Very truly yours,



Steve Hayes, AICP
City Planner¹⁹

Attachments:

1. Additional Comments, on behalf of Riverside, from Linscott, Law & Greenspan, Engineers
2. Resumes of Linscott, Law & Greenspan, Engineers

¹⁹ This comment letter was also prepared with the assistance and expertise of Steve Libring (City of Riverside, Traffic Engineer), Keil Maberry (Linscott, Law & Greenspan, Engineers, Principal), Dan Kloos (Linscott, Law & Greenspan, Engineers, Senior Transportation Engineer), Kristi Smith (City of Riverside, Supervising Deputy City Attorney), and The Sohagi Law Group, PLC.

CC:

William "Rusty" Bailey, III Mayor

Riverside City Council Members

Scott Barber, City Manager

Deanna Lorson, Assistant City Manager

Kristi J. Smith, Supervising Deputy City Attorney

Steve Libring, City Traffic Engineer

Al Zelinka, Community Development Director

Juan Perez, Riverside County, Director of Transportation

Anne Mayer, Riverside County Transportation Commission, Executive Director

Basem Muallem, District Director, California Department of Transportation, District 8

Attachment 1

MEMORANDUM

To:	Mr. Steve Hayes City of Riverside	Date:	April 7, 2013
From:	Keil D. Maberry, P.E. <i>KDM</i> Daniel A. Kloos, P.E. <i>DAK</i> LLG Engineers	LLG Ref:	2.13.3364.1
Subject:	TIA Peer Review The World Logistics Center Traffic Study, Moreno Valley		

Engineers & Planners
Traffic
Transportation
Parking

Linscott, Law &
Greenspan, Engineers

2 Executive Circle
Suite 250
Irvine, CA 92614
949.825.6175 T
949.825.6173 F
www.llgengineers.com

Pasadena
Irvine
San Diego
Woodland Hills

As requested, Linscott, Law & Greenspan, Engineers (LLG) is pleased to provide our peer review comments on *The World Logistics Center Traffic Impact Analysis Report*, prepared by Parsons Brinckerhoff, dated January 2013. As we understand it, The World Logistics Center Project is a plan for the development of modern high-cube logistics warehouse distribution facilities on approximately 3,814 acres of land in the City of Moreno Valley, California. The following summarizes our comments on the traffic study for your consideration.

General Comment

As it relates to the potential traffic impact of the proposed World Logistics Center on the City of Riverside, it is our finding that the traffic impacts primarily consist of two components; 1) employment-based traffic [approximately 25,000 potential auto trips per day (round trips) through the City via the freeway and arterial network] that will utilize the arterial network through the City of Riverside, and 2) truck-based traffic [approximately 12,000 truck trips per day (round trips)] that will utilize the adjacent SR-91/I-215 Freeway through the City of Riverside. As a result, it is imperative that the traffic impact analysis for WLC adequately analyze and provide tangible mitigation measures that will provide corridor-wide benefits for both employees and trucks.

Inadequate Transportation Assumptions

- It is not clear how and when the traffic analysis considered the Mid County Parkway project as a future transportation improvement.
- Draft EIR Appendix I (Traffic Impact Analysis Report – January 2013): Figure 3 on Page 6 – Cumulative Projects. From review of this figure, the traffic study did not include Gless Ranch Center in the cumulative background traffic setting. Gless Ranch Center is a 420,000 square foot (SF) shopping center located on the southwest quadrant of Van Buren Boulevard and Barton Street in the City of Riverside. Gless Ranch Center is forecast to generate approximately 12,945 daily trips, 325 AM peak hour trips and 1,231 PM peak hour trips. This project is anticipated to generate more than 50 project trips during the PM peak hour at several intersections that are also key study intersections analyzed for The World Logistics Center Project. These common key study intersections include the following City of Riverside locations:

Philip M. Linscott, PE (1924-2000)
Jack M. Greenspan, PE (Ret.)
William A. Law, PE (Ret.)
Paul W. Wilkinson, PE
John P. Keating, PE
David S. Shender, PE
John A. Boarman, PE
Clare M. Look-Jaeger, PE
Richard E. Barretto, PE
Keil D. Maberry, PE

Mr. Steve Hayes
April 7, 2013
Page 2

- No. 79 – Trautwein Road at Alessandro Boulevard
- No. 95 – Alessandro Boulevard at Arlington Avenue/Chicago Avenue
- No. 96 – Alessandro Boulevard at Century Avenue
- No. 97 – Alessandro Boulevard at Via Vista Drive
- No. 98 – Alessandro Boulevard at Canyon Crest Drive

Failing to include Gless Ranch Center in the cumulative background setting may understate the impacts of The World Logistics Center Project. An explanation as to why this cumulative project was not included.

- Draft EIR Appendix I (Traffic Impact Analysis Report – January 2013): Tables 1, 2 and 3 on Pages 7-9 – Cumulative Projects. Cumulative Project numbers 10, 14, 15, 23 and 81 are missing from the tables. However, some of these numbers are shown in Figure 3 (i.e. #14 and #15). Please clarify.
- Draft EIR Appendix I (Traffic Impact Analysis Report – January 2013): Page 10 – Roadway Network Assumptions. Please clarify whether or not the “financially constrained project list improvements” are fully funded. The TIA should also be updated to clearly state which planned improvements are included in the analysis (i.e. intersection location, type of improvement, funding source and timing of improvement).
- Draft EIR Appendix I (Traffic Impact Analysis Report – January 2013): Page 27 – Traffic Counts. A quick comparison of the existing traffic count data for the intersection of Alessandro Boulevard at Arlington Avenue/Chicago Avenue indicates that the traffic counts utilized in The World Logistics Center are significantly lower for this location than what was utilized in the Gless Ranch Center TIA. As shown in Table 1, the total intersection AM peak hour volumes and PM peak hour volumes utilized in the World Logistics Center TIA for this location are approximately 5% lower in the AM peak hour and 20% lower in the PM peak hour than the volumes utilized in the Gless Ranch Center TIA.

Mr. Steve Hayes
 April 7, 2013
 Page 3

TABLE 1
 TRAFFIC COUNT COMPARISON

Key Study Intersection: Alessandro Boulevard at Arlington Avenue/Chicago Avenue				
Movements	AM Peak Hour		PM Peak Hour	
	Dec. 2011 WLC TIA	Nov. 2010 Gless Ranch TIA	Dec. 2011 WLC TIA	Nov. 2010 Gless Ranch TIA
NBL	1,153	1,414	608	1,066
NBT	1,566	1,559	748	872
NBR	435	276	158	156
SBL	178	213	386	546
SBT	428	421	1,467	1,462
SBR	22	34	24	14
EBL	35	41	33	26
EBT	449	592	566	855
EBR	575	675	1,022	1,037
WBL	118	107	467	593
WBT	567	582	663	775
WBR	229	186	311	306
Total	5,755	6,100	6,453	7,708

- Draft EIR Appendix I (Traffic Impact Analysis Report – January 2013): Page 78, Table 24. More detail needs to be provided in Table 24 so the Phase I and Phase II project trip generations can be verified. It is not clear as to how the PCE factors were applied to each proposed project land use (Phase I or Phase II).
- Draft EIR Appendix I (Traffic Impact Analysis Report – January 2013): Pages 79 and 81 – Project Trip Distribution. Figures should be added to the report showing the detailed project trip distribution patterns for passenger cars and trucks. These figures need to be provided so the project assignment to the key study intersections and/or freeway segments can be verified.
- Draft EIR Appendix I (Traffic Impact Analysis Report – January 2013): Pages 277-279, Figure 35. Comparing the lane geometrics assumed in the Year 2035 No-Project traffic condition to existing traffic conditions indicates that

Mr. Steve Hayes
 April 7, 2013
 Page 4

LINSCOTT
 LAW &
 GREENSPAN
 engineers

intersection improvements have been assumed to be completed by the Year 2035 at the following City of Riverside locations.

- Arlington Avenue at Horace Street (#93) – A 3rd eastbound and 3rd westbound through lane has been included at this location. Only two eastbound and two westbound through lanes currently exist at this location.
- Arlington Avenue at Victoria Avenue (#94) – A 3rd eastbound and 3rd westbound through lane has been included at this location. Only two eastbound and two westbound through lanes currently exist at this location.
- Alessandro Boulevard at Chicago Avenue (#95) – A 3rd eastbound through lane has been included at this location. Only two eastbound through lanes currently exist at this location.

The traffic study needs to be revised accordingly to clearly indicate the funding source for these improvements. Only improvements that are fully funded should be considered and utilized.

- Draft EIR Appendix I (Traffic Impact Analysis Report – January 2013): Pages 310-312, Figure 36. Comparing the lane geometrics assumed in the Year 2035 Plus-Project traffic condition to existing traffic conditions indicates that intersection improvements have been assumed to be completed by the Year 2035 at the following City of Riverside locations.
 - Arlington Avenue at Horace Street (#93) – A 3rd eastbound and 3rd westbound through lane has been included at this location. Only two eastbound and two westbound through lanes currently exist at this location.
 - Arlington Avenue at Victoria Avenue (#94) – A 3rd eastbound and 3rd westbound through lane has been included at this location. Only two eastbound and two westbound through lanes currently exist at this location.
 - Alessandro Boulevard at Chicago Avenue (#95) – A 3rd eastbound through lane has been included at this location. Only two eastbound through lanes currently exist at this location.

The traffic study needs to be revised accordingly to clearly indicate the funding source for these improvements. Only improvements that are fully funded should be considered and utilized.

- The traffic impact analysis does not include a daily roadway segment analysis, which is recommended for this project considering that the AM and PM peak hours only consist of 13.7% of the project's daily traffic generation forecast. Furthermore, since it is likely that east-west traffic will be diverted from the SR-60/I-215 onto parallel arterials in the City of Riverside, it is recommended that

Mr. Steve Hayes
 April 7, 2013
 Page 5

LINSCOTT
 LAW &
 GREENSPAN
 engineers

Martin Luther King Boulevard and Van Buren Boulevard be included in the ADT analysis. Should the analysis reveal significant traffic impacts, appropriate mitigation measures should be identified, such as contributions to the City of Riverside's Traffic Signal Mitigation Fee program. In addition, given that 86.3% of the project's traffic generation occurs outside the typical AM and PM peak hours and has not been analyzed in combination with the fact that the project will be the single largest trip generator in the City of Moreno Valley, it is recommended that the *Peak Hour of Generator* also be analyzed.

Inadequate Geographic Scope

- Draft EIR Appendix I (Traffic Impact Analysis Report – January 2013): Page 2, Footnote #1. The report states that very little traffic associated with the proposed Project would utilize the section of the I-215 Freeway between the SR-60 Freeway and Perris Boulevard because of freeway congestion. The report also states that due to this congestion that project traffic will utilize surface street routes. The TIA needs to state how many project trips may utilize this section of freeway, so an appropriate fair-share contribution can be calculated and contributed by the World Logistics Center Project for future improvements.
- Given the forecast auto traffic volume that will traverse through the City of Riverside and surrounding communities, combined with the proposed Cajalco Road Improvement Project that will attract east-west regional traffic, Cajalco Road should be included in the analysis. Should the analysis reveal significant traffic impacts, appropriate mitigation measures should be identified.

Inadequate Mitigation Measures

- Draft EIR Appendix I (Traffic Impact Analysis Report – January 2013): Section 12 Mitigation Measures - It is not clear why the mitigation measures for the cumulative condition only recognizes the Year 2035 condition and not the Year 2017 and Year 2022 cumulative conditions. This may reduce the potential mitigation measures that would be recommended if the interim year condition(s) can be mitigated, but not the Year 2035 condition.
- Draft EIR Appendix I (Traffic Impact Analysis Report – January 2013): Tables 77 - The recommended mitigation measure for Intersection No. 95 (Alessandro Boulevard at Arlington Avenue/Chicago Avenue) is feasible. The EBR turn lane can be physically accommodated without significantly affecting any residential property. In addition, there are alternate feasible mitigation measures that could be considered, such as a 3rd Northbound Left (“NBL”) and/or a 3rd Westbound Left (“WBL”).

Mr. Steve Hayes

April 7, 2013

Page 6

- Draft EIR Appendix I (Traffic Impact Analysis Report – January 2013) - The mitigation measures identified in Table 80 for Intersections Nos. 94 and 95 do not match the recommended mitigation measures in Table 69.
- Draft EIR Appendix I (Traffic Impact Analysis Report – January 2013): Table 80 - While implementation of all recommended mitigation measure for Intersection No. 95 (Alessandro Boulevard at Arlington Avenue/Chicago Avenue) may not be feasible, there are additional feasible mitigation measures that could be considered, such as a 3rd NBL, 3rd WBL or 3rd Westbound Through (“WBT”) and 3rd Eastbound Through (“EBT”) or 3rd Eastbound Right (“EBR”). These improvements may mitigate the Year 2017 and/or Year 2022 condition.
- Fundamentally, the addition of approximately 12,000 truck trips (not PCE trips) per day to the I-215/SR-60 Freeway through the City of Riverside necessitates the addition of a corridor wide lane improvement to mitigate the impact on auto traffic similar to the traffic conditions on the I-710 Freeway in South Los Angeles County.
- Draft EIR Appendix I (Traffic Impact Analysis Report – January 2013): Table 78 – Direct Impacts to Freeways and Mitigation: Freeway segment Nos. F-24, F-27, F-42, W-21, W-22, W23, and W-25, which are identified as not feasible, are feasible based on our review of existing conditions in the field. In addition, consideration should be given to the installation of ramp metering along the SR-60/I-215 Freeway corridor as freeway mitigation, which can provide significant benefit to the freeway mainline operation.
- Draft EIR Appendix I (Traffic Impact Analysis Report – January 2013): Table 81 – Direct Impacts to Freeways and Mitigation: Freeway segment Nos. F-19, F-46, F-42, F-49, W-21, W-22, and W-25 EB SR-60, which are identified as not feasible, are feasible based on our review of existing conditions in the field. In addition, consideration should be given to the installation of ramp metering along the SR-60/I-215 Freeway corridor as freeway mitigation, which can provide significant benefit to the freeway mainline operation.
- In light of the repeated infeasibility claims throughout the report regarding the addition of the recommended mitigation measure to provide a mixed-flow lane on the SR-60/I-215 and SR-91 Freeways, it is recommended that a mitigation measure be included that would require the Project to fund a Project Study Report (PSR) and Project Report (PR) through the Riverside County Transportation Commission (RCTC), with the City of Riverside included in the process, to develop an improvement project to add one mixed-flow lane and/or special truck lane in each direction on SR-60/I-215 Freeway between the I-15 Freeway and Gilman Springs Road as well as on the SR-91 Freeway between the SR-60/I-215 and the I-15 Freeway.

Attachment 2

Keil D. Maberry, P.E.

Principal

Years of Experience:
26 years

Years with LLG Engineers:
16 years

Education:

B.S. Civil Engineering
University of Maryland

Registrations:
Professional Engineer
CA Registration TR 1802

Professional Memberships:
Institute of Transportation Engineers
American Society of Civil Engineers
Urban Land Institute

LINSCOTT
LAW &
GREENSPAN

engineers

Linscott, Law &
Greenspan, Engineers

2 Executive Circle
Suite 250

Irvine, CA 92614

T 949.825.6175

F 949.825.6173

www.llgengineers.com

Pasadena

Irvine

San Diego

Woodland Hills

Biography

Mr. Keil D. Maberry has over 25 years of experience in the preparation of transportation planning analysis, traffic impact studies and parking studies. He is a licensed Traffic Engineer in the state of California. Mr. Maberry holds a Bachelor of Science in Civil Engineering from the University of Maryland. He has extensive experience in the preparation of traffic impact studies for a variety of land uses, site access and operational plans, simulation studies, parking studies, traffic and parking management plans, school operational plans and suggested route to school plans. In addition, Mr. Maberry has provided on-call traffic and transportation engineering consultation services to the City of Corona, City of Irvine and the City of Dana Point.

Areas of Expertise

- Traffic Forecasting and Impact Analysis Reports
- Transportation Planning and Site Design Consultation
- Mixed-Use Parking Demand Studies
- Conceptual Improvement Plan Preparation
- Traffic and Parking Field Studies
- Traffic Signal Design
- Traffic Control
- Signing and Striping Plans
- Suggested Route to School Plans
- Expert Witness Testimony

Project Experience

Prepared Traffic Impact Analysis and Parking Demand Analysis reports as well as conducted Site Planning Design Consultation for the proposed **Anaheim Resort Hotel & Spa development project**, which consists of a 252-room boutique hotel with 7,405 square-foot (SF) of meeting/banquet space, a 14,209 SF spa, a 3,735 SF hotel Café, 6,068 SF hotel office space, and a 16,828 SF roof-top bar/club. The development also includes a 14,550 SF pharmacy, 4,800 SF of food/retail shops (which includes 2,000 SF dedicated to coffee shop and 2,800 SF for quick-serve food use) and an 8,000 SF signature restaurant. Prepared Traffic Analysis consisting of a near-term analysis, three General Plan Buildout analysis scenarios using regional traffic model output, Caltrans analyses and an Orange County CMP analyses. Conducted internal circulation analyses for shuttle buses and delivery trucks, and conducted traffic control signal warrant analyses at project intersections.

Provided EIR Traffic Impact Analysis report and parking demand analyses support as well as Signing & Striping and Traffic Signal design plans for the Proposed **Kaiser Permanente Orange County Medical Center project** on La Palma Avenue in the City of Anaheim. The proposed KPOC Medical Center consists of a 360-bed hospital, 398,500 SF of medical offices, and 120,000 SF of administrative offices.

Keil D. Maberry,
P.E.

Page 2 of 2

LINSCOTT
LAW &
GREENSPAN

engineers

Linscott, Law &
Greenspan, Engineers

2 Executive Circle
Suite 250
Irvine, CA 92614
T 949.825.6175
F 949.825.6173
www.llgengineers.com

Pasadena
Irvine
San Diego
Woodland Hills

Prepared Traffic Impact Analysis report for the **Huntington Beach Center Redevelopment Project** (BELLA TERRA) in the City of Huntington Beach. The study focused on evaluating the impact of the redeveloped 1,100,000 SF shopping mall at 14 intersections and 10 roadway segments, as well as site access analysis for a proposed new mall entrance adjacent to I-405 Freeway southbound ramps. Coordinated with Caltrans District 12 staff on the project impacts and proposed improvements within Caltrans jurisdiction.

Prepared EIR Traffic Impact Analysis report for the 31-acre **Pacific City Master Plan** mixed-use development along Pacific Coast Highway in Huntington Beach, California consisting of residential condominiums, visitor-serving commercial/retail, resort hotel, and office. Provided Site Planning Design Consultation and study of project Internal Circulation. Prepared Parking Demand Analysis for the visitor-serving commercial/retail, resort hotel, and office component of the project. Prepared Signing & Striping and Traffic Signal design plans, for the roadways and intersections along the entire project frontage including Pacific Coast Highway, which included coordination with Caltrans District 12.

Prepared EIR Traffic Impact Analysis report for the 1.2 Million square-foot **Corona Crossings** mixed-use development in Corona, California consisting of commercial and entertainment retail, as well as light industrial development. Provided Site Planning Design Consultation and study of project Internal Circulation. Prepared Signing & Striping and Traffic Signal design plans, for the roadways and intersections along the Temescal Canyon Road and Cajalco Road project frontage, including the Cajalco/I-15 Interchange in Caltrans District 8.

Prepared EIR Traffic Impact Analysis report for the 458-acre **Dos Lagos Master Plan** mixed-use development in Corona, California consisting of residential, commercial and entertainment retail with Lifestyle Center, golf resort, business park, and light industrial/R&D condominiums. Provided Site Planning Design Consultation and study of project Internal Circulation for each of the individual development areas within the Dos Lagos Master Plan. Prepared Signing & Striping and Traffic Signal design plans, including ATMS improvements, for the roadways and intersections along the Temescal Canyon Road and Weirick Road project frontage.

Daniel A. Kloos, P.E.

Senior Transportation Engineer

Years of Experience:
14 years

Years with LLG Engineers:
14 years

Education:

B.S. Civil Engineering
University of California, Irvine

Registrations:

Professional Engineer
CA Registration TR 2200

Professional Memberships:

Institute of Transportation Engineers

LINSCOTT LAW & GREENSPAN

engineers

Linscott, Law &
Greenspan, Engineers

2 Executive Circle
Suite 250
Irvine, CA 92614
T 949.825.6175
F 949.825.6173
www.llgengineers.com

Pasadena
Irvine
San Diego
Woodland Hills

Biography

Daniel A. Kloos is a licensed Traffic Engineer in the state of California. He earned his Bachelor of Science in Civil Engineering from the University of California, Irvine and has over 14 years of experience working on traffic engineering projects throughout the Southern California region. Mr. Kloos has extensive experience in the preparation of traffic impact studies for a variety of land uses, site access and operational plans, parking studies and parking management plans. In addition, he currently provides on-call traffic and transportation engineering consultation services to the City of Irvine and the City of Long Beach. His expertise in traffic engineering helps LLG continue its tradition of excellence in the region.

Areas of Expertise

- Traffic Impact Analysis Reports
- Transportation Planning and Site Design Consultation
- Mixed-Use Parking Demand Studies
- Sight Distance Analyses
- Traffic and Parking Field Studies
- Trip Generation Studies
- Pavement Delineation Plans

Project Experience

Gless Ranch Center – Prepared a Traffic Impact Analysis Report for the Gless Ranch Center Project, a proposed retail center with a maximum total of 420,000 square feet (SF) of occupied building area, located in the City of Riverside. The traffic study evaluated the proposed Project's potential near-term and long-term traffic impacts at twenty (29) key study intersections, provided recommendations to improve site access and internal circulation and evaluated the proposed Project's parking needs. LLG worked closely with City staff and the EIR consultant during the preparation of the Traffic Impact Analysis Report and throughout the approval process.

Grand Terrace Town Square Master Development Plan – Traffic Engineer for the Traffic Impact Analysis Report in the City of Grand Terrace, California. This study addressed the potential near-term and long-term traffic impacts at fifteen (15) key study intersections associated with the development of a 212,000 square foot shopping center. The study provided recommendations to improve site access and internal circulation and evaluated the proposed Project's parking needs. LLG worked closely with City staff and the EIR consultant during the preparation of the Traffic Impact Analysis Report and throughout the approval process.

South of Pine Avenue Tentative Tract Map No. 16420 – Traffic Engineer for the Traffic Impact Analysis Report in the City of Chino, California. This study addressed the potential near-term and long-term traffic impacts associated

Daniel A. Kloos,
P.E.

Page 2 of 2

LINSCOTT
LAW &
GREENSPAN

engineers

Linscott, Law &
Greenspan, Engineers

2 Executive Circle
Suite 250

Irvine, CA 92614

T 949.825.6175

F 949.825.6173

www.llgengineers.com

Pasadena

Irvine

San Diego

Woodland Hills

with the development of 4,006 residential dwelling units plus retail, office, recreational, educational and park uses within 540 acres. Recommendations regarding the design of the internal street network as well as the external intersections serving the project site were also developed (i.e. roadway characteristics, lane geometrics and intersection controls).

Second + PCH Development Project – Prepared a Traffic Impact Analysis Report for the Second + PCH Development Project, located in the City of Long Beach. The traffic study evaluated the proposed Project’s potential weekday and weekend day (Saturday) traffic impacts at twenty-five (25) key study intersections, provided recommendations to improve site access and internal circulation, evaluated the proposed Project’s parking needs and addressed concerns from Caltrans regarding intersection operations along Pacific Coast Highway.

El Portal Project – Prepared a Traffic Impact Analysis Report for the El Portal Project, a proposed retail and entertainment center with a maximum total of 600,000 square feet (SF) of occupied building area, located in the City of South Gate. The traffic study evaluated the proposed Project’s potential traffic impacts at forty (40) key study intersections, provided recommendations to improve site access and internal circulation, evaluated the proposed Project’s parking needs and addressed concerns from the California Public Utilities Commission (CPUC) and Union Pacific Railroad (UPRR) regarding vehicular queuing at existing railroad crossings on Atlantic Avenue and Firestone Boulevard. LLG worked closely with City staff and the EIR consultant during the preparation of the Traffic Impact Analysis Report and throughout the approval process.

The Springs at Bethsaida Senior Living Project – Prepared a Traffic Impact Analysis Report for the Springs at Bethsaida Senior Living Project, a proposed 153-unit independent and assisted living residential community, located in the County of Orange. The traffic study evaluated the proposed Project’s potential near-term and long-term traffic impacts at six (6) key study intersections, provided recommendations to improve site access and internal circulation and evaluated the proposed Project’s parking needs. LLG worked closely with City staff and the EIR consultant during the preparation of the Traffic Impact Analysis Report and throughout the approval process.



MEMORANDUM

To:	Mr. Emilio Ramirez City of Riverside	Date:	June 10, 2015
From:	Keil D. Maberry, P.E., Principal <i>KDM</i> Daniel A. Kloos, P.E., Senior Engineer <i>DAK</i> LLG Engineers	LLG Ref:	2.13.3364.1
Subject:	FEIR Peer Review The World Logistics Center, Moreno Valley		

Engineers & Planners
Traffic
Transportation
Parking

Linscott, Law & Greenspan, Engineers
2 Executive Circle
Suite 250
Irvine, CA 92614
949.825.6175 T
949.825.6173 F
www.llgengineers.com

Pasadena
Irvine
San Diego
Woodland Hills

As requested, Linscott, Law & Greenspan, Engineers (LLG) is pleased to provide our peer review comments on the *Traffic Impact Analysis Report for The World Logistics Center*, prepared by Parsons Brinckerhoff, dated September 2014. The following summarizes our comments on the revised traffic study for your consideration.

Response to Comment E-2B-1

The response to this comment is not correct. Our comment does not assert that all traffic generated by the World Logistics Center will pass through the City of Riverside, since 25,000 vehicles and 12,000 trucks, which is based on Table 24, Figure 25 and Figure 29 (January 2013 TIA) comprises only 52% of the 71,085 total vehicles and trucks generated by the Project. Furthermore, utilizing the revised trip generation provided in Table 25 and the general traffic distribution patterns provided in Figures 39 and 44 (i.e. autos and trucks), it was determined that approximately 24,000 auto trips per day (54,714 vehicles x 44% = approximately 24,000 vehicles) and 11,500 truck trips per day (14,007 trucks x 82% = approximately 11,500 trucks) would travel through the City of Riverside via the freeway and/or arterial network. As a result, it continues to be imperative that the traffic impact analysis for World Logistic Center adequately analyze and provide tangible mitigation measures that will provide corridor-wide benefits for both employees and trucks.

Response to Comment E-2B-5

Comment not fully addressed. The TIA should be updated to clearly state which planned improvements are included in the analysis (i.e. intersection location, type of improvement, funding source and timing of improvement) and not direct the reader to SCAG's 2012 RTP for the list of improvements. The list of improvements could be added as an appendix to the TIA for easy reference.

Response to Comment E-2B-8

Comment not addressed. Although Figure 39 (Autos Distribution) and Figure 44 (Trucks Distribution) are provided in the revised Traffic Impact Analysis Report, more detailed distribution figures should be added to the report consistent with a typical TIA. These figures need to be provided so the project assignment to the key study intersections and/or freeway segments can be verified.

Philip M. Linscott, PE (1924-2000)
Jack M. Greenspan, PE (Ret.)
William A. Law, PE (Ret.)
Paul W. Wilkinson, PE
John P. Keating, PE
David S. Shender, PE
John A. Boorman, PE
Clare M. Look-Jaeger, PE
Richard E. Barretto, PE
Keil D. Maberry, PE

An LG2WB Company Founded 1988

Response to Comment E-2B-13

Comment not addressed. The traffic impact analysis does not include a daily roadway segment analysis, which is recommended for this project considering that the AM and PM peak hours only consist of 13.7% of the project's daily traffic generation forecast. Per the City of Riverside Public Works Department *Traffic Impact Analysis Preparation Guide*, dated December 2014 (Section 6.0 – Study Area) and cited by the City in its response, a roadway link analysis shall be required for a TIA analyzing General Plan Amendments (GPA), Specific Plans (SP) or Specific Plan Amendments (SPA). Should the analysis reveal significant traffic impacts, appropriate mitigation measures should be identified, such as contributions to the City of Riverside's Traffic Signal Mitigation Fee program.

Response to Comment E-2B-14

Comment not addressed. The response indicates that the threshold for analysis is 100 peak hour trips based on Caltrans guidelines. However, this is not the complete threshold utilized by Caltrans as stated in the current Caltrans *Guide for the Preparation of Traffic Impact Studies* (Chapter II, Section A – Trip Generation Thresholds). This section of the guidelines illustrates criterion when the analysis of a State highway facility is required. There are three categories of trip thresholds shown in the guidelines (i.e. generates over 100 peak hour trips, generates between 50 and 100 trips and generates between 1 and 49 peak hour trips). Therefore the number of project trips generated on the section of the I-215 Freeway between the SR-60 Freeway and Perris Boulevard should be determined/shown in the TIA report and the appropriate analysis conducted based on Caltrans requirements, which at a minimum would include the existing LOS on this freeway mainline section. This further accentuates the need for a detailed trip distribution pattern, which would show the percentage of traffic on this section of the I-215 Freeway.

Response to Comment E-2B-15

Comment not fully addressed. The revised TIA should show how many AM and PM peak hour project trips are expected to utilize Cajalco Road, so there is a method to validate that the proposed Project will not exceed the 50-trip threshold required for analysis.

Response to Comment E-2B-16

It is reasonable and appropriate to expect that the Project buildout analysis (Year 2022) should include mitigation measures associated with the LOS analyses and identification of significant traffic impacts. While the 2035 analysis may include all reasonably foreseeable future projects, there is no way to understand which mitigation improvements should be installed with completion of the Project unless all mitigation measures identified in the 2035 analysis are expected to be completed by 2022. Furthermore, if there is a 2022 traffic impact, then the appropriate fair share value



towards the mitigation measures should be based on the 2022 condition, not the 2035 condition and therefore identification of the specific mitigation measure in the Project buildout condition is imperative. Otherwise, the fair share contribution will be understated, since the 2035 fair share value is almost always less than the near-term fair share value.

Response to Comment E-2B-20

The response to this comment is not correct. Based on Table 24 and Figure 29 (January 2013 TIA) the project generates approximately 12,000 truck trips (not PCE trips) to the I-215/SR-60 Freeway through the City of Riverside. Utilizing the revised trip generation provided in Table 25 and the general truck traffic distribution pattern provided in Figure 44, the project generates approximately 11,500 trucks (28,914 PCE trips) to the I-215/SR-60 Freeway through the City of Riverside. As stated before, fundamentally, the addition of approximately 11,500 truck trips (28,914 PCE trips) per day to the I-215/SR-60 Freeway through the City of Riverside necessitates the addition of a corridor wide lane improvement to mitigate the impact on auto traffic similar to the traffic conditions on the I-710 Freeway in South Los Angeles County.

Response to Comment E-2B-23

Comment not addressed. The City cites to the Caltrans Route Concept Report Study for the SR-60/I-215 Corridor, dated September 2012, in support of its assertion that currently recommended freeway improvements are sufficient and no additional study is warranted. However, unless the 2012 Caltrans Report included traffic associated with the World Logistics Center Project, the assertion that the recommended freeway improvements to SR-60 are sufficient and no additional study is warranted is false.

* * * * *

We appreciate the opportunity to provide this FEIR Peer Review Memorandum. Should you have any questions, please call us at (949) 825-6175. Thank you.

Law Offices of
CONWAY & TOMICH

Jack K. Conway
 Lillian Tomich

2460 Huntington Drive,
 San Marino, California 91108
 Telephone: (626) 285-4333
 Telephone: (626) 287-1248

Fax (626) 285-1526
 Fax (626) 287-7111

Mr. Mark Gross
 City Of Moreno Valley
 14177 Frederick Street,
 Moreno Valley, CA 92553

Dear City of Moreno Valley,

I am one of the property owners of the 155.4 acres located on the east side of Gilman Springs Road. We are directly east of the World Logistics Center project ("Project") and our parcels are Riverside County Assessor Parcel Numbers: 422-180-002 and 422-190-001. We would like to make sure that the final World Logistics Center project ("WLC") addresses the following concerns and issues:

(1) We have concerns relating to the utilities for the WLC. It appears that some of the various utility lines (i.e. gas, sewer, water, telephone, electric, etc.) may not go all the way to Gilman Springs Road. We would like the City of Moreno Valley to require the WLC project to have all the utility easements and permanent access to such easements that are necessary for us to extend all the utilities to our property. These easements can be along the roads and/or through open space as long as such easements are located in such an area that they are economically feasible to use for our property as well as other adjacent properties.

(2) We are concerned that the Project utility lines (i.e. gas, sewer, water, telephone, electric, etc.) may not have enough excess capacity to support additional development. We would like to request that the City of Moreno Valley make sure that each of the utility lines have enough additional excess capacity to handle additional development on our property and adjacent properties.

(3) We are also concerned about the drainage control for the Project. It appears that there may be one or more drainage basins actually located on or near our property. We want to make sure that our property is not responsible for the drainage control burden for the WLC project area and that no restrictions are placed on the development of our property as a result of the WLC project.

(4) I also have some concern about what happens to our access. We want to make sure the City of Moreno Valley does not limit or restrict our access to Gilman Springs Road.

I want to thank you for your time and consideration on this matter. If you have any questions, please let us know.

Best Regards,

Lillian Tomich

Lillian Tomich

TIC Property Owner

City of Moreno Valley

June 6, 2015

City Council Members

City Planning Commission

Community & Economic Development Department

1477 Fredrick Street

PO Box 88005

Moreno Valley, CA 92552

RECEIVED
JUN 10 2015
CITY OF MORENO VALLEY
Planning Division

Ref: Final Programmatic Environmental Impact Report, (World Logistics Center Project)

Having received and reviewed the above mentioned report I was amazed to find out that the already significant proposed impacts to my property were increased by 25%. The purpose of an environmental report is to attempt to minimize the project impacts to adjoining properties, not to increase the impacts. I am speaking specifically about the building height limitations being increased along Gilman Springs Road from a "Draft EIR" height of 60 feet to 80 feet high in the Final Programmatic EIR, (Aesthetics, Section, 4.1-63 middle of last paragraph). This change will block the already proposed impacted views from my house on Gilman Springs Road and those of the other homes in the Moreno Knolls Homeowners Association.

Just because these properties are outside of the limits of Moreno Valley does not give the City or developer the right to ignore our rights or the impacts to our properties with no attempts of mitigation. The City ignoring the rights of those outside of the City by not treating them equally to those properties within the city limits is a clear violation of EPA's Environmental Justice, **"EPA's goal is to provide an environment where all people enjoy the same degree of protection from environmental and health hazards and equal access to the decision-making process to maintain a healthy environment in which to live, learn, and work."** This is only location where the perimeter height is above 60 feet. Even the adjoining San Jacinto Wildlife Area has limits of 60 foot building heights plus a 400 foot landscaped setback. I would like to have the same consideration as the other species adjoining this proposed project.

My house, **(14670 Gilman Springs Road)** is closer to the proposed project than any other property on Gilman Springs Road yet no noise impact study was performed on that location for this project. I also wrote two letters, one on March 13, 2012 and another on April 5, 2013. Only the first letter appears in the report and the responses to both letters were nonexistent or sketchy at the best; not addressing the issues.

This also is a significant impact to the designated "Scenic" Gilman Springs Road and increases this impact. The EIR writers are aware that this is the case, yet there is also no mention of increased impacts to the adjoining Moreno Knolls neighbors are mentioned, (like we don't exist).

This project is in the wrong location and has significant cumulative failures in so many areas that I am unable to adequately respond to them all. Placing a project of this size with the truck traffic that comes with it should have been located along an Interstate Highway not a State Highway. Federal funding for such things as freeway widening, interchanges and maintenance, flow easier to the Interstate System than the State Highway System.

More than 70 percent of the commuters from Moreno Valley use Route 60 not the I-215. Why do we want this here and not East of I-215 as outlined in the existing general plan?

Please enter this letter into the public records of both meetings of the City Planning Commission and the City Council.

Respectfully Submitted,



Duncan Bush

29307 Highland Blvd

Moreno Valley, CA 92555

951-333-3540

June 11, 2015 World Logistic Center Comments

RECEIVED
JUN 11 2015
CITY OF MORENO VALLEY
Planning Division

Good Evening Planning Commissioners:

My name is Dawn Newkirk and my husband, Ned, and I have lived in Moreno Valley for 44 years. We reside in one of the seven rural residences that could become a part of the World Logistics Center pending city council approval. We built our current home located on Dracaea Avenue (just east of Redlands Blvd.) in 1978. Since that time, we have enjoyed our home, raised two children and were looking forward to spending retirement days in this same home. However, in 2012 our world was turned upside down with the proposal of a World Logistic Center. In May 2012, we were pulled into the footprint of the World Logistics Center by a three to two vote of the city council. Co, Molina, and Stewart's vote determined this course of action. Realistically, this was the first step in changing our zone from residential to industrial.

Now with the completion of the FEIR and recommendation by City Staff this project be approved, I want you to know how its impact will destroy our quality of life. Changing the zoning from residential to industrial will render our property useless as a residence. As we have under three acres of land, our land would not qualify for warehouses. Our zoning would be changed to light logistics which restricts owners to few options such as storage units.

Secondly, we would have a sixty foot high warehouse about 75 feet from our living room window. Another 60 foot high warehouse would be 500 feet from the back of our home.

However, the most important adverse effects to the residents within the WLC Project are health risks. In the FEIR 4.10.6.1 "significant impacts", it states that logistics operations within the project could cause air pollutant, noise, lighting and health risk impacts to residents if they are adjacent to operating warehouses. Incredibly, the FEIR does nothing to mitigate these issues, just states that there is no effective means to mitigate these on site residences from the planned logistics warehouses, and that the land use is significant and unavoidable. PLEASE NOTE: California ARB recommended funding of medical services to those impacted by air pollution. These services are very important to mitigate the impacts. If the WLC is built, the only larger diesel magnet sources in the region are those of Long Beach and La. They have on going programs to provide health services to those impacted by air pollution and the residents of Moreno Valley deserve the same consideration at the expense of the main developer who is causing these impacts.

By recommending this project you put our health in harm's way. The WLC FEIR needs to be revised, recirculated and include qualified health services paid by the developer for not only us within the WLC's specific plan but those living within 1000 feet of the WLC and along the main truck roads leading to the project as a condition of approval.

Wednesday, June 10, 2015

Planning Commission,

The World Logistics Center FEIR and Development Agreement need to be recirculated to the public. We have not had adequate time to review these documents. Furthermore, recommending such a project to our City Council for a vote is irresponsible. The city has not held public workshops to go over all of the potential impacts this project will have on the residents of Moreno Valley now and in the future.

The staff report also features a letter from John Husing, who represents the Inland Empire Economic Partnership. The city has failed to state the conflict of interest in this letter. Highland Fairview CEO, Iddo Benzeevi sits on the board for this agency. Furthermore, John Husing has a special interest in the logistics industry, as he has many contracts to promote this industry to municipalities throughout the Inland Empire region. The positive economic impacts he states are false. I encourage each one of the planning commissioners to do their own research and speak with unbiased sources when determining what the economic consequences will be for Moreno Valley.

The Inland Southern California region already has the largest concentration of warehouses in the United States. These warehouses have yet to produce the economic benefits Highland Fairview claims warehouses do. According to a Harvard Study, Riverside and San Bernardino County are ranked as some of the worst counties for economic upward mobility in the United States. The correlation between warehouse growth and the lack of economic upward mobility leads one to believe that they are casual as well.

I oppose the World Logistics Center project and I encourage the planning commission to also consider the opportunity cost for Moreno Valley. Thank you for your time.

Daniel Peeden

24409 Robinwood Dr.

Moreno Valley, CA 92557

Grace Espino-Salcedo

Subject: RE: World Logistics Center Public Hearing

From: Dorrie Royce [<mailto:dorrie.royce@ucr.edu>]
Sent: Tuesday, June 09, 2015 8:15 AM
To: Jane Halstead, CMC; Ewa Lopez, CMC; Kathy Gross
Subject: World Logistics Center Public Hearing

I would like to share the following comments with the Planning Commission:

The World Logistic Center would significantly lower the quality of life in Moreno Valley and the Inland Empire with increased pollution and traffic and result in lower property values. It will grossly enrich the few and be demoralizing and detrimental to the vast majority of the citizens. It is not necessary to sustain the economy of Moreno Valley, and can only proceed based on greed and deliberate misrepresentation. Approval by the elected officials of Moreno Valley would be unconscionable.

Dorrie Royce
21606 Alcorn Drive
Moreno Valley, CA

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Grace Espino-Salcedo

Subject: RE: Development Agreement

From: Donovan Saadiq [<mailto:dxfilez@gmail.com>]
Sent: Friday, June 05, 2015 11:14 AM
To: Jane Halstead, CMC; Ewa Lopez, CMC; Kathy Gross
Subject: Development Agreement

To All;

This development agreement with over 700 pages is too convoluted and too confusing to be read and digested in less than a week! From my reading it also leans too far to the developers side with the residents being on the hook for infrastructure. I am trying to read and understand this the best I can in the time given. I am an educated man, but even I need time to digest and decipher what the real meaning of what this agreement is about.

I am asking that the council and city please delay and give more time for the residents to read and grasp what has been agreed to and what we would have to pay for. A week is not enough time to get enough feedback from residents so that you can make a decision on what the residents want and the way this is written you would have to be a speed reader to read it in the time given before it gets to the governing boards. Please consider a delay to give fair review by the citizenry and the governing boards. (Planning commission/ City Council) Thank you.

Donovan Saadiq

Kathy Gross
Executive Assistant I
City Clerk's Office
City of Moreno Valley
p: 951.413.3001 | e: kathyg@moval.org W: www.moval.org
14177 Frederick St., Moreno Valley, CA 92553

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

My name is Eunice Kang and I am a Moreno valley resident. I am a recently retired software engineer from 20th Century Fox. I have lived in Moreno Valley for 12 years. Most of those years, I commuted to Fox in Century City, which is 85 miles away.

Most of the working people in Moreno Valley commute to jobs outside the city, many to such far-away places as Los Angeles and Orange Counties.

They come home tired from their long commute and have little time or energy to be with their children. Many of their children do poorly in school. As they become teenagers, they get discouraged and drop out of school. There are no jobs for them and little hope for the future.

The World Logistics Center will bring jobs to our city: Skilled jobs. Construction jobs, Entry level jobs, jobs of all kinds. Granted, those jobs will not be guaranteed to Moreno Valley residents. But we are not looking for a hand out. We are looking for opportunity.

And the developer will contribute educational funds and work with our schools to develop appropriate skills for those jobs, giving our residents a definite advantage.

The people outside of Moreno Valley who do get jobs here will increase traffic coming into our city against the congestion flow. These people will add to our city's tax base. They will buy stuff in our stores. And where do you think they will buy their next house? Here, where the opportunities are good and the home prices are reasonable.

This city has rejected good companies from coming here in the past: Northrop, Boeing, and General Motors. Our stores are closing. Our crime rate is rising. We are a bedroom community with few opportunities.

I support the World Logistic Center because:

- It will bring good jobs to our residents
- It will bring job training skills to our residents
- It will bring entry level jobs to our youth
- It will reduce crime by bringing hope to our youth
- It will bring business to our stores
- It will bring needed revenue to our city
- It will reduce commuter traffic going to Los Angeles and Orange Counties.

RECEIVED

JUN 11 2015

CITY OF MORENO VALLEY
Planning Division

10:47 P.M.

Now, I don't need a job any more. I'm retired. But I care about this city. I care about its growth. I care about its residents and its children and its youth.

Let's approve the World Logistics Center and start doing something positive for our city!

Grace Espino-Salcedo

Subject: RE: Message from WLC Link

-----Original Message-----

From: Erik Wulf [<mailto:iehomeservices@gmail.com>]

Sent: Monday, June 08, 2015 9:54 PM

To: Jane Halstead, CMC; Ewa Lopez, CMC; Kathy Gross

Subject: Message from WLC Link

I'm all for it.

I believe it's another way to use our land other than Residential and help Create jobs for the citizens.

Sent from my iPhone

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)



June 11, 2015

Via E-Mail

Mark Gross Senior Planner
 14177 Frederick Street
 Moreno Valley, CA 92553
planning@moval.org

RE: World Logistics Center Project Final Environmental Impact Report (SCH No. 2012021045)

Dear Mr. Gross:

We respectfully submit the following comments to the Final Environmental Impact Report (“FEIR”) for the World Logistics Center Project (“WLC” or “Project”) and Specific Plan on behalf of the Center for Community Action and Environmental Justice (“CCA EJ”).

CCA EJ is a membership-based organization whose members reside in and around the proposed WLC project site, the Specific Plan area, and in the region. As such, they have a direct interest in the City of Moreno Valley (“City”) and specifically in the City Planning Department’s careful analysis regarding the vast implications that the construction and operation of the WLC has on the health and well-being of Moreno Valley and its surrounding areas, and on the environment.

As described in the FEIR, this Project entails construction of the largest warehouse development in the nation. For a development of this magnitude, it is vital to properly disclose the environmental consequences of the proposed action and to identify and adopt all feasible mitigation measures, and alternatives. Unfortunately, the FEIR fails in its duty to comply with the California Environmental Quality Act (“CEQA”). As such, the City cannot rely on the environmental review contained in the document for the purpose of Project approval, and must require preparation and circulation of a new Draft Environmental Impact Report (“DEIR”) to allow the public and decision-makers an opportunity for meaningful review of the Project’s impacts, prior to issuing any Project approvals.

I. THE FEIR MUST BE RECIRCULATED BEFORE PROJECT APPROVAL AND CERTIFICATION.

Under CEQA, an EIR must be re-circulated for review and comment whenever significant new information becomes known to the lead agency and is added to the EIR after public notice of the availability of the draft document has been made, and before the EIR is certified. Pub. Res. Code § 21092.1. Under such circumstances the lead agency is specifically required to re-notice the environmental review document to the public and all responsible

agencies, and is required to obtain comments from the same, before certifying the document's impacts and alternatives analyses as well as any mitigation measures. *See id.*; *see also*, Pub. Res. Code § 21153. A lead agency's decision not to recirculate an EIR must be supported by substantial evidence. Cal. Code Regs. tit. 14 ("CEQA Guidelines" or "Guidelines") § 15088.5(e).

"Significant new information" includes any information regarding changes in the environmental setting of the project under review. Guidelines § 15088.5(a). It also includes information or data that has been added to the EIR and is considered "significant" because it deviates from that which was presented in the draft document, depriving the public from a meaningful opportunity to comment upon a significant environmental effect of the project, or a feasible way to mitigate or avoid such an effect at the time of circulation of the draft. *Id.* Some examples of significant new information provided in the CEQA Guidelines are: "(1) information relating to a new significant environmental impact that would result from the project or a new mitigation measure; (2) a substantial increase in the severity of an environmental impact [that] would result unless mitigation measures are adopted; and (3) any feasible alternative or mitigation measure considerably different from others previously analyzed ..." Guidelines § 15088.5 (a)(1)-(3). Recirculation is further required where the draft EIR is "so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded." Guidelines § 15088.5 (a).

The required re-noticing and new comment period for a re-circulated EIR is essential to meeting CEQA's procedural and substantive environmental review requirements, as the EIR's assessment of a project's impacts, mitigation measures and alternatives and the public's opportunity to weigh in on the same is at the heart of CEQA. *Laurel Heights Improvement Assn. v. Regents of University of California* (1993) 6 Cal.4th 1112, 1123. Where new information is added to an EIR in such a way as to highlight informational deficiencies in the draft document's environmental impacts, mitigation and alternatives analyses, the public must be allowed the opportunity and additional time to comment on the changes made in the final document's analyses. Moreover, where significant new information that is added to the EIR's assessment of a particular impact area falls within the purview of another responsible agency's area of expertise that agency must also be allowed a meaningful opportunity to review and respond to such new information and any changes implicated in the EIR's analyses.

While re-circulation is indeed an exception and not the rule in the preparation of final environmental review documents, it is an exception that must be invoked here – where the absence of significant information rendered the draft EIR ineffective in meeting CEQA's substantive mandates, and now, where included, the addition of significant new information substantially changes the FEIR's analyses and conclusions regarding the Project's impacts, feasible alternatives and required mitigation. *Laurel Heights Improvement Assn. v. Regents of Univ. of Cal.* (1993) 6 Cal.4th 1112, 1132. As stated in numerous comments to the draft EIR, that document failed to provide critical information regarding the project area and scope of the project's impacts; it failed to adequately describe fundamental information relating to the phasing and timing of the project's massive structural and infrastructural developments; it lacked adequate detail specifically regarding the construction and operations phases of the project; and

it contained analyses and mitigation measures relating to the Project's air quality, traffic, human health and biological resources impacts based on outdated or inapplicable studies and data. In some instances the FEIR erratically and arbitrarily includes selective new data into its analysis of the Project's impacts and mitigation measures, and in others critical information remains absent from the document. Whether referenced in the FEIR as new information, or wholly omitted from the document's analyses, the addition of such information is essential to the public's ability to participate in the environmental review process. The FEIR must therefore be re-drafted and re-circulated document to provide the public at large and the Project's numerous other responsible agencies with more time to review and analyze the Project's impacts and to assess or prescribe necessary mitigation measure to minimize those impacts. The City cannot render a determination on the issuance of the project approvals under consideration until such re-circulation occurs, and CEQA compliance is assured.

A. The FEIR Is Inadequate as an Informational Document, Is Conclusory in Nature, and Precludes Meaningful Public Review.

The approval actions before the City involve more than a straightforward project and EIR approval. The City Planning Department and the City Council are not only determining whether to certify the FEIR and approve a single project; rather, in approving the FEIR as currently drafted and the Project as set forth in that document, the City will be approving numerous future actions needed to effectuate the Project's purpose. Indeed, the FEIR refers to the Project as including "all related development and planning activities currently proposed by Highland Fairview in the Rancho Belago area of the eastern end of the City of Moreno Valley." FEIR, at 3-1. Just some of these related development activities include: (1) amendments to the City of Moreno Valley's General Plan; (2) adoption of a new Specific Plan for the area in which the WLC will be cited (and which is the principle subject of the EIR documents); (3) zoning and land use changes including pre-annexation zoning changes for land that has not yet been acquired by the project proponent, Highland Fairview, but that is contained within the project area; (4) execution of a development agreement consistent with the construction of the nation's largest logistics warehouse, and the Specific Plan land use designations; and (5) a tentative parcel map to be governed by both the Specific Plan and the executed development agreement. Despite the numerous actions needed to effectuate the project, the FEIR omits critical information needed to adequately analyze and mitigate the impacts of those actions and as a result, must be recirculated.

i. The FEIR's Impacts and Mitigation Analyses are Based on an Improper Project Description and Inadequate Information Regarding Key Project Components

"[A]n accurate, stable and finite project description is the sine qua non" of a legally sufficient EIR, and "the defined project and not some different project must be the EIR's bona fide subject." *County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 199.

Commenters on the DEIR pointed out key deficiencies in the document's failure to adequately describe the scope of the Project, including all of the entitlements necessary to effectuate its purpose and to obtain approval for the land use changes contemplated in the EIR documents. While the FEIR includes a brief response to such comments it dismisses them by stating only that the "WLC EIR does have a complete project description" on account of the project being described in a total of "78 pages with 4 tables." FEIR Response to Comments, at 23. Despite its lengthy description, however, the FEIR still fails to include an adequate description of the full scope of the project and it states inaccurate details regarding key project components such as the project's size and the nature of its immediate surroundings. The result of such omissions and inaccuracies is that the full range of impacts that would result from the City's approval of the multiple actions involved in the Project and purportedly analyzed in the FEIR, remain undisclosed, and the public as well as the Project's numerous responsible agencies are precluded from providing meaningful input regarding the Project's impacts and necessary mitigation measures.

For example, the FIER only generally refers to the General Plan amendments that will be needed to effectuate the Project's purpose. FEIR, at 3.12-19. Despite their brief reference throughout the FEIR these amendments will have significant and long lasting impacts. The General Plan, as approved in 2006 and in its "community development" provisions designates the Project area as one that should be developed with the goals of supporting an "organized" "pattern of land uses" that promotes the "rational utilization" of the area's land parcels and creates a "functional balance between urban and rural land uses that will meet the needs of a diverse population and promote the optimum degree of health, safety, well-being and beauty for all areas of the community while maintaining a sound economic base" characterized by a "mix of industrial uses." FEIR, at 4.10-10 (citing objectives from the City of Moreno Valley General Plan, 2006, Section 9.2).

The Project's goal of constructing and operating a 40.6 million square foot warehouse and committing a total of 2,610 acres to indefinite future use for logistics development directly conflicts with the General Plan's objectives for community development. The size of the warehouse development alone precludes any form of "mixed use" of the Project area, whether that be mixed use to attain a "functional balance between urban and rural land uses" or simply a "mix of industrial uses." The Project's commitment of virtually the whole of the Specific Plan area to some form of logistics development further undermines the General Plan's objectives to create any form of a "pattern of land uses" to "meet the needs of a diverse population" or promote health, well-being and beauty for all areas included in the General Plan. Despite these direct conflicts, however, the FEIR concludes that the Project "is consistent with the goals, objectives and policies of the City of Moreno Valley General Plan" without reconciling the Project's clear conflicts with the goals and objectives listed above. FEIR, at 4.10-27. Moreover, the FEIR fails to actually specify what particular General Plan amendments are actually needed to effectuate the Project, and therefore, fails to adequately describe key Project components.

As explained below, the project area is also inconsistently defined. The FEIR includes misleading and inaccurate references to a "CDFW Conservation Buffer Area" that is not part of

the Project. To the extent this “buffer” is used to minimize or otherwise mitigate the Project’s impacts, the reference to the parcel as a “buffer” is fatally flawed and misleads the public.

The FEIR further fails to incorporate any detailed reference to other approvals needed to effectuate the Project, such as the development agreement. Without information relating to the approvals that are specifically designated as necessary for the Project, and which are before the City for a determination on whether they will be issued, the FEIR fails as an informational document. *See Laurel Heights Improvement Assn. v. Regents of University of California* (1993) 6 Cal.4th 1112.

ii. The FEIR’s Description of the “CDFW Conservation Buffer Area” is Misleading and Precludes Public Input and Review in Violation of CEQA.

The FEIR defines the Project and the Specific Plan area as including “all related development and planning activities currently proposed by Highland Fairview in the Rancho Belago area of the eastern end of the City of Moreno Valley.” FEIR, 3-1. The subject property is generally located south of SR-60, east of Redlands Boulevard, west of Gilman Springs Road, and north of Mystic Lake and the San Jacinto Wildlife Area. *Id.* The FEIR defines “Project Site” or “Project Area” as 3, 714 acre-area covered by the project. *Id.* The same Project area was as a 3,918-acre area in the draft EIR. *Id.*

The Project description contained in the FEIR also refers to a “buffer zone” that is comprised of “CDFW parcels” or the “CDFW Conservation Buffer Area” – a series of parcels that have been integrated into the project area by removing over 1000 acres of land acquired by the State and governed by the Western Riverside County Multiple Species Habitat Conservation Plan (“MSHCP”), for the purpose of habitat and species conservation. FEIR, at 3.19-25. This zone is inconsistently and incoherently described in the FEIR, precluding any accurate assessment of the project’s impacts and mitigation. It is described throughout the Project description as a zone that will be “included in the General Plan amendments” approved as part of the Project and only loosely discussed throughout the document, but elsewhere, the same area is described as falling outside of the Specific Plan area altogether. *Cf* FEIR, at 3-19; FEIR, at 3-25. Because this parcel was acquired for the specific purpose of preserving additional habitats and species endemic to the San Jacinto Wildlife Area (“SJWA”) the City cannot rely on it as any form of “buffer” from the Project’s impacts.

The use of a parcel of land whose designated purpose has been to “preserve” species habitat is misleading and requires some level of environmental review itself. The FEIR, however, precludes such review. Accordingly, the FEIR must be recirculated for an adequate assessment of the species and biological resources impacts to the habitats surrounding the Project area, including what is referred to throughout the FEIR as the “CDFW parcels” or “CDFW Conservation Buffer” zone. As explained in detail in the comments submitted by the Center for Biological Diversity and the San Bernardino Audubon Society, the “CDFW parcels” also contain critical waste water basins upon which the sensitive riparian resources preservation efforts

engaged in by the State are based. The extent to which the State's preservation goals are interfered with must also be analyzed.

iii. Lack of Clarity in Ownership of the “CDFW parcels” Indicated in the FEIR Requires Re-circulation under CEQA

The draft EIR referred to “CDFW parcels” as being owned by the California Department of Fish and Wildlife, or the “CDFW,” and the FEIR refers to the parcels as being owned and operated by the State Parks Department. FEIR, at 3.11. If the parcels are in fact owned and controlled by the State Parks Department and there is no agreement between the City and Highland Fairview and that Department for use of the area as a “buffer” for the Project, the area may not be subject to the control of either the City or Highland Fairview. Similarly, for the reasons explained above, if the area is owned and operated by the CDFW it should be considered part of the surrounding habitats that will be impacted by the Project, on account of the purpose to maintain that area to preserve special status, sensitive species and habitat diversity.

Without re-circulation commenters and City alike are precluded from obtaining accurate information regarding the ownership and operation of these parcels, and are unable to comment specifically on the FEIR's claim that this area, which it asserts falls within the Project boundaries, will actually minimize or mitigate the project's significant impacts. Other public agencies are similarly precluded from providing comments regarding the true role or purpose of the “CDFW parcels” and the City cannot prescribe adequate mitigation based on an accurate assessment of the Project's real impacts on the surrounding area, and cannot offset its potentially devastating consequences on the surrounding species and habitats.

iv. The Major Shift in the EIR's Stated “Project Objectives” Requires Re-Circulation.

Unconventionally, the FEIR changed one of its project objectives between the DEIR and the FEIR. The FEIR added the bolded language in the following objective: “Provide a major logistics center to accommodate **a portion of** the ever-expanding trade volumes at the Ports of Los Angeles and Long Beach.” FEIR, at 3-116 (emphasis added). The FEIR seeks to downplay this change by using the following caveat: “[t]he indicated minor wording change was made so the objectives would more accurate regarding service to the port which will only represent a small fraction of project trips...” *Id.* (emphasis in original).

While the change may be minor in the overall number of words added to this specific objective, this change drastically impacts the analysis in the FEIR. Project Objectives are meant to guide the entire environmental analysis under CEQA, including the development of alternatives. *See* Guidelines § 15124(b). Allowing the Project Objectives to change between the DEIR and FEIR has serious consequences because the public is not be able to propose alternatives that meet project objectives if they are changed at the last moment in the process.

The materiality of this change in the instant EIR is demonstrated by examining how this objective was used to justify excluding certain alternatives. For example, the FEIR fails to explain why the 28 million square feet of warehouse space considered under Alternative 1 couldn't be used to accommodate, to a lesser degree, the 786 daily truck trips coming from the Ports of Los Angeles. *See* FEIR, at 1-98; *see also* FEIR, at 4.15-199 (articulating that the trucks coming from the Ports will be between 240 daily trips in 2012 and 786 daily trips by 2035). A 30% reduction in size of the facility could accommodate this paltry number of trucks assumed to come from the Ports of Los Angeles and Long Beach to the same degree that the much larger Project could accommodate the same.

In addition to tainting the alternatives analysis, the change in Project Objectives invokes additional questions that infect the entire assessment of impacts. If this Project is designed to only accommodate "a portion of" the increased needs at the Ports of Los Angeles and Long Beach, what other demand justifies building the nation's largest warehouse development? Is it Ontario Airport? Is it other warehouses in the region? These questions are left unanswered in the FEIR. Regardless, for the first time, the public and decision-makers are notified that this project is only being justified to accommodate "a portion of" the growth at the Ports of Los Angeles and Long Beach.

Overall, the FEIR's inclusion of changes to the Project Objectives, for the purpose of justifying its traffic assumptions violates a core value of CEQA in assessing the range of feasible alternatives that could be used to meet the Project's core objectives.

B. The Inconsistent Application of Significant New Information Regarding Health Risks in the FEIR Warrants Re-Circulation

The EIR's analysis of the Projects diesel emission related health impacts has been substantially revised since the draft EIR was released for public review and comment. Specifically, the FEIR now includes a January 2015 study regarding health impacts from diesel engines, titled "the Advanced Collaborative Emissions Study" ("ACES"). While the draft EIR found notable cancer risks exceeding South Coast Air Quality Management District (SCAQMD) thresholds, the FEIR concludes, based on the ACES study and report that the "application of new emissions control technology to diesel engines have virtually eliminated the health impacts of diesel exhaust." FEIR, at 4-17.

As noted by the California Air Resources Board ("ARB"), however, the use of a single study as the basis for this analysis is insufficient for the purpose of providing a comprehensive assessment of health risk from project construction and operations. ARB comment, 5. The ACES study is only one of many scientific studies related to the health risks from diesel and other mobile source emissions, and cannot by itself serve as substantial evidence regarding the Project's impacts to human health. *Id.* Indeed in relying solely on a single study to reach its determination that the human health and cancer risks from diesel exhaust have been virtually eliminated runs counter to evidence presented in comments.

Moreover, the ACES study is not the only new study that has been released since the publication of the FEIR. In February 2015 the Office of Environmental Health Hazard Assessment (OEHHA) also released a new guidance document and approved risk assessment methodology contained in the OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines: Guidance Manual for the Preparation of Health Risk Assessments. This guidance document sets forth new methodologies for assessing health risk from diesel particulate matter (“DPM”) and other toxics, which, while generally referenced in the FEIR are either not applied, or are insufficiently applied, and the FEIR fails to explain its choice of methodology to measure health risks, and specifically cancer risk in light of the study.

Nonetheless, Table 4.3.AF in the FEIR shows the FEIR’s conclusion that the estimated cancer risks using the “Current OEHHA Guidance” after application of mitigation are substantially less after mitigation. Yet, the SCAQMD cancer risk significance thresholds continue to be exceeded at locations within the project boundaries. According to the FEIR, they are not exceeded at “at any residential areas outside of the project boundary,” but the document fails to substantiate why or how it has reached that conclusion in accordance with the updated methodology it cites as the “New OEHHA guidance”

While the FEIR states that the analysis using the “Current OEHHA Guidance” was provided in the document to allow decision makers and the public to see the cancer-related impacts of the Project on the assumption that NTDE does cause cancer merely including this new information into the document without meaningfully applying it, or recirculating the document for public review violates CEQA’s requirements. *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 308 (“If any substantial changes are proposed in a project after review of a draft EIR, it is necessary to prepare a supplemental EIR subject to the same scrutiny”), see also, *Concerned Citizens of Costa Mesa, Inc. v. 32nd Dist. Agricultural Assn.* (1986) 42 Cal.3d 929, 936.

ARB has requested re-circulation on the basis that “The FEIR analysis has been revised since the draft EIR was released to include [] new studie(s) regarding the health impacts from diesel engines.” The FEIR should be re-circulated to allow the agency a meaningful opportunity to comment, and submit additional studies that would glean new information on the Project’s impacts and mitigation measures. In addition to ARB, the public, particularly residents who will be impacted most directly by the Project’s emissions from heavy truck traffic, and responsible agencies including the SCAQMD should be allowed an additional review and comment period to provide comments on this issue alone, if re-circulation is not granted for the document as a whole.

For these, and the additional reasons submitted in the remainder of this comment, as well as the comments submitted by other conservation and public health groups, the FEIR is inadequate, and its analyses are based on inaccurate, misleading information that precludes public review. As such, the document should be rejected and at a minimum, re-drafted and re-circulated to cure is severe information errors and omissions.

C. The FEIR Omits Information Regarding the Project’s Population and Housing Impacts, and Fails to Assess the Project’s Potential to Cause Displacement of Current Moreno Valley Residents

The DEIR fails to cure the deficiencies raised in comments to the draft EIR, regarding the omission of substantial evidence to support the conclusion that the Project will not cause significant impacts on housing supply and population characteristics in the City of Moreno Valley. Moreover, for many of the same reasons explained below in relation to the FEIR’s assumptions regarding the influx of jobs that will necessarily result from the construction and operation of the Project, the FEIR further fails to support its job creation and job benefits conclusions.

Like the draft EIR, the FEIR fails to substantiate its claims that the Project will necessarily lead to desirable, safe, full-time and permanent employment opportunities for the City’s current population. The FEIR’s analysis regarding the creation of jobs through the construction and operation of the Project is based on a single Fiscal and Economic Impact Study attached at appendix “O” of the document. While that study concludes that the construction and operation of a logistics warehouse the size of the proposed WLC will bring jobs to area, it fails to provide any detailed information regarding the level of education needed to fill those jobs, and it similarly fails to provide any detailed comparison between the average level of education of the City’s current residents and the level of education needed to successfully obtain and retain such jobs on a permanent basis. The FEIR also includes unfounded assumptions regarding the existing housing supply to jobs ratio and concludes that the Project will only “improve” that ratio by adding more jobs to the area. The FEIR fails, however, to analyze the potential impact of an influx of new residents that may be called upon to fill the jobs made available by the Project, but which have not been retained by Moreno Valley residents. Surely the creation of some 25,000 jobs or more would result in some jobs opportunities being conferred to future residents of the area, who do not currently reside in the City.

Without providing more detail regarding the Project’s potential increase in demand for housing, the FEIR fails to analyze or mitigate any potential displacement effects caused by the Project. The FEIR must be redrafted and re-circulated to include such information for public review and comment.

II. THE TRAFFIC ANALYSIS FAILS TO DISCLOSE AND MITIGATE SIGNIFICANT TRAFFIC IMPACTS.

Attached to this comment letter is a technical analysis produced by Traffic Engineer Tom Brohard, PE. [hereinafter “Brohard Letter” – attached as Exhibit A]. The Brohard Letter identifies the magnitude of this project by noting the Project will generate more than 69,000 daily trips. Brohard Letter, at 1; *see also* FEIR, at 4.15-46. Given the large amount of traffic associated with this Project, it is vital that the EIR accurately disclose the true traffic impacts. Brohard Letter, at 1. The Brohard letter identifies serious deficiencies that persist throughout the

FEIR's analyses, and remain inadequately addressed in the FEIR's Response to Comments. All these traffic issues must be addressed to help inform proper disclosure and mitigation of this massive Project. The following sections provide some additional clarification on how the inadequacies in the FEIR's traffic analyses harm the entire FEIR.

A. The Traffic Impacts Underestimate the Traffic Impacts Associated with this Project.

The FEIR underestimates traffic impacts in a number of material ways. This section will focus on two ways – truck share and trip length.

Truck Share

Establishing a proper truck share is vital to understanding the impacts of this Project. In particular, the FEIR assumes a low number of trucks as a share of total trips. The Brohard Letter identifies this critical flaw that the FEIR assumes these overly rosy assumptions on the number of trucks visiting this Project. Brohard Letter, at 7-8. Notably, the FEIR deviates from recommendations made by the South Coast Air Quality Management District, which are designed to ensure that the FEIR portrays a “worst case” scenario to comply with CEQA. See SCAQMD, Warehouse Truck Trip Study Data Results and Usage, available at <http://www.aqmd.gov/docs/default-source/ceqa/handbook/high-cube-warehouse-trip-rate-study-for-air-quality-analysis/finaltrucktripstudymc072514.pdf?sfvrsn=2>. In fact, SCAQMD recommends using a truck share percentage of 40 for projects like this that have unidentified future tenants. See CalEEMOD Guidance Appendix E, available at <http://www.aqmd.gov/docs/default-source/caleemod/caleemod-appendix.pdf?sfvrsn=2>. Here, the Project assumes almost half of that suggested amount will be trucks. The FEIR does not provide substantial evidence to support this conclusion.

Realizing the faulty reliance upon the 2003 Fontana Truck Trip Study in the DEIR, the FEIR seeks to use some limited data collection from the Skechers Warehouse to justify its low truck share. The FEIR rationalizes using this study by concluding “[t]he Skechers warehouse is representative of the warehouses planned for the project. The ITE trip generation rate, however, “is three times greater than the Skechers warehouse traffic counts.” FEIR, at 4.3-73. Thus, the conclusion is not supported by the record.

The FEIR further concludes that “the WLC is expected to have 15-to-25 different tenants from a variety of economic sectors...” FEIR Response to Comments, at 812; see also FEIR, at 3-119. There FEIR fails, however, to substantiate that claim. There is no basis in the FEIR or its attachments to support the assertion that the 15 to 25 currently unidentified tenants will be similar to the Skechers warehouse, which is a clothing and apparel company. The FEIR's erroneous justification is further confused by the fact that also concludes that “[e]ach building may...have multiple tenants.” FEIR, at 3-119. Putting aside whether the Skechers Study, which sampled traffic numbers at the warehouse in November of 2012 for five days, is representative of the unidentified future tenants, the FEIR's conclusion does not follow suit if anywhere from one

to all of the buildings may have multiple tenants. The fact that some or all buildings will have multiple tenants makes them entirely dissimilar to the Skechers warehouse. Moreover, the study of Skechers, which looked at traffic activity during a nonpeak month for goods delivery, is not representative of conditions that will be faced at the new facility.

The FEIR includes significant new data that commenters have first been able to review in the FEIR. This is an abuse of the CEQA process, and as such, the City to reissue and re-circulate the EIR to allow proper vetting of this information.

Truck Length

The FEIR includes new analyses never seen before to justify a trip length less than 50 miles assumed in the draft EIR. The FEIR now claims that the average truck trip length will be 30 to 40 miles. FEIR Response to Comments, at 815. Still, the FEIR provides no information on where these trips will be coming from and what growth at the facilities within 30-40 miles justify this development since it now shifted its Project Objective to only accommodate a small share of port-related cargo. Given that the FEIR includes wholly new information and analysis, the public has not had ample opportunity to vet the data. Thus, it is wholly improper to include a new technical report and traffic analysis, yet alone rely on it. This is especially the case for truck trip length because it directly impacts several other impacts, including direct, indirect and cumulative impacts along overburdened truck routes, and perhaps most importantly air quality and greenhouse gas emissions.

B. The Improper Traffic Analysis Infects the Analysis of Many Other Impacts.

Given that the FEIR has underestimated the impacts from traffic, the analysis contained in the document and in the documents relied upon, are similarly faulty. These impact areas include but are not limited to the Project's impacts on air quality, noise, and greenhouse gasses. A proper traffic analysis is of paramount importance to a fully informative EIR. Thus, the EIR should be recirculated to cure these defects identified in the Brohard Letter and by this and other similar comments.

III. THE GREENHOUSE GAS (“GHG”) EMISSIONS ANALYSIS IS PATENTLY UNLAWFUL.

Seeking to obfuscate the full impacts from this Project, the FEIR dramatically reduces the GHG emissions in a manner that contradicts the core of CEQA. In particular, the FEIR claims that “GHG emissions associated with vehicle miles traveled (VMT) cannot constitute significant increases under CEQA.” FEIR, at 4.7-47. “This regulatory conclusion is therefore directly applicable to the WLC project because VMT is by far the largest source of project GHG emissions.” *Id.* The factual predicate for this absurd conclusion is based on claims that because of “compliance with the Cap-and-Trade regulation, project-specific GHG emissions that are covered by the regulation will be fully mitigated.” *Id.* This is a fundamentally wrong conclusion

that if left uncured will lead to large amounts of significant GHG emissions going unmitigated. This approach is unlawful for several reasons.

First, even though transportation fuels are now under California's Cap and Trade Program, it is common practice for municipalities to seek to mitigate VMT because of the great need. [Exhibit B – Examples of EIRs that address VMT GHG Emissions].

Second, this approach ignores CEQA's substantive mandate and recently adopted CEQA Guidelines related to GHG emissions. In particular, Appendix F notes that mitigation measures may include "[t]he potential of siting, orientation, and design to minimize energy consumption, including transportation energy." Guidelines, Appendix F(II)(D). Under the FEIR's approach, this provision would be rendered utterly nugatory because the siting of facilities in a manner to reduce fuel consumption (i.e. reduce VMT) would be irrelevant for mitigating GHG emissions.

Finally, the position of the FEIR makes no sense. Even if the FEIR is allowed to ignore mitigation measures for GHG emissions of transportation fuels, AB 32 seeks to achieve 1990 levels by 2020. This is not the end game in the effort to clean up harmful GHG emissions. In fact, Governor Schwarzenegger implemented EO-03-05 with the goal of also "reduc[ing] GHG emissions to 80 percent below 1990 levels" by 2050. Even the FEIR concedes that going beyond 1990 levels is a goal that should be sought in the Project. The FEIR notes that the "Sustainability Guidelines" for the WLC "[a]ssist in meeting California's greenhouse gas reduction targets as set forth through Executive Order S-3-05 and Assembly Bill 32 (also known as the Global Warming Solutions Act of 2006)." FEIR, at 3-36 (*see also* FEIR, at 4-7.23, 4.7-24 n.3).¹ The FEIR fails to explain why the GHG targets beyond the current 2020 scope of AB 32's duly adopted programs are relevant for the "Sustainability Guidelines" but not relevant for the mitigation of VMT. In fact, given that the cap and trade program currently does not move emissions towards the goal of 80% below 1990 levels by 2050, there will inherently be significant direct and cumulative unmitigated GHG emissions from this Project. Moreover, even if there are policies geared to achieve the 80% below 1990 levels by 2050, the Project concedes that GHG issues are global in nature, but have real impacts in California. Thus, projects with VMT related emission above the 10,000 metric ton of CO₂e would need to be mitigated even if California had AB 32 programs designed to reach the 80% below 1990 levels by 2050.

This deep flaw in the FEIR is especially troubling when viewed in the context of the FEIR's numerous omissions of other, critical pieces of information, masking the true scope of Project's impacts. More than 379,824 metric tons of CO₂e remain un-mitigated and yet they are identified as insignificant based on the FEIR's approach, which is antithetical to CEQA. FEIR,

¹ Notably, the drafters of the FEIR are confused about the contours of the AB 32's cap and trade program by stating "[t]he cap, or number of allowances, will decline over time in an effort to drastically reduce greenhouse gas emissions by 2050." FEIR, at 4.7-24. While this is speculation, the current program only seeks to push reductions to a level of 1990, not the "drastic" reductions noted in the FEIR. While the recent scoping plan update from CARB mentions revising its regulations to meet the 2050 goals, it does not propose or implement specific amendments to make this statement a reality.

at 4.7-54 (Table 4.7.J). For context, Commenters point out that if a stationary source resulted in the same level of emissions in Riverside County, it would be the third largest GHG emitter in the County. [Exhibit C – Spreadsheet Showing Largest GHG Stationary Sources in Riverside County]. Only two aging power plants would emit more than this source. Because this approach cannot be reconciled with CEQA, the FEIR should be rejected with instructions to prepare a recirculated draft of the document that includes significantly more mitigation measures to curb this large amount of GHG emissions. These mitigation measures should include the use of zero and near-zero emission technologies.

IV. THE AIR QUALITY ANALYSIS CONTINUES TO SUFFER SIGNIFICANT FLAWS.

The Air Quality analysis in the FEIR is designed to mislead the public and decision-makers. Instead of accepting the fact that this project seeks to build the largest diesel magnet source in Riverside County, which receives a score of “F” for ozone and particulate pollution, it seeks to provide an overly rosy picture of the air quality landscape. *See* American Lung Association, 2015 State of the Air, [Attached as Exhibit D]. CEQA does not support this attempt to sugarcoat a major project of this sort.

A. The FEIR Ignores Current Trends in Particulate Matter.

In response to many comments related to the air quality impacts of the project, the FEIR seeks to take solace that “[i]n the Inland Empire there is a marked decreasing trend in PM2.5 concentrations in Riverside-Rubidoux, Fontana, and San Bernardino from 2001 to 2012 and at Mira Loma from 2006 to 2012. The relevance of these trends is that PM2.5 levels have displayed a decreasing trend in the Inland Empire despite increases in urban development including the development of large warehouse complexes since 2001. FEIR Response to Comments, at 217. The FEIR conveniently ignores the data on PM2.5 from 2012 until today. Importantly, 2014 data actually shows an increase in annual PM2.5 levels for many of the monitors relevant to this project. The FEIR provides no justification for ignoring the 2013 and 2014 data in its push that particulate matter levels are improving. [Exhibit E – Comments on EPA recent rulemaking and PM2.5 levels]. Even with the underreported truck assumptions in the FEIR, this project will be one of largest truck magnet in the state. This poses serious issues for attainment of state and federal air quality standards.

B. The FEIR Discounts Feasible Mitigation without Sufficient Justification.

With no sufficient justification, the FEIR discounts many mitigation measures aimed to ease the health burdens that will be imposed by this project. The magnitude of this Project demands robust mitigation. While many of the dismissed mitigation measures should be adopted, we highlight two particularly egregious examples from the Comments.

First, in Response to Comment F-9A-39, the FEIR claims funding health facilities near the project is infeasible. The FEIR claims this mitigation is infeasible without reconciling the

fact that the only other larger diesel magnet sources in the South Coast Air Basin - The Ports of Los Angeles and Long Beach-have determined such programs to be feasible. It is not “impossible to determine what population should be served by such a program.” FEIR Response to Comments, at 822.

The Ports of Los Angeles and Long Beach have done just that. At the Port of Long Beach, staff used Arc GIS, a tool used in the preparation of this EIR, to identify zones where funding should take place. *See* Port of Long Beach, Community Mitigation Grant Program Zone Maps, available at <http://www.polb.com/environment/grants/apply/zonemaps.asp>. Blanket statements of impossibility without one iota of justification do not satisfy CEQA’s disclosure mandate. Moreover, the Port of Los Angeles bounded its Harbor Community Benefit Foundation program to the communities of San Pedro and Wilmington. In addition, both of these ports are located in the South Bay region, which has multiple sources of air pollution that can contribute to negative health.

Second, the Project should not be able to reject the requirement to use zero emission technologies as part of the Project. The Project seeks to use the requirement that trucks be 2010 or later model to shield it from truly mitigating the impacts of this Project. Several agencies have weighed in that this is feasible technology now, and the FEIR fails to articulate why these requirements could not be implemented in the timeframes for this Project.

V. THE FEIR FAILS TO ADEQUATELY ANALYZE AND MITIGATE IMPACTS TO BIOLOGICAL RESOURCES

The FEIR maintains several of the same deficiencies outlined in comments on the draft EIR by conservation groups, the US Fish and Wildlife Service, the California Department of Fish and Wildlife (“CDFW”), and the public.

A. Failure to Properly Disclose and Analyze the Scope of Impacts to the Project Area’s Biological Resources

The FEIR’s improper representation of the area along the southern portion of the Project area as a “buffer” that will mitigate the Project’s construction and operations impacts dangerously misleads the public and prevents the City from requiring mitigation measures necessary to minimize the Project’s significant impacts of sensitive, threatened and endangered species and habitats in the SJWA. Indeed the inclusion of the misleading “buffer” references in the FEIR Project will cause detrimental, significant impacts on lands already set aside for permanent conservation, in violation of CEQA. *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus*, 27 Cal. App. 4th 713, 722. Moreover, as explained above in reference to the inadequacies of the Project description, the FEIR fails to adequately disclose and analyze the Project itself, adjacent areas of biological significance, and impacts to biological resources.

For example, by improperly referring the “CDFW parcels” as a “buffer” the FEIR fails to disclose or analyze the riparian/riverine and hydrological features of the property, as further

explained in the comments submitted by the Center for Biological Diversity and the San Bernardino Audubon Society. The failure to disclose these impacts prevents the FEIR from conforming to the Western Riverside County Multiple Species Habitat Conservation Plan (“MSHCP”). This includes failing to perform an adequate Determination of Biologically Equivalent or Superior Preservation (“DBESP”) as required by the MSHCP.

The FEIR’s deficiencies further preclude adequate analyses of impacts and mitigation for the regional MSHCP and local plans. In analyzing consistency with applicable local General Plan Policies the FEIR states “[t]here is no riparian habitat within the Specific Plan area.” FEIR at 442. However, the FEIR itself contradicts this statement in finding that “[f]ive drainage features (Drainages 7, 8, 9, 12 and 15) were determined to be riparian/riverine under MSHCP guidelines and waters of the state subject to CDFW and RWQCB jurisdiction under Section 1600 of the Fish and Game Code and Porter Cologne Act respectively.” FEIR at 438. The FEIR also fails to disclose and analyze impacts to drainage 14 that contains southern willow scrub that provides habitat for the least Bell’s vireo and southwestern willow flycatcher. DEIR App. E at 54, 120. The FEIR attempts to dismiss the impacts to this riparian habitat by citing to a portion of the MSHCP, which purports to minimize the requirements to analyze impacts to riparian/riverine resources that are artificially created. FEIR, 4.42. However, this does not satisfy CEQA’s requirement to disclose, analyze, and mitigate impacts to sensitive habitat and wildlife. The FEIR goes further in masking the conflict with applicable plans by claiming that the riparian areas containing riverside sage scrub, southern willow scrub, and mule fat scrub are not natural drainage courses requiring preservation under mitigation under the Moreno Valley General Plan Policy 7.4-3. The EIR’s failure to adequately disclose and analyze the Project’s impacts to riparian features and conflicts with local policies violates CEQA.

B. The FEIR Masks and Fails to Mitigate the Project’s Impacts on Special Status, Threatened, or Endangered Species

The inadequacy of the FEIR’s analyses masks severe impacts on burrowing owls and the Los Angeles Pocket Mouse (“LAPM”). As noted in previous comments the FEIR fails to adequately disclose and analyze impacts to burrowing owl. The FEIR also fails to adequately analyze impacts to LAPM because the biological surveys upon which its analyses of species impacts are based purport to capture similar species, such as long tailed pocket mice and desert pocket mice even though the range of those species does not include the project area. Because the inclusion of these studies does not address the impacts to the LAPM, borrowing owl or other threatened species, the FEIR must be re-circulated to disclose the survey results for those species in order to determine whether the document provides the substantial evidence required to demonstrate that the species captured were not LAPM, which is a protected species under the MSHCP.

Despite the Project’s potential impacts on the burrowing owl and other species, the FEIR also fails to adopt feasible mitigation measures recommended by the US Fish and Wildlife Service, and the CDFW’s request that a relocation plan be developed for any burrowing owls that may be found on the project site. FEIR Appendix E-16, Comment 4. The CDFW points out

that burrowing owls have been found on the project site in the past, however, the FEIR takes erroneous position that the FEIR and specific plan are “not a vehicle to establish/enforce environmental mitigations nor does the City of Moreno Valley... place conditions on th[ese] documents.” FEIR Appendix E-16, Response to Comment 4. This response clearly misinterprets CEQA’s requirements that mitigation measures be concrete and enforceable, and mis-states the City’s obligation to require mitigation of the Project’s significant impacts before approving the Project.

The FEIR further fails to disclose additional impacts to wildlife corridors or analyze conflicts between the MSHCP’s requirements for wildlife and species protections in those corridors. The Project has the potential to severely impact wildlife movement between the San Timoteo Badlands, the San Jacinto Wildlife Area, Core H of the MSHCP, and Lake Perris. The building developments, road construction, and traffic components of the Project, create a certain obstruction to wildlife movement between these regionally important areas.

As noted above, the FEIR also fails to adequately describe how the existing drainage systems in the areas surrounding the Project, specifically including the “CDFW parcels” will impact potential wildlife movement, and the FEIR summarily dismisses the Project’s potential impacts on wildlife movement in direct conflict with the MSHCP, and improperly rejects several specific mitigation measures proposed by the US Fish and Wildlife Service and CDFW. For example, the FEIR asserts that it cannot coordinate with the County of Riverside on fencing the area northeast of Gilman Springs Road because the Project owner is not the owner of that property. However, there is no evidence that the project proponent or lead agency even approached the County about implementing such a mitigation measure. This mitigation measure would also be a proper subject for any annexation proceedings that are necessary for the Project, yet any analysis of those proceedings remain absent from the FEIR.

The US Fish and Wildlife Service and CDFW, who are implementing agencies on the MSHCP, have denied their approval of the FEIR’s purported analysis of the Project’s impacts and mitigation measures, stating:

“We cannot concur with the conclusion ... regarding site hydrology, assessment of riparian/riverine resources, the presence of Los Angeles pocket mouse and redirection of wildlife movement around the site ...”

FEIR Appendix E-16, Comment 12.

For these, and the additional reasons set forth in comments submitted by the Center for Biological Diversity and the San Bernardino Audubon Society, the deficiencies in the FEIR must be addressed before final consideration of the Project.

VI. THE PROJECT APPROVALS BEFORE THE CITY REQUIRE FURTHER ANALYSIS IN A PROJECT-LEVEL EIR

As noted above and throughout this comment, the Project’s goal of constructing a 2,382 some odd acre warehouse and supporting other logistics-oriented land uses for the Specific Plan area now, and indefinitely into the future involves multiple actions and approvals from the City. *See* FEIR, at Ch. 1. Accordingly, the FEIR sets forth mitigation measures that it asserts will address the impacts from all of those actions and approvals. *Id.* Despite the FEIR’s inclusion of such mitigation measures, however, as a program-level or “tiered” EIR, the FEIR improperly defers the impacts analyses necessary to provide meaningful mitigation at this stage of environmental review. Moreover, because the Project as defined in the FEIR includes specific development commitments – including the commitment to construct and operate the world’s largest logistics warehouse – the Project approvals before the City require the preparation of a project-level EIR in addition to any broader program-EIR analyses before they can be issued. *Citizens for a Sustainable Treasure Island v. City and County of San Francisco* (2014) 227 Cal.App.4th 1036, 1051 (“[t]he degree of specificity required in an EIR will correspond to the degree of specificity involved in the underlying activity”); *see also San Diego Citizenry Group v. County of San Diego* (2013) 219 Cal.App.4th 1, 2.

“While proper tiering of environmental review allows an agency to defer analysis of certain details of later phases of long-term linked or complex projects until those phases are up for approval,” CEQA’s demand for meaningful information is not satisfied by simply stating, or basing an EIR’s analyses on inadequate or incomplete information, or information that will be provided in the future. *California Clean Energy Committee v. City of Woodland* (2014) 225 Cal.App.4th 173, 200 (citing *Santa Clarita Organization for Planning the Environment v. County of Los Angeles* (2003) 106 Cal.App.4th 715, 723). As the CEQA Guidelines explain: “Tiering does not excuse the lead agency from adequately analyzing reasonably foreseeable significant environmental effects of the project and does not justify deferring such analysis to a later tier EIR or negative declaration.” Guidelines § 15152, subd. (b).

Tiering is properly used to defer analysis of environmental impacts and mitigation measures to later phases of a project **only** when the impacts or mitigation measures are not determined by the first-tier approval decision. *See California Clean Energy Committee v. City of Woodland, supra*, 225 Cal.App.4th 173. In such cases, the later phases that are subject to future environmental analyses are specific to aspects of the Project that are unknown at the time of initial environmental review. *Ibid.* Such aspects are considered “speculative” and as such, must be analyzed in subsequent environmental review document. *Id.* In the context of large land use and development projects, the courts have found tiering to be an appropriate way of evaluating future project aspects such as the aesthetic impacts of parking spaces – aspects of the project which present “speculative possibilities” of potential impacts, but do not necessarily present “substantial evidence of an environmental impact.” *Id.* (evaluating the use of a tiered EIR for the development of a 234 acre shopping center project on undeveloped agricultural land); *see also, Pala Band of Mission Indians v. County of San Diego* (1998) 68 Cal.App.4th 556, 577 (citing to

Citizens Action to Serve All Students v. Thornley (1990) 222 Cal.App.3d 748 for the proposition that “[s]peculative possibilities” regarding future projects are not “substantial evidence of environmental impacts”).

Here, however, the City is aware of, but fails to fully analyze the Project’s true impacts; and yet the FEIR attempts to mitigate those impacts notwithstanding the critical lack of information provided in the document. Its sole basis for doing so is, erroneously, that it provides a “tiered” program-level review of the impacts of the Specific and General Plan land use changes as well as the construction and operation of the WLC.

The FEIR purports to analyze and mitigate the Specific Plan’s deviations from the previously approved Specific Plan, but fails to adequately do so. This includes the land use and zoning changes needed to effectuate the Project – in essence, the construction and operation of the WLC, as well as the long term commitment of the Specific Plan area to logistics uses. The FEIR then purports to assess the impacts of any deviations between the Specific Plan and the City of Moreno Valley’s 2006 General Plan, and finally, it sets forth an analysis of and mitigation for the anticipated impacts of the construction and operation of the WLC. Without further information regarding the Project’s impacts, however, such mitigation efforts are illusory. The FEIR refers only generally to a host of deviations between the Specific Plan land use changes and the land use designations contained in both prior Specific Plan as well as the General Plan. *See* FEIR, at 3.118, 4.1-1, 4.1-71-80. The FEIR also inaccurately describes the Project and the Project area, incorporating numerous deficiencies as explained above in section I.A.ii.

While the City may analyze certain changes to the General Plan in a programmatic EIR, it cannot reasonably analyze the impacts of the Project in the same programmatic EIR for at least two principal reasons. First, the construction and operation of the WLC – the primary subject of the Specific Plan land use changes under consideration for approval by the City here – involves binding, project specific agreements between the City and Highland Fairview. Such agreements are in fact identified in the FEIR, by its reference to the “development agreement” as a project component, subject to the City’s approval. The EIR is therefore required to contain a more detailed level of information than that which is generally required of a program-EIR. *See Citizens for a Sustainable Treasure Island v. City and County of San Francisco, supra*, 227 Cal.App.4th, at 1051 (citing to the CEQA Guidelines to state that “a construction project will necessarily be more detailed in the specific effects of the project than will be an EIR on the adoption of a local general plan....”). Second, the impacts of the construction and operation of the WLC are to a large extent known now, at the time of environmental review, yet they are absent or otherwise improperly analyzed in the document. Indeed the FEIR’s claim to set forth mitigation measures to address such impacts shows that the FEIR attempts to analyze and mitigate those impacts. As stated above, however, a tiered or program level EIR is permitted only where “an EIR cannot provide meaningful information about a speculative future project.” *Pala Band of Mission Indians v. County of San Diego, supra*, 68 Cal.App.4th, 577 (citations omitted). Where it can, “the deferral of an environmental assessment” violates CEQA. *Ibid.*

The City is therefore prohibited from approving the FEIR as “a document which envisions future action without a commitment to future environmental review.” *Id.*

In sum, regardless of whether the City intends to conduct further tiered EIRs for parts of the project, the FEIR for the WLC is defective because it sets forth mitigation measures that are based on an inadequate assessment of the full range of impacts that may result from all of the Project components including the land use changes in the Specific Plan, and its deviations from the General Plan, the construction and operation of the WLC and the execution of the development agreement between the City and Highland Fairview. As such, the document fails as an information document under CEQA, and must be rejected and re-circulated to provide an adequate analysis of each of the actions necessary to effectuate the Project, before the City may take any action to approve or further the Project’s goals. *Save Tara v. City of West Hollywood* (2008) 45 Cal.4th 116, 138 (agencies must not “take any action” that significantly furthers a project before conducting adequate CEQA review)

VII. THE DRAFT STATEMENT OF OVERRIDING CONSIDERATIONS IS UNSUPPORTED BY SUBSTANTIAL EVIDENCE AND FAILS TO JUSTIFY THE PROJECT’S SIGNIFICANT IMPACTS AND INTERFERENCE WITH HEALTH PROTECTIVE AIR QUALITY STANDARDS ATTAINMENT

The FEIR includes as an attachment, a statement of overriding consideration that is still in draft form, and is insufficient to justify the Project’s significant and unavoidable impacts for the reasons explained below. Although the statement’s terms are provided in the proposed draft statement, they are insufficiently analyzed in both the draft EIR and in the FEIR. Moreover because the FEIR as a whole suffers from serious deficiencies that taint the whole of the analyses contained in the document, the draft statement cannot adequately weigh the Project’s adverse, significant impacts with the espoused benefits from the Project contained in any statement of overriding considerations. *Vedanta Society of So. California v. California Quartet, Ltd.* (2000) 84 Cal.App.4th 517, 530 (a project with significant and unmitigated environmental impacts can only be approved when “the elected decision makers have their noses rubbed” in the Project’s environmental effects, and still vote to move forward). As such the statement and its purported benefits must be rejected.

As the lead agency for the Project, if the City is to approve a project of this magnitude, and with the unmitigated significant environmental and human health impacts that the Project will cause, it “must adopt a statement of overriding considerations.” Pub Res. Code § 21081, subd. (b); Guidelines, § 15093. In contrast with mitigation and feasibility findings, overriding considerations can be “larger, more general reasons for approving the project, such as the need to create new jobs, provide housing, generate taxes, and the like.” *Concerned Citizens of South Central L.A. v. Los Angeles Unified School Dist.* (1994) 24 Cal.App.4th 826, 847. Yet, like mitigation and feasibility studies, a statement of overriding consideration is also subject to a substantial evidence standard of review. *Sierra Club v. Contra Costa County* (1992) 10 Cal.App.4th 1212, 1223; Guidelines § 15093, subd. (b).” Thus, an agency's unsupported claim that the project will confer general benefits is insufficient, and the asserted overriding

considerations must be supported by substantial evidence in the FEIR or somewhere in the record. *Sierra Club v. Contra Costa County* (1992) 10 Cal.App.4th 1212, 1223; Guidelines § 15093, subd. (b).”

As part of the EIR review process, statements of overriding consideration are intended to “vindicate the ‘right of the public to be informed in such a way that it can intelligently weigh the environmental consequences’ of a proposed project[;]” and they must make a good-faith effort to inform the public of the risks and potential benefits of the Project whose approval is proposed. *Woodward Park Homeowners Ass'n, Inc. v. City of Fresno* (2007) 150 Cal.App.4th 683, 717-718 (citing *Karlson v. City of Camarillo* (1980) 100 Cal.App.3d 789, 804).

In accordance with this standard, before approving the Project and the FEIR the City must show that it has considered each of the Project’s significant and unavoidable impacts in light of *each* of the alleged overriding considerations that it asserts will justify those impacts. *Cherry Valley Pass Acres & Neighbors v. City of Beaumont* (2010) 190 Cal.App.4th 316, 357 (upholding a statement of overriding consideration on the basis that “the City found the project had eight benefits, each of which ‘separately and individually’ outweighed its unavoidable impacts). Thus, the City must specifically consider and set forth overriding considerations to justify the Project’s significant and unavoidable direct indirect and cumulative impacts in each of the following areas: aesthetics, land use and biological resources, noise, traffic and air quality. *See generally*, Draft Facts, Findings and Statement of Overriding Considerations (“Draft Statement of Overrid.”).

The draft statement of overriding consideration attached to the FEIR asserts two general areas of benefits that it asserts outweigh the Project’s significant and detrimental, un-mitigated impacts: (1) an increase in jobs that improves the job to housing ratio in the City of Moreno Valley, and (2) an increase the in the City’s overall tax revenue, which could be used to improve schools and confer other public benefits to the residents of the City. Draft Statement of Overrid., at 211. Any additional public benefits that the draft statement assumes may result from approval of the Project flow from one of those two underlying considerations.

These two alleged benefits are, however, based on erroneous assumptions that (a) the Project will bring secure, desirable and certain jobs to the City of Moreno Valley; and (b) that the environmental degradation caused by the Project’s significant and unavoidable impacts will not outweigh the benefits conferred by the Project in monetary terms, or based on any other form of valuation methodologies. While the draft statement sites thoroughly to “appendix O” the Fiscal and Economic Impact Study prepared by Taussig & Associates, it fails to account for aspects of the job market that will undoubtedly impact the nature and desirability of the jobs made available at the Project, if it is approved, constructed and permitted to operate. Just some of these unmentioned aspects include trends towards employing largely contract, part-time or temporary or short-term labor to fill the jobs created by the WLC. Indeed the study is based on an assumption that either the WLC or other logistics uses will result in the permanent employment of .5 employees per 1,000 building square feet. Appendix O, at 20. Yet the study fails to

calculate what the rate of employment would be if some or all of those jobs were characterized as part-time or temporary contract labor employment.

The draft statement of overriding considerations similarly fails to account for any discrepancy in full-time vs. part time, temporary or contract jobs. Moreover, additional aspects of job desirability including working conditions for laborers employed at the WLC or similar logistics enterprises that would operate in the project area are left wholly omitted from both the Taussig & Associates study and the draft statement, and to the extent the draft statement relies on the development agreement to ensure that such jobs are actually ensured, such assurances are illusory as the development agreement terms remain unclear.

The draft statement of overriding considerations also fails to adequately quantify, either monetarily or based on some other form of valuation method, the consequences of the Project’s impacts, specifically including its impacts to human health, the environment and invaluable threatened and endangered biological resources that surround the proposed project area. Weighing the Project’s true impacts against its purported benefits is a critical environmental review requirement. *See Woodward Park Homeowners Ass’n, Inc. v. City of Fresno*, 150 Cal.App.4th, 720. The City must therefore engage in a good faith effort to thoroughly analyze of the full scope of the impacts for which the statement of overriding consideration is being offered. Doing so here would involve some process by which to measure conclusory statements that fully contradict the evidence on the record, such as the statement that the Project will improve health public health. Draft Statement of Overrid., at 223.

Finally, the draft statement of overriding considerations fails to justify the Project’s impediment to the South Coast Air Basin achieving federal and state NAAQS, and it’s steady, foreseeable future contribution to the region’s ability to meet Air Quality Management Plan targets, which are essential to ensuring compliance with state and federal law. The statement of overriding consideration cannot, in essence justify the Project’s apparent conflict of potentially causing violations of air quality standards, which carry severe economic sanctions for the 18 million people living the South Coast Air Basin based on parochial economic justifications for one city.

//
//
//
//
/

For these reasons stated herein and because the alleged Project benefits included in the draft statement of overriding consideration run counter to the evidence on the record, the City cannot approve the Project, and cannot certify the FEIR as an informational document.

We appreciate your consideration of these comments. Please do not hesitate to contact us at amartinez@earthjustice.org or ygarcia@earthjustice.org if you have questions about this comment letter.

Sincerely,



Yana Garcia
Adrian Martinez
Attorneys for Earthjustice

Counsel for Center for Community Action & Environmental Justice

EXHIBIT A

May 28, 2015

Adriano Martinez, Staff Attorney
Earthjustice California Office
800 Wilshire Blvd, Suite 1010
Los Angeles, California 90017

SUBJECT: Review of the FEIR for the World Logistics Center (WLC) Project in the City of Moreno Valley – Continuing Traffic and Transportation Issues

Dear Mr. Martinez:

At the request of the Sierra Club, I, Tom Brohard, P.E., have reviewed various portions of the May 2015 Final Environmental Impact Report (FEIR) prepared by LSA for the World Logistics Center (Proposed Project) in the City of Moreno Valley. I have also reviewed the Revised Traffic Impact Analysis prepared by Parsons Brinkerhoff for the WLC Project with focus on the following:

- Volume 1 – Response to Comments; particularly Letter F-9B
- Volume 2 - Revised DEIR, Appendix L – September 2014 Traffic Impact Analysis Report and Appendices A through P
- Volume 3 – FEIR Section 4.15 – Traffic and Circulation

My March 29, 2013 letter to you provided a number of comments on the Draft EIR for the Proposed Project (Letter F-9B Comments 1 through 47) and was enclosed with your comments (Letter F-9A). While some of my comments have been addressed, significant traffic and circulation issues remain as they have not been resolved or fully addressed. For these continuing issues, this letter includes summary quotes from my initial comment letter, the FEIR response, and my rebuttal to the FEIR response. These various issues and concerns require further study, analysis, and explanation before the City of Moreno Valley considers the Proposed Project.

Continuing Traffic and Circulation Issues

According to the FEIR, the WLC Project Specific Plan proposes a maximum of 40.4 million square feet of “high-cube logistics” warehouse distribution uses classified as “Logistics Development” (LD) and 200,000 square feet (approximately 0.5%) of warehousing-related uses classified as “Light Logistics” (LL). The overall project has been reduced by about 1,000,000 square feet from the DEIR. Page 4.15-46 of the FEIR forecasts that the WLC Project will generate 69,542 daily trips with 4,590 trips in the AM peak hour and 5,010 trips in the PM peak hour. These added traffic volumes that will be generated by the WLC Project are extremely high. To put these volumes in perspective, these additional trips are the same as the existing daily and peak hour traffic volumes on SR-60

Adriano Martinez, Staff Attorney
WLC FEIR – Continuing Traffic and Transportation Issues
May 28, 2015

at Moreno Beach Drive. It is no wonder that the WLC Project will create 60 direct traffic impacts and will contribute to 205 cumulative traffic impacts throughout Southern California.

The mitigation measures that have been proposed do not properly or fully address the resulting significant traffic impacts that the Proposed Project will create. Direct project traffic impacts on freeways, roadways, and intersections continue to be confused with cumulative project traffic impacts, leading to defective mitigation measures. Funding is not shown to be available to construct mitigation measures in a timely manner as the significant traffic impacts occur. The following traffic and circulation issues were identified during my review of the documents associated with May 2015 World Logistics Center FEIR, beginning with those issues I found most significantly concerning:

- 1) Comments F-9B-2, F-9B-18, F-9B-19, and F-9B-20 – Direct and Cumulative Traffic Impacts – “Direct Project traffic impacts are repeatedly confused with cumulative Project traffic impacts...”

In response, Page 841 of the FEIR states “The commenter confusions [sic] direct and indirect impacts.”

In rebuttal to this response, my Comment F-9B-18 agreed with and directly quoted Page 4.15-85 of the Draft EIR as follows:

- Direct Traffic Impacts – “A significant project-specific impact would occur if the project would cause a decrease from satisfactory LOS (based on local agency adopted standards) to an unsatisfactory LOS on a study area intersection, roadway segment, freeway mainline lane, freeway weaving segment or freeway ramp.”
- Cumulative Traffic Impacts – “A significant cumulative traffic impact would occur if the project contributes toward those facilities operating at unsatisfactory LOS in the pre-project condition.”

Comment F-9B-20 cited 52 instances where the Draft EIR and the TIA Report incorrectly identified many cumulative traffic impacts when they were actually direct traffic impacts from the definitions above. Further, other direct impacts were not disclosed even though these direct impacts were clearly shown in the various tables when the LOS degraded from an acceptable to an unacceptable level with the addition of only Project traffic.

Over the four analysis scenarios, the TIA identifies 42 direct project traffic impacts and a total of 205 cumulative impacts. As indicated below, there are 18 additional direct project traffic impacts beyond those identified in the TIA where WLC traffic causes an intersection or segment to fall below the

Adriano Martinez, Staff Attorney
WLC FEIR – Continuing Traffic and Transportation Issues
May 28, 2015

acceptable LOS. In each of the various sections in the different scenarios, the text in the TIA conflicts with the entries in the tables throughout the discussion of traffic impacts. Instead, these locations which experience direct impacts are either incorrectly shown as cumulative impacts or they are omitted altogether from the listings.

In response to Comment F-9B-20, the FEIR made some minor corrections to the listing of impacts under various scenarios. In the TIA listings, the locations that fail to meet the thresholds of significance both without and with project traffic added should be more clearly and simply identified as “Cumulative Impacts”. Similarly, those locations that meet the thresholds of significance without project traffic added but then degrade below the standard with project traffic added should be more clearly and simply identified as “Direct Impacts.”

The following impacts are incorrectly identified as cumulative impacts or omitted from the disclosure of “direct” impacts as the addition of Project traffic directly causes a decrease from satisfactory LOS to an unsatisfactory LOS:

Existing plus Phase 1 Conditions – Freeway Segments

- Eastbound SR-60 from Euclid Avenue to Grove Avenue – Degrades from LOS D (density of 34.7) to LOS E (density of 36.7) in AM peak hour with Project traffic added (shown on Page 135 in Table 30 as direct impact but omitted from list of directly impacted freeway segments on Page 134 of the September 2014 TIA).
- Eastbound SR-91 from Central Avenue to 14th Street – Degrades from LOS D (density of 34.8) to LOS E (density of 35.6) in AM peak hour with Project traffic added (shown on Page 136 in Table 30 as direct impact but omitted from list of directly impacted freeway segments on Page 134 of the September 2014 TIA).

Existing plus Build-Out Conditions – Road Segments

- Cactus Avenue from Redlands Boulevard to Cactus Avenue Extension – Degrades from LOS A to LOS E with Project traffic added (shown on Page 146 in Table 36 as direct impact but not identified as a directly impacted road segment on Page 145 of the September 2014 TIA).

Existing plus Build-Out Conditions – Intersections

- Gilman Springs Road/Bridge Street – Degrades from LOS C (delay of 20.8) to LOS D (delay of 25.1) in PM peak hour with Project traffic added (shown on Page 169 in Table 37 as direct impact but omitted from list of directly impacted intersections on Page 171 of the September 2014 TIA).
- San Timoteo Canyon Road/Alessandro Road – Degrades from LOS C (delay of 23.9) to LOS F (delay of 98.1) in PM peak hour with Project

Adriano Martinez, Staff Attorney
WLC FEIR – Continuing Traffic and Transportation Issues
May 28, 2015

traffic added (shown on Page 169 in Table 37 as direct impact but omitted from list of directly impacted intersections on Page 171 of the September 2014 TIA).

Existing plus Build-Out Conditions – Freeway Segments

- Eastbound SR-60 from Euclid Avenue to Grove Avenue – Degrades from LOS D (density of 34.7) to LOS E (density of 38.4) in AM peak hour with Project traffic added (shown on Page 173 in Table 39 as direct impact but omitted from list of directly impacted freeway segments on Page 172 of the September 2014 TIA).

Existing plus Build-Out Conditions – Freeway Weaving LOS

- Eastbound SR-60 from Central Avenue to Fair Isle Drive/Box Springs Road – Degrades from LOS D (density of 32.4) to LOS E (density of 35.0) in PM peak hour with Project traffic added (shown on Page 179 in Table 41 as direct impact but omitted from list of directly impacted freeway weaving LOS on Page 179 of the September 2014 TIA).

2022 plus Phase 1 Conditions – Intersections

- Gilman Springs Road/Bridge Street – Degrades from LOS C (delay of 22.3) to LOS D (delay of 25.4) in AM peak hour with Project traffic added (shown on Page 236 in Table 51 as direct impact but omitted from list of directly impacted intersections on Page 240 of the September 2014 TIA).

2022 plus Phase 1 Conditions – Freeway Segments

- Eastbound SR-60 from Pigeon Pass Road/Frederick Street to Heacock Street – Degrades from LOS D (density of 29.2) to LOS E (density of 37.2) in AM peak hour with Project traffic added (shown on Page 245 in Table 53 as direct impact but omitted from list of directly impacted freeway segments on Page 244 of the September 2014 TIA).
- Eastbound SR-60 from Heacock Street to Perris Boulevard – Degrades from LOS C (density of 25.0) to LOS E (density of 35.0) in AM peak hour with Project traffic added (shown on Page 245 in Table 53 as direct impact but omitted from list of directly impacted freeway segments on Page 244 of the September 2014 TIA).

2022 plus Phase 1 Conditions – Freeway Ramp LOS

- SR-60 Eastbound On-Ramp from Central Avenue – Degrades from LOS D (density of 28.8) to LOS F (density of 31.9) in AM peak hour with Project traffic added (shown on Page 254 in Table 57 as direct impact but omitted from list of directly impacted freeway ramp LOS on Page 253 of the September 2014 TIA).

Adriano Martinez, Staff Attorney
WLC FEIR – Continuing Traffic and Transportation Issues
May 28, 2015

2035 plus Build-Out Conditions – Road Segments

- Gilman Springs Road from Alessandro Boulevard to Bridge Street – Degrades from LOS D to LOS F with Project traffic added (shown on Page 290 in Table 64 as direct impact but not identified as a directly impacted road segment on Page 289 of the September 2014 TIA).

2035 plus Build-Out Conditions – Intersections

- Lasselle Street/Cactus Avenue – Degrades from LOS C (delay of 34.8) to LOS D (delay of 38.2) in PM peak hour with Project traffic added (shown on Page 314 in Table 65 as direct impact but omitted from list of directly impacted intersections on Page 292 of the September 2014 TIA).
- Central Avenue/Chicago Avenue – Degrades from LOS D (delay of 46.8) to LOS E (delay of 60.7) in AM peak hour with Project traffic added (shown on Page 311 in Table 65 as direct impact but omitted from list of directly impacted intersections on Page 292 of the September 2014 TIA).

2035 plus Build-Out Conditions – Freeway Segments

- Westbound SR-60 from Reservoir Street to Ramona Avenue – Degrades from LOS D (density of 34.6) to LOS E (density of 35.8) in PM peak hour with Project traffic added (shown on Page 324 in Table 67 as direct impact but omitted from list of directly impacted freeway segments on Page 321 of the September 2014 TIA).
- Westbound SR-60 from Redlands Boulevard to Theodore Street – Degrades from LOS D (density of 29.7) to LOS E (density of 35.0) in PM peak hour with Project traffic added (shown on Page 324 in Table 67 as direct impact but omitted from list of directly impacted freeway segments on Page 321 of the September 2014 TIA).

2035 plus Build-Out Conditions – Freeway Weaving LOS

- Eastbound SR-60 from Main Street to SR-91 – Degrades from LOS D (density of 34.1) to LOS E (density of 35.8) in AM peak hour with Project traffic added (shown on Page 329 in Table 69 as direct impact but omitted from list of directly impacted freeway weaving LOS on Page 328 of the September 2014 TIA).

2035 plus Build-Out Conditions – Freeway Ramp LOS

- SR-60 Eastbound On-Ramp from Theodore Street – Degrades to LOS F (density of 43.6) in PM peak hour when constructed with Project traffic added (shown on Page 333 in Table 71 as direct impact but omitted from list of directly impacted freeway ramp LOS on Page 332 of the September 2014 TIA).

Adriano Martinez, Staff Attorney
WLC FEIR – Continuing Traffic and Transportation Issues
May 28, 2015

- 2) Comments F-9B-22 and F-9B-39 – Mitigation of Traffic Impacts – “The Project must be required to fully mitigate its direct impacts created when the LOS falls from a satisfactory level to an unsatisfactory level when project traffic is added.” The FEIR did not provide a response to Comment F-9B-22. For Comment F-9B-39, Page 852 of the FEIR states “The FEIR and TIA have been clarified to state that fair share payments for direct project impacts will be made in addition to TUMF and DIF payments.”

In rebuttal to this response, the FEIR and the TIA continue to misinterpret how mitigation measures are financed. Payment of TUMF, DIF, and other development fees are always required to be made. Those fees are typically used by agencies to address cumulative traffic impacts as well as to address minor increases in traffic across the area. As indicated at the beginning of this letter, adding 69,542 daily trips including with 4,590 trips in the AM peak hour and 5,010 trips in the PM peak hour (equal to daily and peak hour volumes that travel on SR-60 at Moreno Beach Drive) are significant. Direct impacts created by traffic from a particular project are the full and total responsibility of the project to address and to mitigate. As stated previously, the Project must be required to:

- Provide all costs associated with mitigation of each of the 60 direct project traffic impacts (42 identified in the TIA and 18 identified in the listing above) when the LOS falls from a satisfactory level to an unsatisfactory level when project traffic is added.
- Participate in and provide a fair-share of the funding for implementation of each of the mitigation measures to address each of the 205 cumulative impacts identified in the FEIR. TUMF and DIF fees can be used for this purpose as long as the projects in the fee programs match up with the improvements that are shown in the fee programs.

Page 341 of the TIA states: “The direct impacts of the WLC Project were determined by comparing the LOS of study facilities from Existing to Existing plus Build-out conditions.” The determination of direct traffic impacts and mitigation measures based solely on the comparison of “Existing” to “Existing plus Build-out Conditions” is woefully incomplete. The TIA identified direct traffic impacts at different times including 5 direct traffic impacts under “Existing plus Phase 1 Project” conditions, 9 direct traffic impacts under “Existing plus Build-out Conditions”, 13 direct traffic impacts under “2022 plus Phase 1 Conditions”, and 15 direct traffic impacts under “2035 plus Build-out Conditions.” There is no reason to evaluate these four scenarios and then to conclude that the direct traffic impacts occur only under “Existing plus Build-out Conditions”. As shown in the TIA, additional direct project traffic impacts occur in 2022 and in 2035. However, the TIA incorrectly omits requirements

Adriano Martinez, Staff Attorney
WLC FEIR – Continuing Traffic and Transportation Issues
May 28, 2015

that WLC must implement mitigation measures to address these direct project traffic impacts.

CEQA also requires that the implementation of mitigation measures be timely. The TIA has identified direct project traffic impacts as well as mitigation in 2022 and in 2035 but it has failed to require implementation of mitigation measures as they are needed in a timely manner in the future.

- 3) Comments F-9B-2, F-9B-39, and F-9B-40 – Funding of Mitigation Measures – “Funding is not shown to be available to construct mitigation measures in a timely manner as the significant Project traffic impacts occur.” In response, Page 841 of the FEIR states “Funding for the identified improvements is expected to come from a variety of sources including Development Impact Fee (DIF), DIF-like fee programs in other jurisdictions, the Transportation Uniform Mitigation Fee (TUMF) Program, State and Federal sources, fair-share contributions from the WLC for improvements in the City, and fair-share contributions from the WLC for improvements outside the City under programs to be established.”

In rebuttal to the response, this generalized statement provides no specifics regarding the implementation schedule or the cost of any of the improvements that are required as mitigation measures. The TIA does not provide any information whatsoever that indicates that any of the improvements are now included or are planned to be included in any fee program. The TIA indicates that other programs may be established with neighboring jurisdictions but there are no specific details about any of these potential programs. The response concludes that “The City does not have direct control over the expenditure of TUMF funds but has pledged to work with WRCOG to shift funding priorities to align with the improvements in the TIA.” The response has not addressed our prior concerns and certainly does not provide any assurance or substantial evidence that the implementation of mitigation will be timely as required by CEQA.

- 4) Comment F-9B-16 and 17 – Truck Percentages Are Too Low – “Both Appendix S and Appendix T to the TIA Report clearly demonstrate that the 2003 Fontana Study should not be used to forecast truck trip generation for the World Logistics Center Project. By doing this, the Draft EIR and TIA Report have significantly underestimated the number of truck trips that the World Logistics Center will generate.” In response, Page 846 of the FEIR states “The commenter’s suggests the truck percentages from the NAIOP study should be used would be appropriate if the overall trip generation rate from the NAIOP study was also used. Instead, the commenter suggests cherry-picking where the high truck percentage from one source (NAIOP) is selected and then combined with the high overall trip generation rate selected

Adriano Martinez, Staff Attorney
WLC FEIR – Continuing Traffic and Transportation Issues
May 28, 2015

from a different source Institute of Transportation Engineers (ITE) to produce a very high estimate of project truck traffic.”

In rebuttal to this response, my prior comments indicated the 2003 Fontana Study was outdated and that more current data should have been used. The City’s recently compiled data from 2013 represents the most current local data but it has not been used by the revised Traffic Study.

Columns labeled “All City Survey Sites” and in “City Sites > 1 MSF” in new Figure 4.15.8 on Page 4.15-49 of the FEIR contains errors and misleads the reader. From the City’s September 27, 2013 “Vehicle Mix Assumption for High-Cube Warehouse” Memorandum which summarized vehicle mixes at six sites in the City ranging from 400,000 to 1,800,000 square feet, the following average mix of vehicles was found: Passenger cars: 76.6%, 2-axle trucks: 3.1%; 3-axle trucks: 2.7%; 4+-axle trucks: 17.6%. The graph for the “All City Survey Sites” shows passenger vehicles at about 82% and all trucks at about 18% which does not match the City’s recent findings.

While I did not suggest cherry-picking the data from different sources, the “City Sites > 1 MSF” column in the Figure 4.15.8 graph does exactly that by only summarizing sites with more than 1,000,000 square feet. To show the data for just those large facilities is inappropriate as warehouse sizes will not be limited to more than 1,000,000 square feet in the WLC Project.

Finally, there has been no consideration at all by the FEIR of published SCAQMD data which indicates that cold storage warehouses generate significantly higher truck trip percentages than those that do not include cold storage. As long as cold storage facilities are allowed in the WLC Project, then a composite trip rate as recommended by SCAQMD must be used for the traffic and air quality analyses of the WLC Project.

- 5) Comments F-9B-6 and F-9A-9 – Traffic Count Seasonal Variations – “No adjustments were made to remove potentially significant seasonal traffic volume fluctuations among the months of February, March, October, November, and December when the counts were taken.” In response, Page 813 of the FEIR compares directional seasonal volumes on SR-60 at the Day Street Interchange, the Heacock Interchange, and the Perris Interchange, concluding that the monthly variations are inconsistent and show no trends.

In rebuttal to this response, the three interchanges chosen by the FEIR for comparison are on SR-60 between 5 and 8 miles to the west of the WLC site. There are 9 interchanges on SR-60 in the City of Moreno Valley and several will serve the site directly. Why were those three interchanges so far away from WLC chosen for comparison? Why are the traffic volumes shown in Table F-9A.A 25 percent less than those counts published by Caltrans in

Adriano Martinez, Staff Attorney
WLC FEIR – Continuing Traffic and Transportation Issues
May 28, 2015

2011 Traffic Volumes on the California State Highway System (see enclosure)? A more complete analysis of the traffic count data adjacent to the WLC site must be conducted before jumping to the unsupported conclusion that there are no significant seasonal traffic volume variations that require adjustments.

- 6) Comments F-9B-35 – Monitoring of TDM Plans – “To achieve and maintain employee trip reduction goals, individual TDM plans for employers in the World Logistics Center must be developed and then monitored on a regular basis. Further, these plans must also contain penalties for non-compliance.” In response, Pages 849 and 850 do not provide a direct response to this comment.

The FEIR must contain provisions for the preparation and monitoring of TDM plans as an enforceable condition of approval for each project in the World Logistics Center.

Additional study of the Proposed Project must be undertaken in the areas of traffic, access, and parking. Each of the various issues and concerns raised throughout this letter must be addressed in detail to properly disclose, analyze, and mitigate the environmental impacts of the Proposed Project. The FEIR must then be revised accordingly and recirculated for further public review and comment. If you have questions regarding these comments, please call me at your convenience.

Respectfully submitted,

Tom Brohard and Associates

Tom Brohard, PE
Principal

Enclosure

2011 Traffic Volumes on the California State Highway System

**2011 TRAFFIC VOLUMES
ON THE CALIFORNIA STATE HIGHWAY SYSTEM**

**STATE OF CALIFORNIA
BUSINESS, TRANSPORTATION AND HOUSING AGENCY
DEPARTMENT OF TRANSPORTATION**

DIVISION OF TRAFFIC OPERATIONS

Sacramento, CA 95814

916-654-4578

**Prepared in Cooperation with the
U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration**

**To Purchase This Book
Price \$15.00
Phone: 916-263-0822**

2011 Traffic Volumes Book

Dist	Route	CO	Postmil	Description	Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak Month	Ahead AADT
8	60	SBD	R 2.366	CENTRAL AVE	15500	225000	220000	15600	226000	221000
8	60	SBD	R 3.602	MOUNTAIN AVE	15600	226000	221000	15300	223000	218000
8	60	SBD	R 4.58	ONTARIO, JCT. RTE. 83	15300	223000	218000	15700	227000	222000
8	60	SBD	R 5.855	GROVE AVE	15700	227000	222000	15200	220000	215000
8	60	SBD	R 6.856	VINEYARD AVE	15200	220000	215000	15300	221000	216000
8	60	SBD	R 7.873	ARCHIBALD AVE	15300	221000	216000	15000	212000	209000
8	60	SBD	R 8.906	HAVEN AVE	15000	212000	209000	14600	207000	204000
8	60	SBD	R 9.958	SAN BERNARDIN/RIVERSIDE CO LINE	14300	203000	200000			
8	60	RIV	R 0	SAN BERNARDIN/RIVERSIDE CO LINE				13400	190000	187000
8	60	RIV	R 0.491	JCT. RTE. 15	11100	157000	155000	11200	159000	155000
8	60	RIV	R 1.56	VAN BUREN BLVD	12800	169000	165000	10700	142000	138000
8	60	RIV	R 1.993	ETIWANDA AVE	10700	142000	138000	11700	155000	151000
8	60	RIV	R 3.03	MISSION BLVD	11700	155000	151000	10700	142000	138000
8	60	RIV	R 4.548	PEDLEY RD	10700	142000	138000	10800	143000	139000
8	60	RIV	R 5.575	PYRITE ST	10800	143000	139000	10500	140000	136000
8	60	RIV	7.533	VALLEY WAY	10500	140000	136000	11200	149000	145000
8	60	RIV	9.555	RUBIDOUX, RUBIDOUX BLVD	11200	149000	145000	11600	154000	150000
8	60	RIV	11.068	RIVERSIDE, CRESTMORE AVE	11600	154000	150000	11900	158000	154000
8	60	RIV	11.732	RIVERSIDE, MAIN ST	11900	158000	154000	11100	147000	143000
8	60	RIV	11.818	RIVERSIDE, ORANGE ST OC	11100	147000	143000	11100	147000	143000
8	60	RIV	12.212	RIVERSIDE, JCT. RTES. 215/91	11100	147000	143000	10000	140000	130000
8	60	RIV	R 12.064	RIVERSIDE, JCT. RTES. 215/91	10000	140000	130000	10000	140000	130000
8	60	RIV	R 12.212	EAST JCT. RTE. 215	10000	140000	130000	10000	140000	130000
8	60	RIV	13.307	DAY ST	12000	140000	130000	12000	143000	132000
8	60	RIV	14.324	MORENO VALLEY, PIGEON PASS	11900	143000	132000	10600	127000	118000
8	60	RIV	15.338	MORENO VALLEY, HEACOCK	10600	127000	118000	9200	111000	103000
8	60	RIV	16.35	MORENO VALLEY, PERRIS	9200	111000	103000	7100	89000	85000
8	60	RIV	18.37	NASON ST	7100	89000	85000	6100	78000	74000
8	60	RIV	19.2	MORENO BEACH DRIVE	6100	78000	74000	5100	64000	61000
8	60	RIV	20.37	REDLANDS BLVD	5100	64000	61000	4400	56000	53000

2011 Traffic Volumes Book

Dist	Route	CO	Postmile	Description	Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak Month	Ahead AADT
8	60	RIV	21.369	EB ON FRM THEODORE ST	4400	56000	53000	4400	56000	53000
8	60	RIV	22.101	GILMAN SPRINGS RD	4750	56000	53000	4000	46500	44500
8	60	RIV	27.979	JACKRABBIT TRAIL	4000	46500	44500	4000	46500	44500
8	60	RIV	30.495	JCT. RTE. 10	4000	46500	44500			
4	61	ALA	14.8	SAN LEANDRO, JCT. RTE. 112 E				2100	23100	22000
4	61	ALA	16.07	OAKLAND, AIRPORT/HEGENBERGER	1950	21900	20800	2000	22100	21000
4	61	ALA	18.52	ALAMEDA, ISLAND DRIVE	1650	18500	18500	3750	41500	39500
4	61	ALA	18.552	ALAMEDA, SAN LEANDRO BR	3750	41500	39500	3750	41500	39500
4	61	ALA	19.44	ALAMEDA, BROADWAY	2000	23100	22000	900	10500	10000
4	61	ALA	19.84	ALAMEDA, BROADWAY/ENCINAL	990	11600	11000	740	8700	8200
4	61	ALA	21.27	ALAMEDA, CENTRAL/SHERMAN	540	6400	6050	860	10100	9600
4	61	ALA	21.967	JCT. RTE. 260 N	1250	15700	15300			
8	62	RIV	0	JCT. RTE. 10				1750	18300	17500
8	62	RIV	R 3.344	PIERSON BLVD	1750	18300	17500	1600	16700	16000
8	62	RIV	R 6.451	INDIAN AVE	1600	16700	16000	2050	21400	20500
8	62	RIV	9.237	RIVERSIDE/SAN BERNARDINO CO LINE	2050	21400	20500			
8	62	SBD	0	RIVERSIDE/SAN BERNARDINO CO LINE				2050	21400	20500
8	62	SBD	0.845	HESS BLVD	2050	21400	20500	2000	20900	20000
8	62	SBD	1.884	MORONGO VALLEY, PIONEER/EAST	2050	21400	20500	2050	21400	20500
8	62	SBD	9.293	YUCCA VALLEY, CAMINO DEL CIELO	2000	20900	20000	2000	20900	20000
8	62	SBD	10.531	YUCCA VALLEY, PIONEER TOWN	2400	25000	24000	2650	27500	26500
8	62	SBD	12.404	YUCCA VALLEY, JCT. RTE. 247 N	2700	28000	27000	2700	28000	26500
8	62	SBD	15.145	YUCCA MESA RD	2700	28000	26500	1950	20500	19500
8	62	SBD	18.267	JOSHUA TREE, PARK BLVD	1700	17900	17000	1700	17900	17000
8	62	SBD	22.165	SUNFAIR RD	1700	17900	17000	1400	14700	14000
8	62	SBD	31.196	TWENTYNINE PALMS, NAT'L PARK/HATCH	1400	14700	14000	1500	15800	15000
8	62	SBD	33.208	TWENTYNINE PALMS, ADOBE RD	1100	11600	11000	960	10000	9500
8	62	SBD	34.223	29 PALMS/UTAH TRAIL	750	5100	4700	430	2950	2700
8	62	SBD	79.476	SAN BERNARDINO/RIVERSIDE CO LINE	120	850	780			
8	62	RIV	79.476	SAN BERNARDINO/RIVERSIDE CO LINE				120	1100	780

EXHIBIT B

3.3 GLOBAL CLIMATE CHANGE

It is well-documented that the Earth's climate has fluctuated throughout its history. However, scientific evidence indicates a correlation between increasing global temperatures over the past century and the worldwide proliferation of greenhouse gas (GHG) emissions by mankind. Climate change associated with global warming is predicted to produce negative environmental, economic, and social consequences across the globe. As a result, this section evaluates the potential for GHG emissions from the proposed Project to impact global climate.

Global climate change (GCC) could affect a variety of environmental conditions in the future. However, sea level rise (SLR) is the condition that has the greatest potential to affect the Port region. SLR is defined as the change in global mean sea level over time. Therefore, this EIR also includes an assessment of how future predictions of SLR potentially would affect operations of the proposed Project.

3.3.1 Environmental Setting

3.3.1.1 Area of Influence

The direct environmental effect of GHG emissions is to increase global temperatures, which indirectly causes numerous environmental and social effects. Therefore, the area of influence for proposed GHG impacts would be global in scale. However, these cumulative global impacts would be manifested as impacts on resources and ecosystems in California. The area of influence for effects from SLR would include the Port waters and Port lands directly adjacent to the ocean.

3.3.1.2 Setting

The Project site is within the Port's Southeast Harbor Planning District. The following section describes types of GHG, the current scientific understanding of GCC, observations and predictions of SLR, and regulations that would apply to GHG emitted from the proposed Project.

Greenhouse Gas Emissions and Effects

GHG are gases that trap heat in the atmosphere. Emissions of GHG occur from natural processes and human activities. The

most common GHG emitted from natural processes and human activities include carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Examples of GHG created and emitted primarily through human activities include fluorinated gases (hydrofluorocarbons and perfluorocarbons) and sulfur hexafluoride. The accumulation of GHG in the atmosphere regulates the Earth's temperature. Without this natural greenhouse effect, the average surface temperature of the Earth would be about 60°F colder (U.S. Global Change Research Program [USGCRP] 2014).

Each GHG is assigned a global warming potential (GWP), which is the ability of a gas or aerosol to trap heat in the atmosphere. The GWP rating system is standardized to CO₂, which has a GWP value of one. For example, CH₄ has a GWP of 25, which means that it has a global warming effect 25 times greater than CO₂ on an equal-mass basis (The Climate Registry 2014). Total GHG emissions from a source are often reported as a CO₂ equivalent (CO₂e). The CO₂e is calculated by multiplying the emission of each GHG by its GWP and adding the products together to produce a single, combined emission rate representing all GHG.

Numerous studies document the recent trend of rising atmospheric concentrations of CO₂. The longest continuous record of CO₂ monitoring extends back to 1958 (Keeling 1960 and Scripps Institution of Oceanography 2014). These data show that atmospheric CO₂ levels have risen an average of 1.5 ppm per year over the last 55 years (National Oceanic and Atmospheric Administration 2014). As of 2014, CO₂ levels are about 30 percent higher than the highest levels estimated for the 800,000 years preceding the industrial revolution, as determined from CO₂ concentrations analyzed from air bubbles in Antarctic ice core samples (USGCRP 2014).

Recent observed environmental changes due to global warming include rising temperatures, shrinking glaciers and sea ice, thawing permafrost, a lengthened growing season, and shifts in plant and animal ranges. International, national, and state organizations independently confirm these findings, and they predict that climate change will continue into the foreseeable future (Intergovernmental Panel on Climate Change 2014, USGCRP 2014, and California Climate Change Center 2012).

The most recent assessment of climate change impacts in California by the state of California predicts that temperatures in California will increase between 4.1°F to 8.6°F by 2100, based upon low and high global GHG emission scenarios (California Climate Change Center 2012). Predictions of long-term negative environmental impacts due to global warming include SLR, changing weather patterns with increases in the severity of storms and droughts, changes to local and regional ecosystems including the potential loss of species, and a reduction in winter snow pack. In California, predictions of these effects include exacerbation of air quality problems, a reduction in municipal water supply from the Sierra snowpack, a rise in sea level that would displace coastal businesses and residences, an increase in wild fires, damage to marine and terrestrial ecosystems, and an increase in the incidence of infectious diseases, asthma, and other human health problems (California Climate Change Center 2012).

It is estimated that airborne black carbon contributes to global warming due to its ability to warm the atmosphere and to melt snow packs and polar ice if deposited onto these surfaces (International Polar Foundation 2008). Black carbon is emitted from a range of naturally occurring events and human activities, including wildfires, diesel engines, and burning biofuels.

At present, there are no standards, regulations, or protocols related to assessing the impact of proposed emissions of black carbon to GCC. Therefore, this EIR provides a qualitative assessment of this effect. Black carbon is a component of DPM that would occur from diesel-powered project sources. Section 3.2, Air Quality and Health Risk, quantitatively evaluates proposed DPM emissions (and in part black carbon) as a criteria pollutant and TAC.

Direct Effects of Sea-Level Rise on the California Coast

Over the past several decades, sea level along the California coast has risen at a rate of about 17 to 20 centimeters (cm) per century (California Climate Change Center 2012). The rate of SLR is predicted to increase in the future. The California Sea Level Rise Task Force recommends a range of future SLR estimates for state agencies to consider for planning future

development projects (Sea-Level Rise Task Force of the Coastal and Ocean Working Group of the California Climate Action Team [CO-CAT] 2013). These projections identify that sea levels will rise an average of 7, 14, and 41 inches by years 2030, 2050, and 2100, respectively, compared to 2000 levels.

3.3.1.3 Regulatory Setting

All levels of government have some responsibility to protect air quality through the adoption and enforcement of regulations. The regulation of GHG is a relatively new component of air quality. The following describes the federal, state, and local GHG regulations that would apply to the proposed Project and alternatives.

Federal Regulations

The U.S. government administers a wide array of public-private partnerships to reduce U.S. GHG emissions. These programs focus on energy efficiency, renewable energy, CH₄, non-CO₂ gases, agricultural practices, and implementation of technologies to achieve GHG reductions.

Based on a recent U.S. Supreme Court decision (Massachusetts v. EPA (2007) 549 U.S. 497, the EPA has been given the authority to regulate GHG as air pollutants under the federal CAA (refer to Section 3.2, Air Quality and Health Risk, for a discussion of the CAA). EPA also implements several voluntary programs that contribute to the reduction of GHG emissions. At this time, the EPA has not promulgated regulations for GHG emissions from mobile sources that would require direct compliance by operators at the Port. However, operators of stationary sources of GHG could be subject to the following EPA regulations:

- Prevention of Significant Deterioration (PSD) Permit Program – For new or modified stationary sources that are subject to the PSD Program due to their criteria pollutant emissions and that the subject source also emits more than 75,000 metric tons per year of CO₂e, these GHG emissions are subject to Best Available Control Technology (BACT) requirements; and
- Mandatory GHG Reporting Rule applies to facilities that emit 25,000 metric tons per year or more of GHG.

State Regulations and Agreements

To date, California is one of 23 states that have set GHG emission targets. Executive Order (EO) S-3-05 and AB 32, the California Global Warming Solutions Act of 2006, promulgated targets to achieve reductions in GHG to 1990 GHG levels by the year 2020. This target-setting approach allows progress to be made in addressing climate change, and is a forerunner to setting emission limits. The California Air Resources Board (CARB) is responsible for regulating GHG in California.

Assembly Bill 32 – California Global Warming Solutions Act of 2006

AB 32 was signed into law by then-governor Arnold Schwarzenegger on September 27, 2006 and it is the first law to limit GHG emissions at the state level. The Act directs the State to reduce California emissions of GHG to 1990 levels by 2020. It instructs the CARB to establish a program of regulatory and market mechanisms to achieve GHG reductions and to implement a mandatory GHG reporting and verification program. AB 32 requires the CARB to finalize GHG emission limits and reduction measures by January 1, 2011 and to implement them by January 1, 2012.

In accordance with AB 32, the CARB approved the Climate Change Scoping Plan (Scoping Plan) (ARB 2008) in October 2008, which outlines the state's strategy for achieving the 2020 GHG emissions limit outlined under the law. The Scoping Plan includes recommendations for reducing GHG emissions from most sectors of the California economy.

As part of the statewide programs to reduce GHG emissions, on October 25, 2007, the CARB approved several emission reduction strategies that pertain to goods movement activities for ships, Port drayage trucks, cargo handling equipment, and transport refrigeration units:

- Green Ports (ship electrification);
- SmartWay Truck Efficiency;
- Tire Inflation Program;
- Anti-idling enforcement;
- Refrigerant Tracking, Reporting, and Recovery Program; and
- Low Carbon Fuel Standard.

Several of the measures within the Scoping Plan are targeted at goods movement and ports operations and they are expected to achieve a combined reduction of 3.7 million metric tons of CO₂e. For goods movement, the Scoping Plan included two measures: 1) Measure T-5, an Early Action Measure that requires ship electrification at ports (shore-to-ship power or cold-ironing); and 2) Measure T-6, requires GHG emission reductions from goods movement through various efficiency measures. While Measure T-6 includes several explicit strategies, including the CARB Port Drayage Truck Regulation and the proposed OGV Vessel Speed Reduction Rule, many specific voluntary or regulatory strategies needed to achieve the Scoping Plan's GHG emission reduction target for goods movement have yet to be defined. The CARB completed its first update to the Scoping Plan on May 22, 2014 (ARB 2014).

Executive Order S-3-05

EO S-3-05, signed by then-Governor Schwarzenegger on June 1, 2005, establishes the following GHG emission reduction targets for California: 1) by 2010, reduce GHG emissions to 2000 levels; 2) by 2020, reduce GHG emissions to 1990 levels; and 3) by 2050, reduce GHG emissions to 80 percent below 1990 levels. EO S-3-05 also calls for the California Environmental Protection Agency to prepare biannual reports on 1) progress made towards achieving these goals, 2) impacts to California from global warming, and 3) mitigation and adaptation plans to combat these impacts. The most recent of these reports was completed in December 2010 (Climate Action Team 2010).

California Climate Action Registry/ The Climate Registry

Established by the California Legislature in 2000, the California Climate Action Registry (CCAR) was a non-profit public/private partnership that maintains a voluntary registry for GHG emissions. The purpose of CCAR was to help companies, organizations, and local agencies establish GHG emissions baselines for purposes of complying with future GHG emission reduction requirements. CCAR transitioned into two programs in 2009, the Climate Action Reserve and The Climate Registry (TCR). The Climate Action Reserve tracks and registers voluntary projects that reduce emissions of GHG, while TCR has taken over the voluntary registry for GHG emissions from CCAR.

AB 32 requires the CARB to incorporate the standards and protocols developed by CCAR into the state's future GHG emissions reporting program, to the maximum extent feasible. The current GHG emission calculation methods used by TCR are contained in *The Climate Registry – General Reporting Protocol, Version 2.0* (TCR Protocol) (TCR 2014). This protocol categorizes GHG emission sources as either 1) direct (vehicles, onsite combustion, fugitive, and process emissions) or 2) indirect (from offsite electricity, steam, and co-generation).

TCR is a nonprofit collaboration among North American states, provinces, territories, and Native Sovereign Nations who sets consistent and transparent standards to calculate, verify, and publicly report GHG emissions into a single registry. The Climate Registry Information System is the TCR's online GHG calculation, reporting, and verification tool.

Regulation for the Mandatory Reporting of Greenhouse Gas Emissions

As part of the AB 32 requirements, the CARB approved a mandatory GHG reporting regulation that became effective January 2009. The regulation requires operators of facilities in California that emit greater than 25,000 metric tons per year of CO₂ from stationary combustion sources in any calendar year after 2007 to report these emissions on an annual basis.

California Senate Bill 97

Senate Bill 97, enacted in 2007, directed the State Office of Planning and Research to propose CEQA Guidelines "for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions" by January 1, 2010. On December 30, 2009, the California Natural Resources Agency (Resources Agency) adopted the proposed amendments to the CEQA Guidelines in the CCR

According to the Resources Agency, "due to the global nature of GHG emissions and their potential effects, GHG emissions will typically be addressed in a cumulative impacts analysis" (California Natural Resources Agency 2009). The recently adopted amendments to the CEQA Guidelines, which address the mitigation of GHG emissions, create a new resource section for GHG emissions in the CEQA Guidelines

Appendix G Environmental Checklist. That section poses the following questions – Would the project:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG?

As discussed in CEQA Guidelines Section 15064.4, the determination of the significance of GHG emissions calls for a careful judgment by the lead agency. CEQA Guidelines Section 15064.4 further provides that a lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. A lead agency shall have discretion to determine in the context of a particular project whether to:

1. Use a model or methodology to quantify GHG emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate, provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or
2. Rely on a qualitative analysis or performance based standards.

CEQA Guidelines Section 15064.4 also advises a lead agency to consider the following factors, among others, when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

California Solid Waste Reuse and Recycling Access Act

The California Solid Waste Reuse and Recycling Access Act of 1991 requires each jurisdiction to adopt an ordinance by September 1, 1994, requiring any "development project" for which an application for a building permit is submitted to provide an adequate storage area for collection and removal of recyclable materials. The MCC facility currently complies with this requirement. Further, material reuse would continue to be consistent with the Port's Import Soil-Material Quality Requirements (dated March 29, 2006). Pursuant to the City of Long Beach ordinance, recyclable waste materials (i.e., concrete and asphalt) shall be processed for reuse. Asphalt and concrete shall be recycled and other recyclable waste shall be taken to accredited recycling centers, thereby diverting waste from landfills. Materials shall be separated on-site for reuse, recycling, or proper disposal. During construction, separate bins for recycling of construction materials shall be provided.

Executive Order S-13-08 (Sea Level Rise)

On November 14, 2008, Governor Schwarzenegger issued EO S-13-08 for purposes of developing a plan for the State to deal with future effects of SLR (California Office of the Governor 2012). The EO directs the California Resources Agency, in cooperation with other agencies, to:

1. Request the National Academy of Sciences (NAS) to convene an independent panel to complete the first California Sea Level Rise Assessment Report by December 1, 2010. The final Sea Level Rise Assessment Report will advise how California should plan for future SLR. The report should include 1) relative SLR projections specific to California, taking into account issues such as coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge, and land subsidence rates, 2) the range of uncertainty in selected SLR projections, 3) a synthesis of existing information on projected SLR impacts to state infrastructure (such as roads, public facilities and beaches), natural areas, and coastal and marine ecosystems, and 4) a discussion of future research needs regarding SLR for California;
2. Conduct a review of the NAS assessment every 2 years or as necessary;

3. Prepare a report to assess vulnerability of transportation systems to SLR that will include provisions for investment critical to safety, maintenance and operational improvements of the system and economy of the state;
4. Develop a state Climate Adaptation Strategy. The strategy will summarize the best known science on climate change impacts to California, assess California's vulnerability to the identified impacts, and outline solutions to promote resiliency. This strategy will be facilitated through the Climate Action Team and will be coordinated with California's climate change mitigation efforts; and
5. Provide state land-use planning guidance related to SLR and other climate change impacts.

The EO also states that prior to release of the final Sea Level Rise Assessment Report from the NAS, all state agencies that are planning construction projects in areas vulnerable to future SLR shall consider a range of SLR scenarios for the years 2050 and 2100 in order to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to SLR. However, it excludes projects that have filed a NOP, and/or are programmed for construction funding the next five years, or are routine maintenance projects as of the date of this EO.

Subsequent to the release of the EO, it was apparent that the NAS would be unable to complete the Sea Level Rise Assessment Report until sometime in 2012. Therefore, as interim guidance, the CO-CAT, with science support provided by the Ocean Protection Council's Science Advisory Team and the California Ocean Science Trust, released the *State of California Sea-Level Rise Interim Guidance Document* in October 2010 (CO-CAT 2010). This interim guidance recommended a range of SLR estimates for years 2030 to 2100 for state agencies to consider for planning future development projects.

The National Research Council (NRC) (of the NAS) released their final report on SLR for California in June 2012 (NRC 2012). The CO-CAT updated their *SLR Interim Guidance Document* with the findings from the 2012 NRC report (CO-CAT 2013). The SLR projections

recommended by the CO-CAT that pertain to the POLB project region (South of Cape Mendocino) include the following (compared to year 2000 sea levels):

- 0.13 to 0.98 feet by 2030;
- 0.39 to 2.0 feet by 2050; and
- 1.38 to 5.48 feet by 2100.

Local Regulations and Agreements

Port of Long Beach Green Port Policy

As discussed in Section 3.2, Air Quality and Health Risk, the POLB Green Port Policy includes initiatives that reduce emissions of criteria pollutant and TACs from operations at the Port. Many of these measures also will result in GHG emission reductions. Recent commitments for Port sustainability and terminal development made through the Green Port Policy also will reduce air emissions (POLB 2013).

San Pedro Bay Ports Clean Air Action Plan

As discussed in Section 3.2, Air Quality and Health Risk, the POLB and POLA implement the San Pedro Bay Ports CAAP to reduce emissions of criteria pollutants and TACs generated from operations at the Port and POLA in the interest of public health. While the CAAP does not specifically pertain to GHG emissions, many of the CAAP measures also will result in GHG emission reductions, which are identified in this EIR. In addition, the annual emission inventories produced for operations at each port now contain estimates of GHG emissions.

Greenhouse Gas Strategic Plan

The Port's commitment to protecting the environment from the harmful effects of Port operations, as stated in the Green Port Policy, necessitates the development of programs and projects to reduce GHG emissions. In September 2008, the Port's Board of Harbor Commissioners adopted a formal resolution that established a framework to reduce GHG emissions. The framework outlined efforts that are already underway at the Port to mitigate impacts to climate change:

1. The Port collaborated with other city departments to produce the city's first voluntary GHG emissions inventory (calendar year 2007), which was submitted

to the CCAR. The Port continues to develop an annual inventory GHG emissions for the Harbor Department;

2. The Port joined other city departments in preparing a plan to increase energy efficiency in city-owned facilities, thereby reducing indirect GHG emissions from energy generation. This initiative is known as the Southern California Edison 2009–2011 Local Government Partnership;
3. In February 2010, the City of Long Beach adopted the Long Beach Sustainable City Action Plan that includes initiatives, goals, and actions that will move Long Beach toward becoming a sustainable city. The Sustainable City Action Plan includes initiatives to reduce the city's carbon footprint and sets a goal to reduce GHG emissions from city facilities and operations by 15 percent in 2020, relative to 2007 levels;
4. The Port participates in tree planting and urban forest renewal efforts through its support of the City of Long Beach's Urban Forest Master Plan;
5. Port staff consulted with the Long Beach Gas and Oil Department and Tidelands Oil Production Company (Tidelands) to evaluate potential opportunities for capturing CO₂ produced by oil operations in the Harbor District and re-injecting (sequestration) it through wells at the Port back into the subsurface formations;
6. Beginning with the 2006 POLB air emissions inventory, GHG emissions from OGV, heavy-duty trucks, CHE, harbor craft, and locomotives are quantified to enable the establishment of GHG reduction goals;
7. The Port's Renewable Energy Working Group is developing strategies to expand the use and production of renewable energy at the Port. Criteria for emerging technologies will be established so that the technologies can be evaluated in a manner similar to the existing CAAP Technology Advancement Program;
8. The Port's Renewable Energy Working Group finalized a Solar Energy Technology and Siting Study (Solar Siting Study) that reviewed available solar technologies and estimated solar energy generation potential for the entire Harbor District. The study determined that there are many sites within

the Harbor District where solar energy technologies could be developed on building rooftops and at ground-level;

9. Based on the Solar Siting Study, Port staff is developing a program to provide incentive funding to Port tenants for the installation of solar panels on tenant-controlled facilities; and
10. In May 2013, the Port's Board of Harbor Commissioners adopted the Port of Long Beach Energy Policy to guide efforts to secure a more sustainable and resilient supply of power as demand grows. Under the Energy Policy, the Port will implement measures to increase efficiency, conservation, resiliency, and renewable energy in collaboration with various groups including port tenants, utilities, other city departments, industry stakeholders, labor unions, universities, and the Port of Los Angeles.

The Port is developing a Greenhouse Gas Strategic Plan (GHG Plan) that will examine GHG impacts for activities within the Harbor District and will identify strategies for the reduction of the overall carbon footprint of such activities. Similar to the CAAP, the GHG Plan will identify strategies for activities under direct Port control and those that are controlled by third parties, such as tenants. The GHG Plan also will be used to mitigate project-specific and cumulative GHG impacts from future projects through modernization and/or upgrading of marine terminals and other facilities in the Harbor District.

The Port also developed the Greenhouse Gas Emission Reduction Program Guidelines (GHG Guidelines) that describe the procedure that the Port will use to select GHG emission reduction programs that will meet the GHG Plan reduction goals. The Board of Commissioners adopted the GHG Guidelines on March 22, 2009.

Climate Change Adaptation and Coastal Resiliency Strategic Plan

The POLB is developing a harbor-wide Climate Change Adaptation and Coastal Resiliency Strategic Plan (CRS Plan) that will enable the Port to begin preparing for the impacts of climate change and associated coastal hazards. The CRS Plan will provide a framework for the Port to incorporate adaptive measures due to projected climate change into its policymaking and

planning processes, environmental documents, infrastructure design, construction practices, and community outreach and education efforts.

The CRS Plan will focus on protecting the built environment of the Port, as the Port's terminals and associated goods movement infrastructure are critically important economic assets for the region. Successful development and implementation of the CRS Plan will require the engagement of all Port divisions and tenants, as well as industry, regulatory, and community stakeholders. Specifically, the CRS Plan will provide a framework for identifying and managing risks associated with climate change in the Harbor District, and ensure resiliency and business continuity of Port operations, the supply chain, and other businesses that depend on the Port.

3.3.2 Impacts and Mitigation Measures

The following analysis considers the GHG impacts that would occur from the proposed Project and alternatives. It should be noted that GCC impacts are, by nature, cumulative impacts. Therefore, there is no separate cumulative impacts analysis for GCC.

3.3.2.1 Significance Criteria

According to CEQA Guidelines *Appendix G* Environmental Checklist, the following criteria may be considered to establish the significance of GHG emissions:

Would the Project:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG?

CEQA Guidelines allow the lead agency discretion in how to address and evaluate significance based on these criteria.

To provide guidance to local lead agencies on determining significance for GHG emissions in its CEQA documents, the SCAQMD staff has convened an on-going GHG CEQA Significance Threshold Working Group. Members of the working group include government agencies implementing CEQA and representatives from

various stakeholder groups, including the POLB, that provide input to the SCAQMD staff on developing GHG CEQA significance thresholds.

On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for CEQA projects where the SCAQMD is lead agency. For industrial projects, a significance threshold of 10,000 metric tons of CO₂e emissions per year was determined. Construction GHG emissions are required to be included, amortized over the project life, in the project's annual GHG emissions totals.

Considering these guidelines and Port-specific climate change impact issues, the following thresholds are used in this EIR to determine the significance of Project GCC impacts:

GCC-1: Produce GHG emissions that exceed the SCAQMD interim 10,000 metric tons CO₂e annualized significant emissions threshold for industrial projects.

GCC-2: Expose people or structures to a significant risk of loss, injury or death involving flooding as a result of SLR.

3.3.2.2 Methodology

This analysis includes an estimate of GHG emissions that would be produced from proposed construction and operational activities. Sources considered in the analysis include those identified in Section 3.2, Air Quality and Health Risk, for criteria pollutant impacts.

Appendix A.1 includes a description of the methods and assumptions used to estimate GHG emissions for proposed construction and operational activities.

GHG emissions associated with the proposed Project scenarios were calculated using the methodologies presented in Section 3.2, Air Quality and Health Risk, and the TCR Protocol. However, for purposes of CEQA, TCR has not developed a protocol for determining the operational boundaries for some Port-related sources, such as OGVs. Therefore, this GHG analysis evaluated an expanded geographic boundary of operational activities that included the entire state of California. For on-road cement delivery trucks, operations would occur from round trip distances of 60 miles, as evaluated for criteria pollutants in Section 3.2, Air Quality and Health Risk. For OGV transit operations, the analysis evaluated a shipping route distance between the Port and the State Water's 3-mile jurisdictional boundary west of Point Conception of about 92 nm. The analysis assumed that all proposed Project ships would follow this "northern route." The northern route represents the longest distance that OGVs would travel to and from the Port while in State Waters. GHG emission calculations also include environmental control (EC) AQ-1 through AQ-4, which are described in Section 3.2, Air Quality and Health Risk.

Table 3.3-1 presents an estimate of annual GHG emissions generated from the operation of the MCC terminal under the CEQA Baseline scenario.

Activity	Metric Tons CO ₂ e
Ships – Outer Waters Transit	2,944
Ships - Precautionary Area Transit	112
Ships - Harbor Transit	29
Ships – Docking/Turning	13
Ships - Hoteling Aux. Sources	1,346
Tugboats - Cargo Vessel Assist	94
Payloaders	29
On-road Trucks	5,944
Offsite Electrical Generation	4,134
Total MCC Terminal GHG Emissions	14,649

3.3.2.3 Alternative 1 – Proposed Project

Construction and Operational Impacts

Impact GCC-1: The Project would produce GHG emissions that exceed the SCAQMD interim annualized significant emissions threshold for industrial projects.

As discussed in Section 3.3.2.1, Air Quality and Health Risk Significance Criteria, construction and operational activities include both direct and indirect GHG emissions. Direct emissions include those GHG emissions that are generated by construction equipment, and operational emission sources directly related to the proposed Project, including OGVs, payloaders, and cement delivery trucks.

Project-related construction sources for which GHG emissions were calculated include: 1) off-road diesel construction equipment, 2) on-road trucks, and 3) worker commute vehicles. Per SCAQMD interim guidance for assessing industrial project impacts, construction emissions are amortized over a 30-year period and added to the annual operating emissions to address their contribution to annual emissions over the lifetime of the proposed Project.

Project-related operation emission sources for which GHG emissions were calculated include: 1) OGVs and assist tugboats, 2) onsite off-road equipment, 3) on-road delivery trucks, and

4) offsite generation of electricity used by the terminal. Due to the small net change in the number of employees that would occur between the baseline and proposed Project, GHG emissions from employee commuting were not calculated since they would be negligible. Table 3.3-2 summarizes total annualized GHG emissions that would result from proposed Project construction and operational activities.

Impact Determination

As shown in Table 3.3-2, construction and operation of the proposed Project would generate a net increase of 22,248 metric tons of unmitigated CO₂e compared to CEQA baseline levels. These emissions would exceed the SCAQMD interim significance threshold of 10,000 metric tons of CO₂e per year and therefore would be significant.

Mitigation Measures

Measures that reduce electricity consumption or fossil fuel usage from proposed Project emission sources would reduce GHG emissions associated with the proposed Project. The proposed Project would be required to implement applicable CAAP requirements, which were developed to implement the Port's Green Port Policy, and the environmental controls listed in Section 3.2.2.2, Air Quality and Health Risk Methodology. Although the focus of the currently approved CAAP is criteria pollutant

Activity	Metric Tons CO₂e
Amortized Construction Emissions (30-year life)	56
Ships – Outer Waters Transit	8,134
Ships - Precautionary Area Transit	309
Ships - Harbor Transit	82
Ships – Docking	38
Ships - Hoteling Aux. Sources	1,037
Tugboats - Cargo Vessel Assist	251
Payloaders and SCR Duct Burner	1,072
On-road Trucks	18,319
Off-site Electrical Generation	7,599
Total unmitigated GHG Emissions	36,897
CEQA Baseline Annual Emissions	14,649
Net Change - Proposed Project minus CEQA Baseline	22,248
SCAQMD Interim Threshold	10,000
Exceed SCAQMD Threshold?	Yes

emissions reduction, some of the measures that are being implemented under the CAAP would also have the effect of reducing GHG emissions from operations.

On-road cement delivery trucks and OGVs are two of the largest sources of GHGs from proposed Project operations. The air quality/GHG analysis assumes that the operation of OGVs under the proposed Project would comply with the following environmental controls, which would minimize GHG emissions: 1) OGV transit speeds would not exceed 12 knots within 40 nm of Point Fermin (CAAP measure OGV1 [OGV Vessel Speed Reduction]) and 2) OGVs would cold-iron at Berth 66 percent of the time on an annual average. While extending OGV Vessel Speed Reduction beyond 40 nm from the Port would result in additional fuel savings and resulting reductions of GHGs, implementation of this measure would be unenforceable due to a lack of adequate monitoring of OGV activities in this region. No other measures are feasible to reduce GHGs from the operation of proposed OGVs.

The air quality/GHG analysis also assumes that proposed cement delivery trucks would comply with the POLB CTP, which would minimize GHG emissions from these sources. This is the case, as the CTP fleet contains a large number of relatively newer trucks that produce lower GHG emissions compared to older trucks. **Mitigation Measure AQ-2** proposed in Section 3.2.2.3, Air Quality and Health Risk requires that at least 90 percent of the Project truck fleet would be no more than five years old to mitigate emissions of NOx and PM10. This measure also would slightly lower GHGs from Project delivery trucks compared to the unmitigated CTP fleet. This slight benefit (less than one percent reduction in GHGs) would not occur until project year two (2016), when the average age of the mitigated truck fleet would become younger than the CTP fleet. As a result, to be conservative, the proposed Project mitigated GHG analysis does not include GHG emission reductions due to **MM AQ-2**. Delivery trucks powered with alternative fuels, such as liquid propane gas or compressed natural gas, would produce lower GHGs compared to diesel-powered trucks. However, MCC only owns diesel-powered trucks and procuring these lower-emitting trucks for purposes of project GHG mitigation would have a very high cost per mass of GHG reduction.

Therefore, no other measures are feasible to further reduce GHGs from the operation of proposed cement delivery trucks.

The Project operations would implement several environmental controls and the only other feasible method to reduce proposed GHG emissions is to achieve emission reductions from non-Project sources. Therefore, the following mitigation measures are recommended to provide additional GHG emission reductions.

Mitigation Measure GCC-1: Indirect GHG Emission Reduction/Avoidance. MCC shall minimize the release of indirect GHG emissions through measures that reduce or avoid electricity consumption at the facility. Measures to reduce indirect GHG emissions from electricity generation shall include: 1) installation of low-energy demand lighting (e.g., fluorescent or light-emitting diode) in the existing office building, other facility buildings, and the existing and new exterior lighting, except where compatible energy efficient lighting is not available or its installation could compromise safety; and 2) installation of approximately 1,000 square feet of solar panels on the existing office building, with the total amount to be determined based on available space and the additional weight that can be borne by the existing roof. Prior to the start of Project construction, MCC shall submit to the Port a proposed plan and schedule for implementing these two measures. The low-energy demand lighting and solar panels shall be installed no later than three (3) years from the start of Project construction. Once these installations have been completed, MCC shall prepare and submit to the Port a report detailing the number of existing lights replaced, number of new low-energy demand lighting installed, and the final total square feet of solar panels installed. The report also shall include a quantitative assessment of the amount of greenhouse gas emissions reduced from each of the two measures and the amount of power generated from the solar panels in kilowatt-hours per year.

Mitigation Measure GCC-2: Energy Audit. To identify future opportunities to reduce GHG emissions, commencing in 2018 and every five years thereafter, MCC at its expense shall complete a site-specific energy audit using a qualified third party energy auditor. Both the energy auditor and the scope of the audit must

be approved by the Port. This audit shall evaluate MCC's facility and operations to determine whether there are additional, cost-effective measures that would reduce overall power use. No later than six (6) months following completion of the energy audit, MCC shall submit a report to the Port that presents 1) the results of the audit and 2) a schedule for implementation of the feasible, cost-effective energy-efficiency or conservation measures identified in the report.

Mitigation Measure GCC-3: Funding Contributions to the POLB Greenhouse Gas Emissions Reduction Grant Program. MCC shall provide a one-time lump sum contribution of \$333,720 to the POLB GHG Emissions Reduction Grant Program. This fee is based on the following: 1) Project operations are estimated to increase CO₂e emissions from baseline conditions by as much as 22,248 metric tons at maximum design throughput of 4.58 million tons per year of cement and 2) the SCAQMD has established Rule 2702 (GHG Reduction Program), which offers GHG emission reductions at a rate of \$15 per metric ton of CO₂e. The Project-related cost would be based on: 22,248 metric tons CO₂e emissions x \$15 per metric ton = \$333,720.

This contribution would be used to fund projects pursuant to the GHG Program, including but not limited to generation of green power from renewable energy sources; installation of urban forests and drought-tolerant community gardens; purchase of electric vehicles; lighting replacement with light-emitting diode fixtures; and energy-efficiency projects such as building insulation; and heating, ventilation, and air conditioning; and boiler replacements. This contribution shall not be used to fund projects at MCC's project site.

The timing of the payment pursuant to this mitigation measure shall be made by the later of the following two dates: 1) the date that MCC issues a Notice to Proceed or otherwise authorizes the commencement of construction on the construction contract or 2) the date that the Final EIR is conclusively determined to be valid, either by operation of PRC Section 21167.2 or by final judgment or final adjudication.

Significance of Impacts after Mitigation

Due to the difficulty of determining the specific extent of each proposed mitigation measure in reducing GHG emissions, the analysis did not quantify the effects of implementing **Mitigation Measures GCC-1 through GCC-3**. Implementation of these measures would result in lower Project GHG emissions compared to unmitigated levels, although mitigated net GHGs from the Project would exceed the SCAQMD interim significance threshold of 10,000 metric tons of CO₂e per year. Since there are no other feasible mitigation measures, emissions of GHGs from the proposed Project would remain significant and unavoidable.

Implementation of **Mitigation Measure AQ-3, Diesel Particulate Filter for the DoCCS** (presented in Section 3.2.2.3 of this EIR), would reduce emissions of PM and associated black carbon from project OGVs while at berth. These emission reductions also would result in a corresponding yet indeterminable reduction in impacts to global warming and climate change.

Impact GCC-2: The Project would not expose people or structures to a significant risk of loss, injury, or death involving flooding as a result of sea level rise. Construction and Operational Impacts.

The California Flood Risk: Sea Level Rise - Long Beach Quadrangle shows that a SLR of 4.6 feet on top of a 100-year flood event at the Port would produce virtually no risk of increased flooding over the next century at the MCC terminal or within the Project vicinity (Pacific Institute 2009). The project terminal and wharf would remain higher than this elevated sea level by a safe margin. This also would be the case for the effects of the extreme SLR range of 5.48 feet by 2100, as identified by the CO-CAT for assessing project vulnerability to SLR. SLR would occur at a slow enough rate that there would be ample time to respond to incremental changes in sea level and therefore to implement adaptations. These adaptations would be developed as part of the Port's Climate Change Adaptation and Coastal Resiliency Strategic Plan to avoid potential impacts from these long-term changes.

Impact Determination

SLR would not significantly impact Project operations during the life of the Project. Since impacts from SLR would be less than significant, no mitigation is required.

3.3.2.4 Alternative 2 – Reduced Expansion Alternative

Construction and Operational Impacts

Impact GCC-1: Alternative 2 would produce GHG emissions that exceed the SCAQMD interim annualized significant emissions threshold for industrial projects.

Table 3.3-3 summarizes total annualized GHG emissions that would result from construction and operation of the Reduced Throughput Alternative.

Impact Determination

As shown in Table 3.3-3, construction and operation of the Reduced Throughput Alternative would generate a net increase of 15,106 metric tons of unmitigated CO₂e compared to CEQA baseline levels. These emissions would exceed the SCAQMD interim significance threshold of 10,000 metric tons of CO₂e per year and therefore would be significant.

Mitigation Measures

Measures that reduce electricity consumption or fossil fuel usage from the Reduced Throughput Alternative activities would reduce proposed GHG emissions. The Reduced Throughput Alternative would be required to institute all applicable CAAP requirements, which were developed to implement the Port's Green Port Policy, and the environmental controls listed in Section 3.2.2.2, Air Quality and Health Risk Methodology.

The same mitigations identified for the proposed Project (**Mitigation Measures GCC-1 through GCC-3**) also are proposed to reduce GHG emissions from the Reduced Throughput Alternative. Similar to the proposed Project, since operations associated with the Reduced Throughput Alternative would implement **Mitigation Measure AQ-2** and several environmental controls, there are no other feasible methods to reduce proposed GHG emissions.

Significance of Impacts after Mitigation

Due to the difficulty of determining the specific extent of each proposed mitigation measure in reducing GHG emissions, the analysis did not quantify the effects of implementing **Mitigation Measures GCC-1 through GCC-3**.

Activity	Metric Tons CO₂e
Amortized Construction Emissions (30-year life)	36
Ships – Outer Waters Transit	6,507
Ships - Precautionary Area Transit	247
Ships - Harbor Transit	66
Ships – Docking	30
Ships - Hoteling Aux. Sources	829
Tugboats - Cargo Vessel Assist	201
Payloaders and SCR Duct Burner	1,059
On-road Trucks	14,655
Off-site Electrical Generation	6,125
Total Annual GHG Emissions	29,755
CEQA Baseline Annual Emissions	14,649
Net Change – Reduced Throughput Alternative minus CEQA Baseline	15,106
SCAQMD Interim Threshold	10,000
Exceed SCAQMD Threshold?	Yes

Implementation of these measures would result in lower GHG emissions from Alternative 2 compared to unmitigated levels, although mitigated net GHGs from the Alternative would exceed the SCAQMD interim significance threshold of 10,000 metric tons of CO₂e per year. Since there are no other feasible mitigation measures, emissions of GHGs from the Reduced Throughput Alternative would remain significant and unavoidable.

Implementation of **Mitigation Measure AQ-3, Diesel Particulate Filter for the DoCCS** (presented in Section 3.2.2.3 of this EIR), would reduce emissions of PM and associated black carbon from project OGVs while at berth. These emission reductions also would result in a corresponding yet indeterminable reduction in impacts to global warming and climate change.

Impact GCC-2: Alternative 2 would not expose people or structures to a significant risk of loss, injury, or death involving flooding

For the same reasons identified for the proposed Project under **Impact GCC-2**, SLR would not significantly impact the Reduced Throughput Alternative operations during its expected life. Since impacts from SLR would be less than significant, no mitigation is required.

3.3.2.5 Alternative 3 – No Project Alternative

Operational Impacts

Impact GCC-1: Alternative 3 would not produce GHG emissions that exceed the SCAQMD interim annualized significant emissions threshold for industrial projects.

Table 3.3-4 summarizes total annual GHG emissions that would result from the operation of the No Project Alternative.

Impact Determination

As shown in Table 3.3-4, operation of the No Project Alternative would generate a net increase of 9,143 metric tons of unmitigated CO₂e compared to CEQA baseline levels. These emissions would not exceed the SCAQMD interim significance threshold of 10,000 metric tons of CO₂e per year and therefore would be less than significant. In addition, this alternative does not require any discretionary action by an agency.

Impact GCC-2: Alternative 3 would not expose people or structures to a significant risk of loss, injury, or death involving flooding

Table 3.3-4. Annual Unmitigated GHG Emissions from the No Project Alternative– Year 2015

Activity	Metric Tons CO ₂ e
Ships – Outer Waters Transit	5,502
Ships - Precautionary Area Transit	209
Ships - Harbor Transit	56
Ships – Docking	25
Ships - Hoteling Aux. Sources	814
Tugboats - Cargo Vessel Assist	170
Payloaders	53
On-road Trucks	9,863
Off-site Electrical Generation	7,100
Total Annual GHG Emissions	23,792
CEQA Baseline Annual Emissions	14,649
Net Change – No Project Alternative minus CEQA Baseline	9,143
SCAQMD Interim Threshold	10,000
Exceed SCAQMD Threshold?	No

For the same reasons identified for the proposed Project under **Impact GCC-2**, SLR would not significantly impact the No Project Alternative operations during its expected life. Since impacts from SLR would be less than significant, no mitigation is required.

3.3.3 Cumulative Impacts

As noted above, GHG and GCC impacts are, by nature, cumulative impacts. Therefore, there is no separate cumulative impacts analysis for GCC.

3.3.4 Mitigation Monitoring Program

Mitigation Measures GCC-1 through GCC-3 and their associated monitoring requirements will be documented in the Project's Mitigation, Monitoring, and Reporting program. The Mitigation, Monitoring, and Reporting Program will document compliance with implementing the mitigation measures approved in the final EIR.

EXHIBIT C

REPORTING YEAR	FACILITY NAME	GHGRP ID	LOCATION ADDRESS	CITY NAME	COUNTY NAME	STATE	ZIP CODE	PARENT COMPANIES	GHG QUANTITY (METRIC TONS CO2e)	SUBPARTS
2013	Blythe Energy	1001405	385 N. Buck Blvd.	BLYTHE	Riverside	CA	92225	AltaGas Ltd. (100%);	724915	D
2013	Inland Empire Energy Center	1000469	26226 ANTELOPE RD	ROMOLAND	Riverside	CA	92585	GENERAL ELECTRIC CO (GE CO) (100%);	626380	C,D
2013	CPV Sentinel LLC	1010962	15775 Melissa Ln	N. Palm Springs	Riverside	CA	92258	CPV Sentinel, LLC (100%);	185500	D
2013	EL SOBRANTE LANDFILL	1007693	10910 DAWSON CANYON ROAD	CORONA	Riverside	CA	92883	Waste Management, Inc. (100%);	154496	C,HH
2013	BADLANDS SANITARY LANDFILL	1000046	31125 IRONWOOD AVENUE	MORENO VALLEY	Riverside	CA	92555	County of Riverside (100%);	56282	C,HH
2013	LAMB CANYON SANITARY LANDFILL	1002134	16411 LAMB CANYON RD	BEAUMONT	Riverside	CA	92223	County of Riverside (100%);	49713	HH
2013	Indigo Generation Facility	1000128	63500 19TH AVE	NORTH PALM SPRINGS	Riverside	CA	92258	DIAMOND GENERATING CORP (100%);	47703	D
2013	Southern California Gas Blythe Facility	1004779	13100West 14th Avenue	Blythe	Riverside	CA	92225	SEMPRA ENERGY INC (100%);	36997	C,W
2013	International Rectifier	1009951	41915 Business Park Dr	Temecula	Riverside	CA	92590	International Rectifier (100%);	30322	C,I
2013	Riverside Energy Resource Center	1000471	5901 PAYTON AVE	RIVERSIDE	Riverside	CA	92504	City of Riverside Public Utility (100%);	30154	D
2013	San Diego Gas and Electric -Moreno Station	1001719	14601 Virginia Street	Moreno Valley	Riverside	CA	92555	SEMPRA ENERGY INC (100%);	29479	C,W
2013	Pechanga Resort and Casino	1010424	45000 Pechanga Parkway	Temecula	Riverside	CA	92593	Pechanga Band of Luiseno Mission Indians (100%);	25117	C
2013	All American Asphalt	1011361	1776 All American Way	Corona	Riverside	CA	92879		19132	C
2013	RIV CO WASTE MGMT (EDOM HILL)	1000368	70-100 EDOM HILL RD	THOUSAND PALMS	Riverside	CA	92276	County of Riverside (100%);	9266	HH
2013	COACHELLA VALLEY DISPOSAL SITE LANDFILL	1005654	87-011 44TH AVE LANDFILL RD, N	COACHELLA	Riverside	CA	92236	County of Riverside (100%);	4048	HH
2013	HIGHGROVE SANITARY LANDFILL	1006079	1420 PIGEON PASS ROAD	HIGHGROVE	Riverside	CA	92507	County of Riverside (100%);	2846	HH
2013	CORONA DISPOSAL SITE	1000369	1300 MAGNOLIA AVENUE	CORONA	Riverside	CA	92879	County of Riverside (100%);	2057	HH
2013	MEAD VALLEY DISPOSAL SITE LANDFILL	1000366	22376 FORREST RD	PERRIS	Riverside	CA	92570	County of Riverside (100%);	1078	HH
2013	DOUBLE BUTTE DISPOSAL SITE LANDFILL	1000367	31710 GRAND AVE	WINCHESTER	Riverside	CA	92596	County of Riverside (100%);	1065	HH

Source: United States Environmental Protection Agency via Facility Level Information on Greenhouse Gases Tool (FLIGHT)

EXHIBIT D



What's the **State of Your Air?**

Home > 2015 > States > California

States

State List

FAQ

Understanding the Grades and Tables

Share Your Story

Download Report

REPORT CARD: What's the Grade for Your State?

Search by Zip Code:

Enter Your Zip

Search

Search by State:

Select Your State

Search

California

[How to Protect Yourself](#)
[What does INC and DNC mean?](#)

Riverside County Los Angeles-Long Beach, CA

If you live in Riverside County, the air you breathe may put your health at risk.



You can make a difference in the air that you breathe.

[Take Action for Healthier Air](#) [Tell us why having healthy air matters to you.](#)

Tell your friends about the air where you live.

SEND AN EMAIL SHARE ON FACEBOOK SHARE ON TWITTER

More about [Methodology](#).

High Ozone Days Learn More		
Ozone Grade:	F	How is my grade calculated?
Weighted Average	97.0	Change Since 2009: 5.2 fewer days this year
+ View Orange, Red, and Purple Ozone Days		
Particle Pollution - 24 Hour Learn More		
Grade:	F	How is my grade calculated?
Weighted Average:	33.5	Change Since 2000: 73.3 fewer days this year
+ View Orange, Red, and Purple Particle Pollution Days		
Particle Pollution - Annual Learn More		
Grade:	Fail	How is my grade calculated?
Design Value	15.1	Change Since 2000: -13.8 µg/m³
Groups At Risk Learn More		
Total Population:	2,292,507	Risks to the population
Pediatric Asthma:	54,531	Risks to people with Asthma
Adult Asthma:	146,427	Risks to people with Asthma
COPD:	78,238	Risks to people with COPD
Cardiovascular Disease:	114,669	Risks to people with Cardiovascular Disease
Diabetes:	171,404	Risks to people with Diabetes
Children Under 18:	615,555	Risks to children and teens
Adults 65 & Over:	294,281	Risks to older adults
Poverty Estimate:	392,513	Risks to people with low incomes

Navigation icons and search bar

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER

EXHIBIT E



ALASKA CALIFORNIA FLORIDA MID-PACIFIC NORTHEAST NORTHERN ROCKIES
NORTHWEST ROCKY MOUNTAIN WASHINGTON, D.C. INTERNATIONAL



January 22, 2015

Via Email

Wienke Tax
Air Planning Office, AIR-2
U.S. Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, California 94105-3901
tax.wienke@epa.gov

RE: Clean Data Determination for 1997 PM_{2.5} Standards; California—South Coast; Applicability of Clean Air Act Requirements,” EPA-R09-OAR-2014-0708.

Dear Ms. Tax,

On behalf of Communities for a Better Environment, Sierra Club, Center for Biological Diversity, WildEarth Guardians, Medical Advocates for Healthy Air, and Physicians for Social Responsibility – Los Angeles (collectively, “Health Advocates”), we submit the following comments on EPA’s Proposed Rule, “Clean Data Determination for 1997 PM_{2.5} Standards; California—South Coast; Applicability of Clean Air Act Requirements,” EPA-R09-OAR-2014-0708, 79 Fed. Reg. 72999 (Dec. 9, 2014) (“Clean Data Determination”). Health Advocates disagrees with the determination for the following reasons.

I. 2014 Monitoring Data Demonstrates that the South Coast is Out of Attainment with the 1997 PM_{2.5} Standards, and Must Continue to Adopt Measures to Come Into Attainment.

EPA indicates that no 2014 data was included in the proposed Clean Data Determination, but that “EPA will review the preliminary 2014 data prior to taking final action to ensure that they are consistent with the determination of attainment.” 79 Fed. Reg. at 73003. Because 2014 data shows that the South Coast is not in attainment, EPA cannot make the proposed Clean Data Determination.

The 2014 data uploaded onto the California Air Resources Board’s monitoring website indicates that several monitoring sites exceeded the 1997 PM_{2.5} Standards, and therefore the South Coast was not in attainment of these standards in 2014.¹ These sites include Central Los

¹ EPA’s AirData database does not yet have complete data for 2014.

Angeles, Metropolitan Riverside County-Rubidoux, Riverside-Magnolia, Mira Loma, Burbank, and San Bernardino Upland.

Site	2014 Annual Mean ($\mu\text{g}/\text{m}^3$)
Central Los Angeles – Los Angeles (Main St.) ²	18.8
Metropolitan Riverside County – Rubidoux ³	15.6
Riverside-Magnolia ⁴	16.3
Mira Loma – Mira Loma (Van Buren) ⁵	19.2
Burbank W Palm Ave (Jan-March) ⁶	19.8
San Bernardino Upland ⁷	17.9

² Data pulled from CARB’s air monitoring database for monitoring site 2899, monitors “I” and “-“, available at <http://www.arb.ca.gov/aqmis2/display.php?param=PM25HR&units=001&year=2014&report=SITE1YR&statistic=DAVG&site=2899&monitor=I&ptype=aqd>, and <http://www.arb.ca.gov/aqmis2/display.php?param=PM25HR&units=001&year=2014&report=SITE1YR&statistic=DAVG&site=2899&monitor=-&ptype=aqd>.

³ Data pulled from CARB’s air monitoring database for monitoring site 2596, monitors “-“ and “F”, available at <http://www.arb.ca.gov/aqmis2/pickdownload.php?param=PM25HR&units=001&year=2014&report=SITE1YR&statistic=DAVG&site=2596&monitor=-&ptype=aqd>, and <http://www.arb.ca.gov/aqmis2/display.php?param=PM25HR&units=001&year=2014&report=SITE1YR&statistic=DAVG&site=2596&monitor=F&ptype=aqd>.

⁴ Data pulled from CARB’s air monitoring database for monitoring site 233, monitors “C” and “-“, available at <http://www.arb.ca.gov/aqmis2/display.php?param=PM25HR&units=001&year=2014&report=SITE1YR&statistic=DAVG&site=2333&monitor=-&ptype=aqd>, and <http://www.arb.ca.gov/aqmis2/display.php?param=PM25HR&units=001&year=2014&report=SITE1YR&statistic=DAVG&site=2333&monitor=C&ptype=aqd>.

⁵ Data pulled from CARB’s air monitoring database for monitoring site 3702, monitors “C” and “-“, available at <http://www.arb.ca.gov/aqmis2/display.php?param=PM25HR&units=001&year=2014&report=SITE1YR&statistic=DAVG&site=3702&monitor=-&ptype=aqd>, and <http://www.arb.ca.gov/aqmis2/display.php?param=PM25HR&units=001&year=2014&report=SITE1YR&statistic=DAVG&site=3702&monitor=C&ptype=aqd>.

⁶ Data pulled from CARB’s air monitoring database for site 2492, monitors “C” and “-“, available at <http://www.arb.ca.gov/aqmis2/display.php?param=PM25HR&units=001&year=2014&report=SITE1YR&statistic=DAVG&site=2492&monitor=C&ptype=aqd>, and <http://www.arb.ca.gov/aqmis2/display.php?param=PM25HR&units=001&year=2014&report=SITE1YR&statistic=DAVG&site=2492&monitor=-&ptype=aqd>.

⁷ Data pulled from CARB’s monitoring database for site 2485, monitors “A” and “-“, available at <http://www.arb.ca.gov/aqmis2/display.php?param=PM25HR&units=001&year=2014&report=SITE1YR&statistic=DAVG&site=2485&monitor=A&ptype=aqd>, and <http://www.arb.ca.gov/aqmis2/display.php?param=PM25HR&units=001&year=2014&report=SITE1YR&statistic=DAVG&site=2485&monitor=-&ptype=aqd>.

EPA notes that it proposes to suspend the obligations to submit State Implementation Plan revisions concerning Reasonable Further Progress (RFP), attainment demonstration, Reasonably Available Control Measures (RACM), contingency measures, and other requirements related to nonattainment, only “for so long as the area continues to attain the standard.” 79 Fed. Reg. at 73004. Because, as discussed above, the South Coast was out of attainment with the 1997 standard in 2014, suspending these requirements is inappropriate. *C.f.* Revocation of Determination of Attainment of Ozone Standard by the Pittsburgh-Beaver Valley Ozone Nonattainment Area and Reinstatement of Applicability of Certain Reasonable Further Progress and Attainment Demonstration Requirements, 61 Fed. Reg. 28061 (Jun. 4, 1996) (revoking attainment demonstration after finding exceedances over the preceding year).

EPA should continue to require the South Coast to adopt measures to ensure that the region comes into attainment with the 1997 PM_{2.5} Standards. Indeed, because the region has been out of attainment for more than six years, EPA must go a step further, and reclassify the South Coast as a “serious” nonattainment area and require the South Coast to prepare a serious area plan. 42 U.S.C. § 7513(b)(2).

II. EPA Cannot Make a Clean Data Determination Because the Data Excludes Near-Roadway Monitoring.

Section 107(a) of the Clean Air Act requires states to “assure[] air quality within the entire geographic area.” 42 U.S.C. § 7407(a). Congress provided no exemption for areas near highways, where the evidence shows much higher levels of direct PM_{2.5} within 300 meters of the highway.⁸ Thus, the inclusion of this data is necessary to protect the over 1-million people who live, work, and go to school--thus, breathe the ambient air--within 300 meters of a highway in the South Coast Air Basin.⁹ Indeed, including near-roadway data is critical where, as shown above, several existing sites exceeded the 1997 PM_{2.5} standard in 2014. Monitors next to highways in the same vicinity as those that exceed the standard are likely to show even higher concentrations of PM_{2.5} than the existing monitors. Therefore, EPA’s clean data determination

⁸ See e.g., South Coast Air Quality Management District, Final 2007 Air Quality Management Plan (June 2007), at 11-2, available at <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2007-air-quality-management-plan/2007-aqmp-final-document.pdf?sfvrsn=2>; See also U.S. EPA, Final Technical Support Document and Response to Comments, Final Rulemaking Action on the South Coast 2007 AQMP for PM_{2.5} and the South Coast Portions of the Revised 2007 State Strategy (September 30, 2011) [Attached as Exhibit A], at 55-56; Communities for a Better Environment *et al.*, Comments on the 2011 Air Monitoring Network Plan for the South Coast Air Quality Management District (June 30, 2011) [hereinafter “2011 Monitoring Plan Comments”] [Attached as Exhibit B]. See also Gould, Greg, Draft Report—Near Roadway Emissions: Measurement, Exposure, and Monitoring (June 21, 2011) [hereinafter “Gould report”] [Attached as Exhibit C]; E.H. Pechan & Associates, Inc., Estimating Contributions of On-Road Emissions to Near Highway PM_{2.5} Concentrations (April 16, 2009) [hereinafter “Pechan Report”] [Attached as Exhibit D].

⁹ See 2011 Monitoring Plan Comments (Exhibit B) at 10, 16; Gould Report (Exhibit C) at 18, 26-27; Pechan Report (Exhibit D) at 2.

most likely excludes thousands of people who live, work, and go to school near highways and freeways from the protections of the Clean Air Act.¹⁰

In addition, as a result of the clear evidence of higher levels of PM2.5 near highways and freeways, several of the Health Advocates groups have a case pending in the Ninth Circuit in which the groups argue that the PM2.5 NAAQS determinations must include near-roadway monitoring data.¹¹ The case has been argued and is under submission. It is premature for EPA to make a “clean data” determination before the court has ruled on this issue.

Sincerely,

Elizabeth Forsyth
Earthjustice
50 California Street, Ste. 500
San Francisco, CA 94111
415-217-2000
eforsyth@earthjustice.org

Maya Golden-Krasner
Staff Attorney
Communities for a Better Environment
6325 Pacific Blvd., Suite 300
Huntington Park, CA 90255
323-826-9771 x. 121
maya@cbeal.org

¹⁰ In fact, in January 2013, EPA recognized that demonstrating attainment does require near-roadway monitoring in areas with over one million people, and the D.C. Circuit upheld this determination. 78 Fed. Reg. 3086, 3238 (Jan. 15, 2013); *Nat'l Ass'n of Mfrs. v. EPA*, 750 F.3d 921 (DC Cir. 2014). EPA found that “[a] significant fraction of the population lives in proximity to major roads. These exposures occur in locations that represent ambient air for which the agency has a responsibility to ensure the public is protected with an adequate margin of safety. Ignoring monitoring results from such areas (or not monitoring at all) would abdicate this responsibility. Put another way, monitoring in such areas does not make the standard more stringent, but rather affords requisite protection to the populations, among them at-risk populations, exposed to fine particulate in these areas.” 78 Fed. Reg. at 3240; *Nat'l Ass'n of Mfrs.*, 750 F.3d at 926.

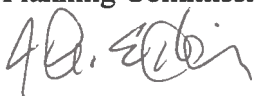
¹¹ *Physicians for Social Responsibility-LA et al. v. U.S. EPA*, Case No. 12-70079. The groups include Physicians for Social Responsibility-LA and Communities for a Better Environment.

961 Creek View Lane
Redlands, CA 92373
(909) 307-9444 Phone
john@johnhusing.com
www.johnhusing.com

RECEIVED

MAY 26 2015

CITY OF MORENO VALLEY
Planning Division

To: Moreno Valley Planning Commission
From: John Husing 
Date: May 21, 2015
Subject: World Logistics Center

At recent forums sponsored by UCR (5/12/2014) and Riverside County (5/14.2014), I discussed my view of the best way in which to plan for the likely growth of logistics facilities in the eastern portion of Western Riverside County, including Moreno Valley. Those thoughts may be of use to the Planning Commission in its deliberations about the World Logistics Center.

Having watched the Inland Empire economy grow-up over the past 50 years of work as an economist, the city of Ontario seems to me to have handled industrial growth the best and offers serious lessons to Moreno Valley. Allow me to explain.

Ontario's first distribution center opened in 1985. Today, there are 99 million square feet of industry development in that city which is the backbone of the entire Inland Empire logistics industry. Importantly, these operations are isolated to the east of the community. There are no incompatible uses such as retail centers, residential neighborhoods or schools mixed in to the industry area. Also, the city has worked hard to isolate the heavy duty truck traffic between these facilities and the adjacent freeways so there is minimal intermixing with other vehicles. This has allowed Ontario to benefit from the retail sales taxes (*which exceed all other non-industrial sources*) and property taxes generated by this industrial complex and use them to support projects benefiting the rest of the city. This has been done without unduly impacting the lives of its residents. It has also provided jobs:housing balance for the community which today has far more jobs than are needed given its level of occupied homes.

Ontario has had one difficulty in that its overall industrial area was never master planned in advance as it had a large number of landowners and numerous developers unrelated to each other. It was thus not possible to plan all of the amenities that could have been built into the industrial area. It thus grew up as projects were proposed without an overall theme or allowance for infrastructure or amenities beyond those individual developers were proposing.

Moreno Valley has the chance to overcome that difficulty. As the World Logistics Center has a single property owner and the Planning Commission is looking at the entire area as a unit, this offers an enormous advantage to the city. The 40 million square feet proposed can have the thematic tone and amenities this implies. The project is also arising at a time when e-commerce operations are looking for locations. Their retail sales tax generation, which applies to every California sale from their facilities, should far exceed that possible in Ontario which grew up before the advent of on-line shopping. In addition, the square foot of space per job in these fulfillment centers is much less than traditional warehousing making the jobs per facility as high or higher than for manufacturing firms of equal size. This offers the opportunity for more jobs in less space than in Ontario and should help the city's resident-commuters work locally.

Much has been made of the 40 million square feet as a major change in the scope of logistics space. Here, it should be noted that the city of Riverside had 40,693,000 square feet in first quarter 2013 and more has been built since. Currently, the Inland Empire has 19.2 million square feet under construction, which represents 82.5% of that in Southern California. The point being that the amount is not unusual large, its just stands out because it is being master planned.

It should also be noted that the Inland Empire's logistics sector has added 13,633 direct jobs between first quarter 2014-2015, representing 25.1% of the 54,367 jobs created in the area. The median hourly pay in this sector, according to the official data from the California Employment Development Department, is \$21.44 (\$44,591 a year) with 50% of workers making more and 50% less. Their analysis shows that 83% of workers in the field are in occupations requiring a high school or less education. That means 33% of marginally educated workers are earning over the median hourly rate. This is an important consideration for Moreno Valley in that the Census Bureau's American Community Survey found that 53.1% of Moreno Valley's adults 25 and over in 2013 had high school or less schooling.

Finally on the issue of pollution, there has finally been a study of the 2007 truck engines already required on all trucks going to the ports or intermodal rail yards and thus those handling containers. Over 50% of the study was paid for by California Air Resources Board and the Environmental Protection Agency. The research was conducted by the Health Effects Institute in Boston and conducted by Ph.D. scientists from around the U.S. It found no cancer risk and 90% plus reductions in PM_{2.5}, NOX and other gases. The 2010 engines are even cleaner and will be required on all trucks by 2021. Let me recommended that members of the commission review the study directly. It is available at: <http://www.healtheffects.org/> Here is there website summary:

HEI report on lifetime animal exposure to new-technology diesel engine exhaust finds no evidence of lung cancer – January 2015

Research Report 184, *Advanced Collaborative Emissions Study (ACES): Lifetime Cancer and Non-Cancer Assessment in Rats Exposed to New-Technology Diesel Exhaust*, describes the first study to conduct a comprehensive evaluation of lifetime exposure to new-technology diesel exhaust (NTDE). The study was conducted by Drs. Jacob McDonald of the Lovelace Respiratory Research Institute, Jeffrey Bemis of Litron Laboratories, Lance Hallberg of the University of Texas Medical Branch, and Daniel Conklin of the University of Louisville, and their colleagues. Male and female rats were exposed for 80 hours per week, for up to 30 months, to emissions from a heavy-duty diesel engine meeting stringent 2007 U.S. standards that has greatly reduced particle emissions compared with pre-2007 engines. The investigators evaluated more than 100 different biologic endpoints, including tumor development, and compared the results with biologic effects seen in earlier studies in rats exposed to diesel exhaust from pre-2007 engines. For a Press Release, [click here](#). To download HEI Research Report 184, including a Commentary by the HEI ACES Review Panel



Thank you for allowing mean to submit these remarks,

John Husing

John Husing



June 10, 2015

Board of Directors

President

Randy A. Record

Vice President

David J. Slawson

Directors

Joseph J. Kuebler, CPA

Philip E. Paule

Ronald W. Sullivan

General Manager

Paul D. Jones II, P.E.

Treasurer

Joseph J. Kuebler, CPA

**Chairman of the Board,
The Metropolitan Water
District of So. Calif.**

Randy A. Record

Legal Counsel

Lemieux & O'Neill

City of Moreno Valley
Community & Economic Development Department
Planning Division
14177 Frederick Street
PO BOX 88005
Moreno Valley, CA 92552-0805

SUBJECT: World Logistics Center Final Environmental Impact Report (SCH#2012021045), and EMWD's comments

Dear Mr. Mark Gross,

Eastern Municipal Water District (EMWD) thanks you for the opportunity to review the Notice of Public Hearing for the above referenced project. EMWD offers the attached comments, which help provide consistency throughout the document, when discussing the proposed water and sewer facilities for this project.

In addition, EMWD takes this opportunity to point out the following:

1. To date, a final Master Plan Of Service (POS) has not been completed. The project proponent is required to obtain an approved Master POS of the entire project area, prior to commencing final design. Subsequent component projects will be required to obtain individual phase-related POS, based on the approved Master POS.
2. The subject project is an active project with EMWD's New Business Department, with a water and sewer service Work Order Numbers 15146 and 15147, and a Project Record Number WS2011-399.

Again, EMWD appreciates the opportunity to comment on this project. If you have questions concerning these comments, please feel free to contact me at (951) 928-3777, Ext. 4468, or the project lead engineer, Brian Raines at Ext. 4467.

Sincerely,

Maroun El-Hage, M.S., P.E.
Senior Civil Engineer
New Business Department
(951) 928-3777 x4468
El-hagem@emwd.org

Attachments



Community & Economic Development Department
Planning Division

RECEIVED

MAY 1 2015

EMWD - MAIL ROOM

14177 Frederick Street
P. O. Box 88005
Moreno Valley CA 92552-0805
Telephone: 951.413.3206
FAX: 951.413.3210

May 1, 2015

RE: World Logistics Center Final Environmental Impact Report (SCH#2012021045)

Dear Interested Party,

The World Logistics Center Project Final Environmental Impact Report (FEIR) is complete and available for public review. The project site is located east of Redlands Boulevard, south of the SR-60 Freeway, west of Gilman Springs Road, and north of the San Jacinto Wildlife Area (see map on opposite side of page).

The proposed World Logistics Center (WLC) project area is approximately 3,818 acres and includes a new 2,610 acre Specific Plan area envisioned to accommodate up to 40.6 million square feet of high cube industrial warehouse distribution development and related uses. A General Plan Amendment to Business Park/Light industrial (BP) for warehouse logistics and Open Space (OS) and various related amendments to General Plan Elements for Community Development, Parks, Recreation and Open Space, Circulation, Safety, and Conservation also proposed. Approval of the project will result in a full repeal of the current Moreno Highlands Specific Plan No. 212-1, will provide a Change of Zone to Logistics Development (LD), Light Logistics (LL) and Open Space (OS) for areas within the proposed WLC Specific Plan boundary, and will provide a Change of Zone to Open Space (OS) for those project areas outside and southerly of the new WLC Specific Plan boundary. Eighty-five (85) acres of land at the northwest corner of Alessandro Boulevard and Gilman Springs Road is being pre-zoned and intended for a subsequent annexation to the City. The developer has also requested approval of Tentative Parcel Map No. 36457 for financing purposes only with 26 parcels identified, and the developer is seeking approval of a Development Agreement covering the properties controlled by Highland Fairview.





The FEIR contains the Draft EIR with modifications due to responses to comments, public comments received on the DEIR during the public review period and responses to the comments, the proposed Mitigation Monitoring Program and a draft Statement of Overriding Considerations. The document and related appendices are available online at www.moval.org. Printed copies of the document can be reviewed during normal business hours at City Hall or at the Moreno Valley Library located at 25480 Alessandro Boulevard.

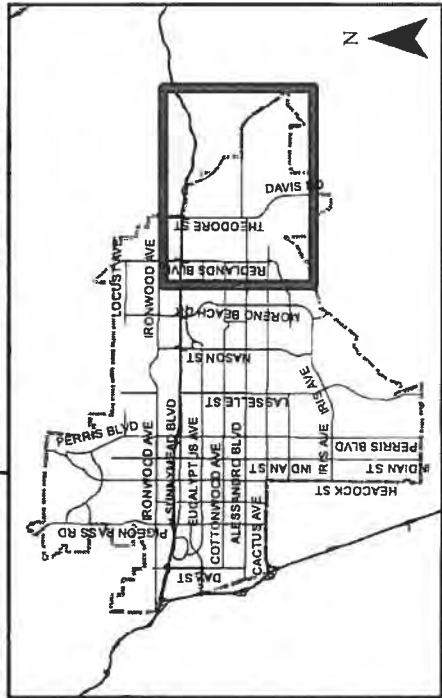
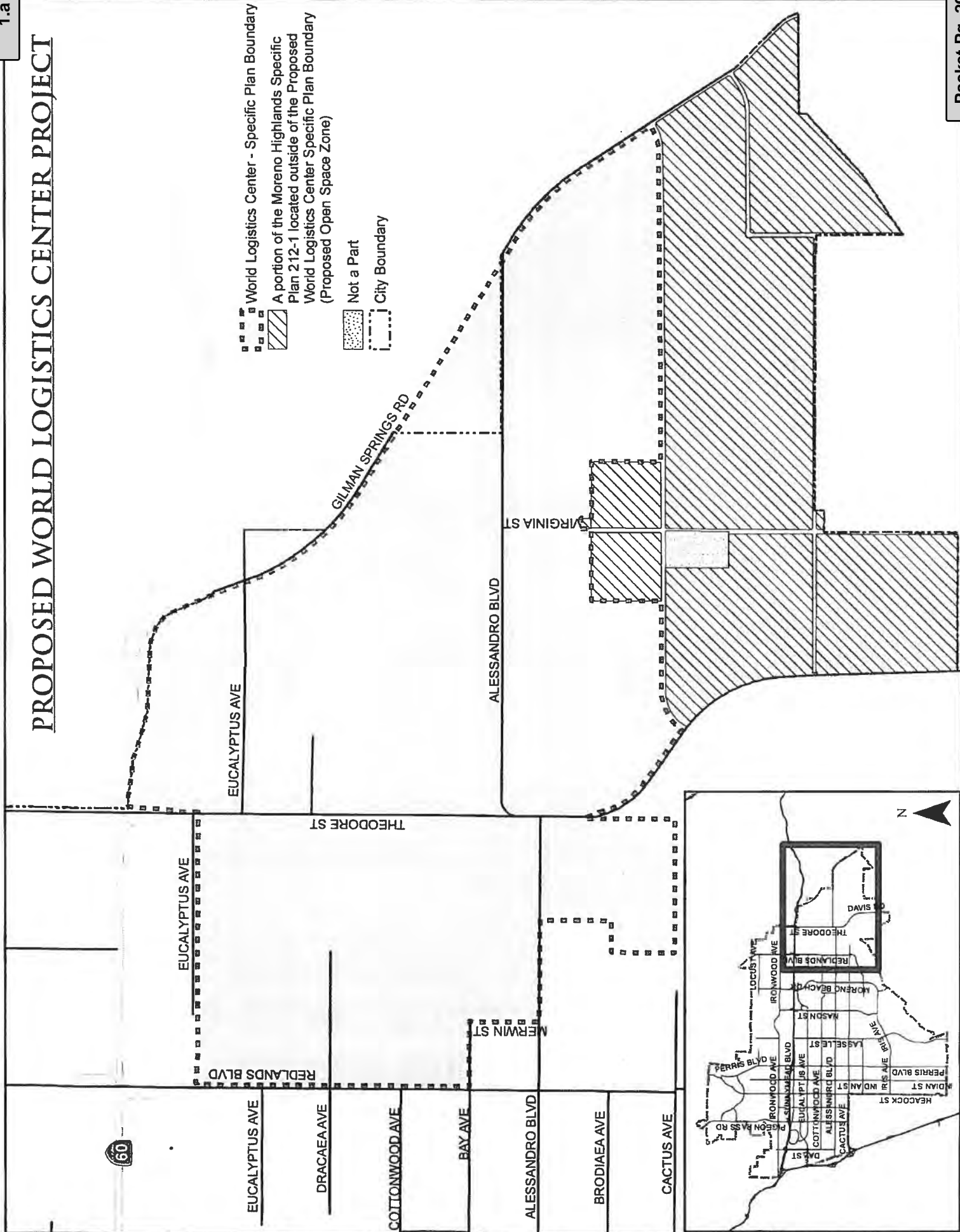
The project is scheduled for a public hearing before the Planning Commission on June 11, 2015 at 7:00 pm. The hearing location is at the City Hall Council Chamber located at 14177 Frederick Street, Moreno Valley, California 92552. For more information, please contact Mark Gross, Senior Planner at (951) 413-3215.

Sincerely,

Richard J. Sandzimir
Planning Official

PROPOSED WORLD LOGISTICS CENTER PROJECT

-  World Logistics Center - Specific Plan Boundary
-  A portion of the Moreno Highlands Specific Plan 212-1 located outside of the Proposed World Logistics Center Specific Plan Boundary (Proposed Open Space Zone)
-  Not a Part
-  City Boundary



**Final Programmatic Environmental Impact Report
Volume 3 – Revised Draft EIR (Clean)
World Logistics Center Project**

- Flood Control and Water Conservation District: Amend Storm Drain Master Plan.
- **Other Affected Agencies**
 - Western Riverside Council of Governments: TUMF Contributions.
 - Eastern Municipal Water District: ~~Water Service Agreements.~~
 - Developer will make “fair share” contributions to established development impact fee programs in the cities of Riverside, Perris, and Redlands for local road and intersection improvements identified in the programmatic Traffic Impact Assessment (TIA) included with the EIR (Final EIR Volume 2 Appendix L-1). This item is subject to review and approval by the City Transportation Division.
- **State of California**
 - Regional Water Quality Control Board: Water Quality Permitting.
 - Department of Transportation (Caltrans): Encroachment Permits for SR-60 and adopt fair share contribution programs for future development within the WLCSP to contribute funds for local road and intersection improvements identified in the programmatic Traffic Impact Assessment (TIA) included with the EIR (Final EIR Volume 2 Appendix L-1).
 - California Department of Fish and Wildlife: Streambed Alteration Agreements.
- **Federal Agencies**
 - U.S. Army Corps of Engineers: Clean Water Act Permitting.

EMWD's Comment on 6/10/2015:

Please repaace with:

"STANDARD WATER AND SEWER FACILITIES AND SERVICE AGREEMENT"

Table 1.B: World Logistics Center Project Environmental Impact Summary

Issues/Impacts	Mitigation Measures	Level of Significance
Impact 4.15.6.4 Cumulative Impacts - General Plan Buildout (Year 2035) With Project Conditions Traffic and Level of Service Impacts		
The project will contribute significant amounts of traffic onto roadways and at intersections in the City of Moreno Valley and other cities, and area freeways, after completion of development under the WLCSP (i.e., after 2022).	Implementation of previously identified Measures 4.15.7.4A through 4.15.7.4G for development as it occurs during development under the WLCSP.	Significant and Unavoidable
4.16 Utilities and Service Systems		
LESS THAN SIGNIFICANT IMPACTS		
Construction or Expansion of Water Treatment Facilities		
The project can connect to the existing water supply and will not require the construction of any new water storage or treatment facilities.	No mitigation is required.	Less than Significant
Cumulative Water Supply		
The EMWD has determined that it will be able to provide adequate water supply to meet the project at users, who will improve	No mitigation is required.	Less than Significant
<p style="color: red; font-weight: bold;">EMWD comment, on 6/10/15: revise sentence as follows: "The project can connect to the existing water supply and will not require the construction of any new treatment facilities. The project is required to construct on-site and off-site conveyance piping, booster stations, and storage tanks."</p>		
Wastewater Expected wastewater flows from the proposed WLC project will not exceed the capabilities of the serving treatment plant.	No mitigation is required.	No Impact
Wastewater Treatment Capacity and/or New or Expanded Wastewater Facilities		
The proposed WLC project would not require the construction of new wastewater treatment facilities or expansion of existing facilities, which could cause significant environmental effects.	No mitigation is required.	Less than Significant

Final Programmatic Environmental Impact Report

Volume 3 – Revised Draft EIR (Clean)

World Logistics Center Project

With implementation of passive and active conservation measures, the EMWD can significantly reduce its retail water demand and continue to do so in the future.

As previously identified, Metropolitan has analyzed the reliability of water delivery through the SWP and the Colorado River Aqueduct. Metropolitan's IRP and 2010 RUWMP conclude that, with the storage and transfer programs developed by Metropolitan, there will be a reliable source of water to serve its member agencies' needs through 2035.

The amount of water demand would be within the existing available supply even with a reduction in deliveries from the SWP. Imported sources of water will be supplemented by an increase in desalination of brackish groundwater, recycled water use, and water use efficiency, and implementation of aggressive conservation measures by the EMWD. The proposed WLC project would not require the construction of new water treatment facilities or expansion of existing facilities, which could cause significant environmental effects.

Annually, a 5-year Capital Improvement Plan (CIP) is prepared by the EMWD. The EMWD's CIP outlines specific projects and their funding sources. Each project is also submitted individually to the Board for authorization and approval. This allows the EMWD to match needed facilities with development trends accurately. Funding for the EMWD's microfiltration plants, distribution pipes, and the recharge and recovery program is listed in the most recent EMWD CIP.

~~All necessary water distribution facilities would be installed simultaneously with required roadway frontage improvements for each phase of development of the proposed WLC project. Therefore, the connection to the existing water delivery system would not result in substantial disturbance of existing roadways or water facilities.~~ As previously identified, the potable water demand that would be required for the proposed WLC project would total 1,991.25 AFY. The amount of water demand would be within the existing available supply even with a reduction in deliveries from the SWP. Imported sources of water will be supplemented by an increase in desalination of brackish groundwater, recycled water use, and water use efficiency, and implementation of aggressive conservation measures by the EMWD. The proposed WLC project would not require the construction of new water treatment facilities or expansion of existing facilities, which could cause significant environmental effects.

It should be noted that the water consumption estimates in this section for future logistics uses within the WLCSP are likely overestimated by a significant factor, as a result of the emphasis on xeriscape

EMWD's Comment, on 6/10/2015:
 Revise sentence as follows:
 .
 .
 "All necessary water distribution facilities would be installed, **by the developer and at the developer's cost**, simultaneously with required roadway frontage improvements for each phase of development of the proposed WLC project."
 .

used a "worst-case" scenario as outlined in the WSA prepared by the EMWD (March 21, 2012).

Adherence to standard requirements identified by EMWD and the City associated with the design and installation of new water infrastructure, including the additional water storage tanks and connections to existing and future water infrastructure, would ensure that no significant impacts would result from the construction or operation of the proposed WLC project. Therefore, impacts related to this issue would be less than significant and no mitigation measures would be required other than those measures recommended in other sections addressing potential impacts of off-site improvements (e.g., cultural resources and biological resources).

Final Programmatic Environmental Impact Report Volume 3 – Revised Draft EIR (Clean) World Logistics Center Project

It is anticipated that the majority of water for future development would be supplied by imported water from Metropolitan, recognizing the following conditions:

- The ability of Metropolitan to meet the demands of member agencies as described in the 2010 RUWMP as the majority of EMWD's current and future supply rely on Metropolitan's supplies. This assessment is based on representations by Metropolitan that it will provide the water requested by the EMWD for the next 20 years under the conditions set forth in Water Code Section 10910 as authorized by Water Code Section 10631(k). This assessment is subject to review, modification, or rescission in the event that regulations, court decisions, or other events reduce or impair Metropolitan's ability to provide such water.
- The cost of new water supplies will continue to increase. The developer of this project is required to help fund the acquisition of new water supplies, new treatment or recycled water facilities, and water efficiency measures for existing customers to develop new water supplies.
- New customers may also be required to pay a higher commodity rate for water used than existing customers to offset the rising costs to the EMWD for new water supplies.
- The developer will install water-efficient devices such as low-flow toilets and landscaping according to the requirements of the EMWD's water use efficiency ordinance(s) at the time of project on water supplies.

EMWD's Comment on 6/10/2015:
Please replace "City" with "EMWD"

Metropolitan is on a member agency, but predicts the future water demand based on regional growth information. Metropolitan stated in its 2010 RUWMP that, with the addition of all water supplies, existing and planned, Metropolitan would have the ability to meet all of its member agencies' projected supplemental demand through 2035 even under a repeat of historic drought scenarios. For any short-term water shortages and interruptions caused by disaster or unprecedented drought, the plans and policies outlined in the 2010 RUWMP will be implemented.

The proposed WLC project may be conditioned by the City to construct off-site and on-site water facilities needed to distribute water throughout the project area. A plan of service for the proposed WLC project would be approved by the EMWD that would identify specific on-site improvements. The nearest recycled water line is a 24-inch transmission main located approximately 0.25 mile southwest of the project site, at the intersection of Redlands Boulevard and Cactus Avenue. Although currently active recycled water lines are not adjacent to the project site, in the future, it may be possible to serve this project site with recycled water. Irrigated landscaped areas of the proposed WLC project site will be designed to connect to the recycled water system and would utilize recycled water in landscape areas to the extent feasible. EMWD policy recognizes recycled water as the preferred source of supply for recreation areas, green-esthetic impoundment or other water features. The project site will be designed to use recycled water and off-site

EMWD's Comment on 6/10/2015:
Please insert:
"and off-site"

Water Demand Based on the Existing General Plan Land Uses for the Project Site. As noted in Section 3.0, *Project Description*, the Community Development Element¹ of the City's General Plan currently designates the project site as a mix of residential, commercial, business park, and open space land uses. These land use designations are based on the previously approved (1992) Moreno Highlands Specific Plan (MHSP) and were used in developing EMWD's 2010 UWMP. Table 4.16.F summarizes the current land use designations at the project site, their associated acreages, and expected water demand from the 1992 MHSP EIR. The EIR prepared for the MHSP indicated that

¹ City of Moreno Valley General Plan Community Development Element, City of Moreno Valley, July 11, 2006.

**Final Programmatic Environmental Impact Report
Volume 3 – Revised Draft EIR (Clean)
World Logistics Center Project**

proposed WLC project site. Current capacity at this facility is 16 mgd¹ with an existing average inflow of approximately 11.2 mgd.² Under current conditions, the average daily surplus treatment capacity is approximately 4.5 mgd. Generally, water use and wastewater flows are related in that wastewater is generated from indoor water uses.

Flow from the Logistics Development is based on a factor of water use equivalent to 0.01 gpd/sf. These values were determined based on a water demand analysis and benchmarking study conducted to determine water generation factors for similar facilities as outlined in the Technical Memorandum titled *World Logistics Center Water Demands and Waste Water Generation for Buildings* dated March 13, 2012. Since this study is for Specific Plan purposes and because these wastewater generation factors are less than rates used to cover the broad spectrum of light industrial uses, a facility sizing factor was added. This factor is 2.0 times the 0.01 gpd/sf for a wastewater generation factor of 0.02 gpd/sf. Based on a square footage of 40.6 million, the wastewater generated from the logistics uses on the site is 812,000 gpd. An additional 5,100 gpd of flow was added to account for the in-project fueling station. Thus, the total wastewater generated from the site is 817,100 (0.82 mgd). The additional wastewater treatment demand of 0.82 mgd resulting from development of the proposed WLC project totals approximately 18.2 percent of current surplus treatment capacity. Improvements planned for the MVRWRF facility would increase capacity at this facility from 16 mgd to 18 mgd with an ultimate expansion of this facility of 41 mgd. The planned expansion of the MVRWRF to increase capacity from 16 mgd to 18 mgd was completed in December 2013.³ Impacts associated with wastewater facilities would be less than significant because the amount of wastewater generated by the project would be within the existing surplus treatment capacity at the MVRWRF. ~~The proposed WLC project would not require the construction of new wastewater treatment facilities or expansion of existing facilities, which could cause significant environmental effects. Therefore, impacts associated with wastewater facilities would be less than significant and no mitigation is required.~~

4.16.2.6 Significant Impacts

No impacts related to wastewater services or facilities have been identified as significant for the proposed WLC project.

EMWD's comment, on 6/10/2015: please add the following

"...The proposed WLC project would not require the construction of new wastewater treatment facilities, which could cause significant environmental effects. *However the WLC project is required to construct on-site and off-site conveyance piping to provide service to the project area. Therefore, impacts associated with wastewater facilities would be less than significant and no mitigation is required.*"

EMWD are reviewed throughout the year. EMWD has a funding and construction mechanism in place that ensures improvements to EMWD facilities occurs in a timely manner. This funding mechanism is referred to as EMWD's Sewer Financial Participation Charge Program. For all new development within the EMWD service area, the Sewer Financial Participation Charge is allocated to assist in the financing of any future collection and disposal facilities and any future sewer treatment plant facilities.

¹ 5.13 *Public Services and Utilities*, City of Moreno Valley General Plan Final EIR, July 2006.

² Eastern Municipal Water District Moreno Valley Regional Water Reclamation Facility, <http://www.emwd.org/modules.aspx?documentid=1423>, website accessed April 2, 2012.

³ Approval and Authorize an Amendment (246,044) to the Agreement with Carollo Engineers for Constuction Management and Engineering Support Services During Construction of the MVRWRF, Eastern Municipal Water District, July 2, 2014, <http://www.emwd.org/home/showdocument?id=10415>.

**Final Programmatic Environmental Impact Report
Volume 3 – Revised Draft EIR (Clean)
World Logistics Center Project**

Cumulative development would not exceed the capacity of the wastewater treatment system because the MVRWRF would expand as growth occurred.

~~The proposed WLC project would not have a cumulatively significant impact on wastewater infrastructure because the proposed WLC project would not require the expansion of existing infrastructure, only connections to existing infrastructure would be required by the project.~~ By adhering to the wastewater treatment requirements established by the Santa Ana RWQCB through the NPDES permit, wastewater from the project site that is processed through the MVRWRF would meet established standards. As the wastewater from all development within the service area of the MVRWRF would be similarly treated under the NPDES, no cumulatively significant exceedance of Santa Ana RWQCB wastewater treatment requirements would occur.

EMWD's Comment, on 6/10/2015:

4.16 revise sentence as follows:

4.16. "The proposed WLC project would not have a cumulatively significant impact on wastewater infrastructure because the proposed WLC project would not require the expansion of existing **waste water treatment facilities, and is only required to construct on-site and off-site conveyance piping to connect to existing infrastructure.**"

trans. Additionally, Waste Management of the Inland Empire will also use other County landfills in the area, such as the Lamb Canyon Landfill on County land near the City of Beaumont and the El Sobrante Landfill in the City of Corona. The Badlands Sanitary Landfill is designated a Class III landfill run by the County of Riverside.² Waste types accepted at the Badlands Sanitary Landfill include agricultural, construction/demolition, industrial, mixed municipal, and tires.

The Badlands Sanitary Landfill currently has a permitted capacity of 33.5 million cubic yards with a remaining capacity of 14.7 million cubic yards.³ The tonnage of any mass of solid waste is dependent on the material (e.g., metals, paper, and green waste) and its density (compacted or uncompacted). Utilizing conversion factors from various jurisdictions, one cubic yard of compacted municipal solid waste typically weighs 750 pounds (0.37 ton).⁴ Based on this conversion factor, remaining space at the Badlands Sanitary Landfill totals approximately 5.45 million tons with an estimated closure date of January 2024. The maximum daily permitted throughput of this facility is 4,000 tons/day. The Badlands Sanitary Landfill currently accepts approximately 1,683 tons/day.⁵

Recyclable materials collected by Waste Management of the Inland Empire are handled at the Moreno Valley Transfer Station owned and operated by Waste Management, Inc. The Moreno Valley Transfer Station is a large volume transfer and processing facility that accepts the following waste types: construction and demolition materials, green materials, metals, and mixed municipal waste. The Moreno Valley Transfer Station currently has a permitted capacity of 2,600 tons per day and currently accepts 2,000 tons per day. This facility currently has the capacity to accept an additional 600 tons per day.

¹ Trash service in the City of Moreno Valley is mandatory and Waste Management of Inland Valley is the only solid waste service provider.

² Class III landfills are required to be located where adequate separation can be provided between non-hazardous solid waste and surface and subsurface waters. This class of landfill is not permitted to accept hazardous waste.

³ *Badlands Sanitary Landfill Facility/Site Summary Details*, CalRecycle website, <http://www.calrecycle.ca.gov//AA-0006//>, website accessed April 2, 2012.

⁴ <http://www.recyclemaniacs.org/doc/measurement-tracking/CURC-profile-input-form-with-conversion-guide.xls>, website accessed December 21, 2011.

⁵ Based on 2011 average; e-mail correspondence with John Farrar, Administrative Services Assistant, County of Riverside Waste Management Department, December 21, 2011.

Table 1.B: World Logistics Center Project Environmental Impact Summary

Issues/Impacts	Mitigation Measures	Level of Significance
	available. This measure shall be implemented to the satisfaction of the City Planning Division and Land Development Division/Public Works.	
Impact 4.16.1.6.2 Storm Water Drainage Requirements		
The development of the proposed WLC project would introduce a substantial amount of impervious surfaces on the site, which could result in significant increases in off-site runoff.	4.16.1.6.2A Each Plot Plan application for development shall include a concept grading and drainage plan, with supporting engineering calculations. The plans shall be designed such that the existing sediment carrying capacity of the drainage courses exiting the project area is similar to the existing condition. The runoff leaving the project site shall be comparable to the sheet flow of the existing condition to maintain the sediment carrying capacity and amount of available sediment for transport so that no increased erosion will occur downstream. This measure shall be implemented to the satisfaction of the City Land Development Division/Public Works.	Less than Significant with Mitigation
Cumulative Impacts to Water Supply Services		
The proposed WLC project would connect to existing conveyance infrastructure and adequate treatment capacity is available, so the proposed WLC project would not make a significant contribution to any cumulatively considerable impacts on water supply or infrastructure.	Mitigation not required	Less than Significant with Mitigation
Impact 4.16.4.6.1 Construction or Expansion of Electrical and Natural Gas Facilities		
Based on calculations contained Tables 4.16.I and 4.16.J, the proposed WLC project would consume approximately 376,426 megawatt-hours (MWh) of electricity and almost 14.6 million cubic feet of natural gas per year. Therefore, the proposed project may induce the need to construct new electrical and natural gas facilities. This is a significant impact that requires mitigation.	4.16.4.6.1A Each application for a building permit shall include energy calculations to demonstrate compliance with the California Energy Efficiency Standards confirming that each new structure meets applicable Building and Energy Efficiency Standards. The plans shall also ensure that buildings are in conformance with the State Energy Conservation Efficiency Standards for Nonresidential buildings (Title 24, Part 6, Article 1, Section 101.2). Ensig Co materials, or permeable or porous pavement, for all roadways and walkways not within the public right-of-way, to minimize the absorption of solar heat and	Less than Significant with Mitigation

Impact 4.16.4.6.3

EMWD comment, on 6/10/15: please incorporate in the sentence the following:

"The project can connect to the existing water supply and will not require the construction of any new treatment facilities. The project is required to construct on-site and off-site conveyance piping, booster stations, and storage tanks."

5.2 Recycled Water

EMWD policy recognizes recycled water as the preferred source of supply for all non-potable water demands, including irrigation of recreation areas, green-belts, open space common areas, commercial landscaping, and supply for aesthetic impoundment or other water features. The proposed project is near an existing recycled water line and in the future recycled water may be available for the project.

According to EMWD policy, the project may be conditioned to construct a recycled water system physically separated from the potable water system. The system will need to be constructed to recycled water standards. The project may also be conditioned to construct off-site recycled water facilities. EMWD will make a final determination on requirements for recycled water use and facilities during the plan of service phase of the project.

5.3 Duration of Approval – 3 Year Maximum

This assessment will be reviewed every three years until the project begins construction. The project applicant shall notify EMWD when construction has begun. The review will insure that the information included in this assessment remains accurate and no significant changes to either the project or EMWD's water supply have occurred. If neither the project applicant nor the lead agency contacts EMWD within three years of approval of this WSA, it will be assumed that the proposed project no longer requires the estimated water demand calculated, the demand for this project will not be considered in assessments for future projects, and the assessment provided by this document will become invalid.

5.4 Conclusion

EMWD relies on MWD to meet the needs of its growing population. MWD stated in its 2010 RUWMP that with the addition of all water supplies, existing and planned, MWD would have the ability to meet all of its member agencies' projected supplemental demand through 2035, even under a repeat of historic multi-year drought scenarios.

Based on present information that, when combined supply for its member water supply to meet demands.

EMWD's comment on 6/10/15: While this requirement for additional funding is not adopted at this time, the project may be subject to this requirement if and when EMWD's Board Of Directors approves such measures in the future.

In the event the lead agency determines adequate water supply exists for this project, the developer of this project is required to meet with EMWD staff to develop a plan of service. The plan of service will detail water, wastewater and recycled water requirements to serve the projects. An agreement developed prior to construction will determine additional funding required to reduce existing customer demand on imported supplies through the expansion of local resources. The reduction of existing customer demand on imported water supplies will free up allocated imported water to be used to serve this project under multiple dry year conditions. The amount of funding will be determined by the EMWD and may take the form of a new component of connection fees or a separate charge. The estimated cost of desalinated water is between \$1,400 and \$1,700 per AF. These costs are expected to increase over time.

If there is a change in the circumstances detailed in this assessment, EMWD will address the changes in the plan of service for the project. Modifications at the plan of service stage could reduce the amount of water available to serve this project.

Grace Espino-Salcedo

Subject: RE: Message from WLC Link

From: Frank Huddleston [<mailto:fhuddleston52@gmail.com>]

Sent: Tuesday, June 09, 2015 3:01 PM

To: Jane Halstead, CMC; Ewa Lopez, CMC; Kathy Gross

Subject: Message from WLC Link

We need WLC. We need jobs,jobs and more JOBS.This would be great for the city. It would put us on the map again.The money that it would create. Upper class jobs. The value of our homes would go up. Just look at the unemployed people here.So lets start building,and more FORWARD and not backwards.

Kathy Gross

Executive Assistant I

City Clerk's Office

City of Moreno Valley

p: 951.413.3001 | e: kathyg@moval.org w: www.moval.org

14177 Frederick St., Moreno Valley, CA 92553

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Friends of the Northern San Jacinto Valley
P.O. Box 4266
Idyllwild CA 92549
www.northfriends.org

June 11, 2015

Planning Commission
City of Moreno Valley
14177 Frederick Street
Moreno Valley CA 92552

Mark Gross Planner
Email: Markg@moval.org

RE: June 11, 2015—Moreno Valley Planning Commission- World Logistics Center Final Environmental Impact Report (SCH#2012021045)

The Friends of the Northern San Jacinto Valley submit these comments on the Final Environmental Impact Report for the World Logistics Center.

The Final EIR Reliance on the “CDFW Conservation Buffer Area” is in Error.

The CDFW in its April 8, 2013 comments stated: “The revised DEIR should not refer to the SJWA as a “CDFW Conservation Buffer Area”, (B-3 pg. 17, #4) “Providing a buffer was not the sole purpose of the acquisition. Lands that compromise the “CDFW” conservation buffer Area” include agricultural properties that were purchased by the CDFW from individual landowners through grants obtained under the Safe Neighborhood Parks, Clean Water, Air & Coastal Protection Bond Act (Prop. 12). The lands were purchased by the CDFW and incorporated into the SJWA to expand the existing wildlife area, provide wildlife refuge for SKR during flooding events at Mystic Lake, and contribute toward the preservation of a wildlife corridor between the SJWA and the Badlands.... the lands cannot be used to offset impacts associated with development of the Project, provide for the Project’s open space requirements,

provide a setback/buffer from the Project, or to mitigate/minimize impacts resulting from the Project” (pg. 14)

The minutes of the May 18, 2001, Wildlife Conservation Board (WCB) meeting indicate that the “acquisition of the approximately 1,000 acres will allow for protection of a portion of Mystic Lake and its associated upland habitat which is important to a number of sensitive plant and animal species. The upland areas and hills surrounding the lowland flood plain of Mystic Lake are dominated by Riversidian sage scrub and patches of grasslands are found on the upland and alkali flats. Numerous sensitive plants endemic to the Mystic Lake area, including the thread-leaved brodiaea...San Jacinto saltbush... and spreading navarretia...are found on the site. The DFG has identified the subject properties as being within a Significant Natural Area and has recommended the purchase of the property as an addition to the existing WLA. The acquisition of the subject properties are important to wildlife, as they will serve as a buffer from the development north of the Wildlife Area (WLA) and add significant wildlife benefits to the WLA.” (Draft EIR Comment letter G-29 Attachment 4 pg. 4-5)

The City falsely claims the CDFW created the “CDFW Conservation Buffer Area”, but the CDFW states, “The revised DEIR should not refer to the SJWA as a ‘CDFW Conservation Buffer Area’”. Friends could find no authority for the City to tell the State of California Department of Fish and Wildlife that the CDFW is wrong. Friends agree with the CDFW that the DEIR must be revised and recirculated to show the new significant environmental impacts to the SJWA conserved lands without relying on the fraudulent “CDFW Conservation Buffer Area” designation.

The City Response to Comments G-89-3 (pg. 1458 of Vol.1) states, “The lands discussed as CDFW Conservation Buffer Area including the SDG&E lands are not a part of the WLC specific Plan, but are a part of the General Plan Amendment and Zoning Changes.”

In Response to comments G-89-4 (pg. 1458 vol. 1) the City states the 1,000-foot indirect impact zone is now associated with the edge of the WLC Specific Plan boundary, [rather than the southern edge of the fictional “CDFW Conservation Buffer Area”] and extends into the SJWA conservation area in

order to identify any indirect impacts of the development of the specific plan.”

There has been no CEQA or MSHCP analysis of the direct and indirect impacts to the SJWA without reliance on the fraudulent “CDFW Conservation Buffer Area” designation. The impacts to the SJWA from the project under both a CEQA and MSHCP impact analysis are significant. The City’s new impact analysis (moving of the analysis area to the Specific Plan boundary line) is significant new information that has deprived the public and decision makers of a meaningful opportunity to comment upon substantial adverse environmental impacts of the project.

The Draft EIR impact analysis and mitigation measures must be revised and recirculated so that the public can comment on these significant changes to the Biological Resources section of the environmental document.

Susan Nash
President
Friends of the Northern San Jacinto Valley

Tom Paulek
Conservation Chair
Friends of the Northern San Jacinto Valley

Grace Espino-Salcedo

Subject: RE: WLC comments for all Planning Commissioners

From: George Hague [<mailto:gbhague@gmail.com>]
Sent: Thursday, June 11, 2015 4:42 PM
To: Mark Gross
Cc: Richard Sandzimier
Subject: WLC comments for all Planning Commissioners

Dear Planning Commissioners,

RE: World Logistic Center's (WLC) Final EIR and tonights meeting

I have been receiving many excellent letters which were sent to the City in regards to the WLC. The last one was from Earth Justice on behalf of the Center for Community Action and Environmental Justice (CCA EJ). This 22 page letter with about 30 pages of excellent attachments needs to be read by you all as do the many other letters/emails you have received prior to any vote.

With almost three hours of presentations on the WLC before the public hearing begins where the public talks, you should begin the hearing by telling those in the audience that a second hearing has been scheduled forso they do not have to wait until 11 p.m. to know this.

The notice on the WLC's Final EIR said we had 45 days following May 1st to make comments. That would be Monday June 15th. I would expect additional letters for your consideration will be coming in next week and your vote should not take place until you have read them all.

Sincerely,

George Hague

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Grace Espino-Salcedo

Subject: RE: Message from WLC Link

-----Original Message-----

From: Gary Hayes [<mailto:garyphayes1@gmail.com>]
Sent: Thursday, June 11, 2015 6:52 PM
To: Jane Halstead, CMC; Ewa Lopez, CMC; Kathy Gross
Subject: Message from WLC Link

I would like to voice my full support for World Logistics Center. This project will bring many good paying jobs to Moreno Valley and will bring much needed revenue to our city. I have been a resident of the city for 29 years and would like to see us bring in this type of project so we can grow and become a first class city that we are capable of being. We need to make the city more than a bedroom community that it has always been.

In November we had an election of council members and the people spoke now there are those who are trying to recall all of those elected by the people. If there are some who don't like who was elected they have the opportunity next election to vote them out. That is the way the system works. Recalls cost money and those funds could be better used in many other places. It appears that there are some who if they don't get there way they must recall and the majority has spoken.

Sent from my iPad I

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Moreno Valley
Planning Commission

May 20, 2015

RECEIVED

MAY 18 2015

CITY OF MORENO VALLEY
Planning Division

World Logistics Center

Re: as a former resident of
Moreno Valley, please
consider the residents.

Truckers are prone to
change the environment.

Living near the Industrial
area @ Alessandro Blvd.

This area will become an
eyesore compared to Now.

Please don't allow this! The
Press Enterprise published a MAP.

P.S. this breaks
my heart!

Sincerely,
Helen Vytham
8171 Niagara Ave.
Riverside, CA 92504



Inland Empire Waterkeeper

Advocacy • Education • Restoration • Enforcement

6876 Indiana Avenue, Suite D
 Riverside, CA 92506
 Phone (714) 850-1965
 Fax (714) 850-1592
 Website www.iewaterkeeper.org

June 5, 2015

Sent via email: richardsa@moval.org

City of Moreno Valley
 Community and Economic Development Department
 ATTN: Richard Sandzimier, Planning Official
 14177 Frederick Street PO Box 88005
 Moreno Valley, CA 92552

Re: World Logistics Center Project, Final Environmental Impact Report, State Clearinghouse No. 2012021045.

Dear Mr. Richard Sandzimier,

Inland Empire Waterkeeper (Waterkeeper) is a non-profit environmental organization dedicated to advocacy, education, restoration and enforcement in the Santa Ana River Watershed. Waterkeeper's members use and enjoy the unique waterways of the Inland Empire and rely on our region's surface and groundwater on an everyday basis. We write on behalf of our collective membership to express our concerns with the inadequate responses to our previous letter that were given by World Logistics Center Project (WLC) in its Final Environmental Impact Report (FEIR), released on May 1, 2015.

We previously submitted a letter on April 8, 2013 addressing our concerns about the proposed WLC's DEIR. Our letter explained that the DEIR did not adequately address many significant effects of WLC's construction and operation. Specifically, we focused on the significant effects that one of the world's largest master-planned warehousing complexes would have on local groundwater recharge, surface runoff, impaired receiving waters, and the San Jacinto Wildlife Area and wetlands.

In their FEIR, WLC primarily responded to ours and others' concerns by proposing to use detention basins as infiltration basins, habitat mitigation, and 100-year storm retention.

This letter focuses on the reasons why detention basins do not adequately store water and trap pollutants like infiltration basins, are not adequate wildlife habitat mitigation, and are likely unable to contain runoff from a 100-year storm. In addition, these concerns carry greater weight because polluted stormwater would be flowing into the San Jacinto Wildlife Area and wetlands. This threatens to turn Mystic Lake and the other protected wetlands into infiltration ponds for potentially hazardous runoff from WLC.

I.) The BMPs Proposed are Inadequate to Control Runoff

In WLC's FEIR responses to the many letters submitted with concerns about water quality, WLC focused on their proposed detention pond system. In addition, WLC explained that they planned to use bio-retention swales, Low Impact Development (LID) BMPs, and spreading areas. WLC calculated that by using the detention basins to also infiltrate water, they would reduce the volume of runoff to mimic natural levels. In addition, WLC claimed that using the detention basins to infiltrate would also sufficiently lower the levels of pollutants to natural levels. Finally, WLC calculated that its system of detention basins with some infiltration capacity would be able to handle a 100-year storm.

However, research and practice shows that detention basins are not capable of infiltrating the amounts of water required to reach WLC's calculations of natural levels of runoff. In addition, detention basins are not sufficient to remove the pollutants that will be generated by the facility, so that runoff would be polluted. Finally, detention basins of the proposed size are unlikely to be able to hold the volume of runoff generated in a 100-year storm event.

A.) The Proposed Detention Basins Will Not Be Able to Adequately Control Runoff

Detention basins are designed to control peak flows and infiltrate some water, but are not the same as infiltration basins. Detention basins are used to slow down stormwater runoff, not to infiltrate large amounts of water. As the FEIR notes, water flows from the Badlands and the 60 freeway into the project site, where it then continues through the San Jacinto Wildlife Area and wetlands. To contain this large amount of water, large infiltration basins will be needed. The FEIR estimates the soil type and infiltration rate, but has not adequately examined it. WLC has presented no analysis of the effects of the large amounts of runoff that would flow into the San Jacinto Wildlife Area. To adequately mimic the natural condition of runoff flow, velocity, and volume, a more thorough analysis of the size, number, and location of infiltration basins must be conducted.

B.) The Proposed Detention Basins Will Not Be Able to Capture a 100-year Storm Event

In the FEIR, WLC calculates that their proposed system of detention basins with limited infiltration capacity will be enough to hold the stormwater from a 3-hour and 24-hour 100-year storm event. However, it is unlikely that detention basins will be able to withstand such large storms. Even if the detention basins were able to hold back a significant portion of the runoff from a 100-year storm, detention basins are not designed to infiltrate large volumes of water. This means that while the volume of water exiting the project site may be similar to natural condition during a 100-year storm event, the duration of the discharge and its velocity would likely result in significant hydromodification of the downstream area that is not thoroughly considered in this FEIR. The project proponents must conduct a comprehensive analysis of the capacity of the facility to capture the stormwater from a 100-year storm event and the impacts of the discharge, if any, from such an event to the receiving waters.

II. The Proposed Detention Basins Will Likely Not Be Able to Adequately Control Pollutants Because They Will Likely Not Provide Enough Infiltration Capacity or Pretreatment

The project may result in surface water pollution during operation. The 40 million square foot project will turn thousands of acres of natural area into impervious roofs and roads. Storm water

runoff from the roadways, parking lots, and commercial and industrial buildings can carry a variety of pollutants such as sediment, petroleum hydrocarbons, commonly utilized construction materials, landscaping chemicals, and pesticides; as well as metals such as iron, aluminum, cadmium, and toxic metals such as copper, lead, and zinc, which may lead to the degradation of downstream receiving waters. Runoff from landscaped areas may contain elevated levels of phosphorous, nutrients and suspended solids. WLC has not adequately shown that they are taking steps to control these pollutants and account for their potentially significant effect on the wildlife area that lies directly downstream from the project site.

The California Stormwater Quality Association's (CASQA's) New Development and Redevelopment BMP Handbook (Handbook) shows that the only listed pollutant that detention basins remove with a "high" level of efficiency is trash.¹ This means that for virtually all other pollutants, even detention basins with some infiltration capacity are insufficient to remove all pollutants discharged to surface waters. The CASQA Handbook also adds that detention basins are relatively ineffective at removing soluble pollutants. The CASQA Handbook does not assert that the limited infiltration capability of some detention basins is enough to mitigate detention basins' ineffective removal rate of virtually all pollutants. Since the pollutants would be flowing into San Jacinto Wildlife Area and wetlands, the water flowing from the project site should not be contaminated by pollutants at all. Therefore, WLC must take steps to control pollutants, such as installing large infiltration basins with adequate pretreatment. WLC provides no analysis of the significant impact that polluted water would have upon the San Jacinto Wildlife Area and wetlands.

Specifically, detention basins only remove 40-60% of Oil and Grease. The CASQA Handbook says that detention basins have only "moderate" removal effectiveness for Oil and Grease.² The CASQA Handbook does not assert that the limited infiltration capability of some detention basins is enough to mitigate detention basins' ineffective removal rate of Oil and Grease. As WLC would be one of the largest master-planned warehousing complex in the world, there would be a large number of trucks delivering shipments every day. This means a significant amount of Oil and Grease would need to be removed prior to any stormwater discharging from the site or entering detention basins. Detention basins are not sufficient to remove this Oil and Grease. Pretreatment BMP's to control Oil and Grease prior to discharge into detention or infiltration basins are needed. WLC does not provide analysis of the significant effect that runoff polluted with Oil and Grease would have on the San Jacinto Wildlife Area and wetlands. Further, WLC does not provide BMPs or mitigation measures to deal with Oil and Grease.

Finally, the CASQA Handbook rated detention basins' nutrient removal capabilities as "low".³ The CASQA Handbook does not assert that the limited infiltration capability of some detention basins is enough to mitigate detention basins' ineffective removal rate of nutrients. In addition, runoff from the WLC would enter the impaired waters of Canyon Lake and Lake Elsinore. Those two water bodies have Total Maximum Daily Loads (TMDL's) for nutrients. WLC explained in its FEIR that nutrients would be present in the stormwater from its facility. The proposed detention basins will not be able to rid the water of these nutrients, and would therefore be inadequate to satisfy the TMDL's of the impaired receiving water bodies. Waterkeeper notes that the proposed WLC

¹ California Stormwater Quality Association, *Stormwater Best Management Practice Handbook: New Development and Redevelopment*, TC-22, p.1 (2003).

² Id.

³ Id.

discharges nutrient laden stormwater into receiving waters that are already impaired water bodies with a nutrient TMDL. This new discharge of nutrient laden stormwater to a waterbody with a nutrient TMDL would undoubtedly cause or contribute to a violation of water quality standards. Such a discharge would most likely be prohibited under the Clean Water Act. Again, for WLC to be in compliance with the TMDL's, they would have to use BMPs that are effective for removing nutrients, such as infiltration basins, not just detention basins with some infiltration capacity. In order for the environmental review process to be meaningful, and for the public and relevant agencies to be aware of significant impacts per CEQA, the method of water quality treatment of nutrients should be discussed in the FEIR.

III.) WLC Provides No Analysis of the Significant and Inevitable Impacts of Polluted Stormwater Runoff into the San Jacinto Wildlife Area and Wetlands

The WLC project site lies directly in the middle of a sub-watershed that directs water from the Badlands open space area and the 60 freeway through the San Jacinto Wildlife Area, wetlands, and Mystic Lake. The construction of the WLC and conversion of this mostly natural area to impervious surfaces on a scale yet experienced in the United States will influence the water quality in the San Jacinto Wildlife Area and wetlands, as well as other receiving waters. WLC has calculated that the natural flows of the drainage areas will continue. However, by converting the pervious surfaces to impervious and conducting shipping and transportation activities onsite, it is inevitable that the site will discharge more stormwater after construction than it is currently discharging and pollutants will be transported from the site to the San Jacinto Wildlife Area and wetlands, as well as other receiving waters.

With approximately ninety percent of the ephemeral water bodies that once covered huge areas of inland California are now gone, it is especially important that ephemeral water bodies like Mystic Lake protected from pollution and alteration.

The hydraulic conditions of wetlands, such as the San Jacinto Wildlife Area, are strongly influenced by sources and distribution of water. The project may result in the discharge of polluted surface water during operation. Storm water runoff from the roadways, parking lots, and commercial and industrial buildings can carry a variety of pollutants such as sediment, petroleum hydrocarbons, construction materials, landscaping chemicals, nutrients and metals. Releasing contaminated storm water at a controlled rate after a storm event will change the hydrology of downstream areas such as Mystic Lake by providing a more regular flow of water into the ephemeral lake. The FEIR is insufficiently detailed in its description of the type of treatment captured water will undergo, if any, before it is released into Mystic Lake. The FEIR must specify the type of treatment captured storm water will undergo prior to release into Mystic Lake and the San Jacinto Wildlife Area.

WLC provides no analysis of the effects of pollution or extra runoff on the San Jacinto Wildlife Area, wetlands, or ephemeral water bodies like Mystic Lake. The baseline water quality conditions on the project site, especially the southern border that abuts the San Jacinto Wildlife Area, should be established before any development on the project site is approved because a study conducted after the approval of a project “will inevitably have diminished influence on decision making.”⁴

⁴ *Communities for a Better Environment et al., v. City of Richmond*, 184 Cal.App.4th 70, 73 (2010).

This is not only a potential significant effect of the project, it is inevitable. Therefore, if WLC does not conduct such an analysis, they would be violating CEQA by not providing the public and relevant agencies with a highly likely significant impact of the project.

Specifically, WLC needs to provide data on the impact of additional stormwater runoff and/or polluted stormwater on the San Jacinto Wildlife Area and wetlands, as well as their proposed mitigation. In addition, WLC needs to explain the monitoring system designed to determine whether additional stormwater runoff or polluted stormwater is discharging to the San Jacinto Wildlife Area. Since WLC proposes to have one of the world's largest master-planned warehousing complexes drain directly into a protected wildlife area and wetlands, WLC cannot simply claim that their BMPs will never fail. The importance of a clean, natural flow of water to the Wildlife Area and wetlands, combined with the massive scale of the project, necessitates that WLC take steps to ensure that inevitable impact of BMP failure on the Wildlife Area and wetlands is known.

IV.) The Proposed BMPs Will Not Ensure that Groundwater is Adequately Recharged

As noted above, the proposed detention basin system will not be able to infiltrate water at the levels currently seen by the natural site (90%). Although detention basins can infiltrate some water, this is not their purpose. Therefore, unless WLC builds infiltration basins, there will not be groundwater recharge at natural levels. WLC does not provide an analysis of what impacts would occur were they to further deplete groundwater in the area. Given that the project area will undergo a massive increase in impervious surface area, it is overly speculative to assume that the loss of groundwater recharge will be offset by irrigation of the project's drought tolerant landscaped areas.

In light of the serious statewide drought and the arid region of the project site, virtually any groundwater depletion would constitute a significant impact. Therefore, per CEQA, WLC must conduct a groundwater depletion impact analysis. Given the gravity of the water shortage in California and the region, WLC cannot simply claim that its BMP system will always result in full groundwater recharge. Given the potentially very significant impact if the proposed BMPs do not result in full groundwater recharge, WLC must give an analysis of this situation per CEQA.

V.) Detention Basins are Not Habitat Mitigation

In the FEIR, WLC explains that their detention basins will also be used as low-quality habitat mitigation. Detention basins must be scraped clean periodically, and do not provide even low-quality habitat mitigation for impacts to wetlands. In addition, habitat mitigation credit cannot be given for a facility taking measures that they are required to do. The installation of detentions basins is the result of a analysis by the project proponent of the LID prioritization arising out of the County of Riverside's Municipal Separate Storm Sewer System Permit. WLC cannot receive mitigation credit for installing BMPs which are otherwise required and provide marginal habitat benefit, at best.

VI.) Construction Related Water Quality Impacts Will Be Significant

A proposed project of this size and nature in this location will require massive grading and construction likely to threaten downstream water quality. The Environmental Protection Agency has cited sediment-laden runoff from construction projects as one of the most potentially damaging forms of water pollution. Sediment leaving construction sites may deliver toxic chemicals and nutrients into waterways. The threat of increased sedimentation to Mystic Lake must be analyzed in

the FEIR. Treatment Control BMPs listed in the FEIR do not include treatment for sediment. Instead, the FEIR relies on the future acquisition of an NPDES permit to address the control of sediment discharges from the project site. This is inadequate, and an assessment of the significant impacts of construction-related polluted runoff is necessary.

VII. The Cumulative Impacts of Development in the Region are Not Adequately Addressed in the FEIR

Development within the watershed will result in an increase in impervious surfaces, in addition to changes in land use and associated pollutant runoff characteristics. Increased impervious surfaces are likely to alter existing hydrology and increase potential pollutant loads. The FEIR does not contemplate other reasonably foreseeable future projects that may have direct or indirect impacts on receiving waters and the adjacent San Jacinto Wildlife Area. WLC argues publicly that its proposal will create economic development in the area, and so the potential impacts of this project economic stimulus need to be addressed in the FEIR.

VIII. Conclusion

Waterkeeper supports responsible development and encourages the adoption of a comprehensive FEIR that more specifically addresses how the direct and indirect impacts of the project to the region's water quality, wildlife areas and wetlands will be mitigated.

Please do not hesitate to contact the Waterkeeper office with any questions or comments on our WLC position. We look forward to working with the City of Moreno Valley on resolving these and other issues with this priority project.

Regards,

Garry Brown
Executive Director
Inland Empire Waterkeeper

Joseph Fass
211 Campbell Ave
Redlands, CA 92373
310-874-0829
jfass@pricefass.com

June 10, 2015

Mr. Mark Gross
 City of Moreno Valley
 Community Development Department
 14177 Frederick Street
 PO Box 88005
 Moreno Valley, CA 92552

RE: World Logistics Center Final Environmental Impact Report (EIR)
 SCH# 2012021045

Dear Mr. Gross:

I am a frequent user of Northern San Jacinto Valley as well as a fractional owner of property adjacent to the San Jacinto Wildlife Area. The property I own has been meticulously developed for seasonal wetlands. It is used year round for bird and mammal habitat and for migratory waterfowl hunting during the seasons dictated by State and Federal agencies charged with protecting such species of waterfowl.

The Northern San Jacinto Valley is a historical part of the Pacific Flyway whose importance was first documented in the journals of Juan Bautista de Anza, an early Spanish explorer headed two expeditions on what would eventually become the overland route to upper or "Alta" California. In the book Anza And The Northwest Frontier of New Spain by J.N. Bowman and Robert F. Heizer, Carl Schaefer Dentzel, the former Director of the Southwest Museum writes: "Anza was a trail blazer, a history maker, a symbol of great human accomplishment and service to the peoples of Mexico and the United States. He was both a visionary and a doer – and though he and his colleagues may never in their wildest dreams have foreseen the results of their efforts, history has proven they did their work wisely and well."

There are only 23 National Trails in the United States. Each of the Trails was created by Public Law because of their significance to the country's history or because of the natural beauty they capture or the recreational opportunities. Similar to the Lewis and Clark Trail, the Anza Trail is recognized because of its historical significance.

In both expeditions, what is now Mystic Lake is mentioned prominently in the diaries of Anza and Father Pedro Font, a missionary accompanying Anza in the second expedition (1775-1776).

On his first expedition to the area on March 19, 1774 a description of Anza's diary entry from the Webroots Library U.S. History states:

“That night it rained and snowed, and it was not until the next afternoon that the expedition started, taking its way over the divide between Vandeveter flat and Hemet valley, an elevation of four thousand nine hundred and eighty-five feet, and camped at a beautiful lake in Hemet Valley which Anza named Laguna del Principe. In crossing the divide he says he found a fair vein of silver ore. The next three days he traveled down the Hemet valley, the San Jacinto River, camping on March 19 on the boarder of a large and beautiful lake, covered with white geese, which he named Laguna de San Antonio de Bucarelli. This was San Jacinto Lake (Later renamed Mystic Lake). He is enthusiastic in his description of the beautiful river, the trees, and the flowers. The river he named San Jose, and the San Jacinto Valley he called La Valle Ameno de San Jose (The pleasant valley of San Jose). Into this pleasant valley comes the north fork of the San Jacinto River, a bounding, precipitous stream of such crystalline beauty that they named the gorge down which it runs La Canada del Paraiso—the Vale of Paradise.”

In a historical chronicle of the first expedition, his camp labeled number 58 was located generally north of the Ramona Expressway near Davis Road. The lake Anza named Laguna se San Antonio de Bucarelli is adjacent to the 4,850-acre San Jacinto Wildlife Area featuring restored wetlands and wildlife habitat. Anza described the lake, the outlet area of the San Jacinto River, as “several leagues in circumference and as full of white geese as water.”

While the City of Moreno Valley contemplates paving over a historically significant portion of the Juan Bautista de Anza National Trail Corridor with warehouses, I think the process of identifying the resulting loss of historical wildlife habitat and California history has fallen short in the EIR process.

As a duck hunter, environmentalist and a person who has worked the land for over twenty-five years to help restore wetlands and maintain riparian and upland habitat, I believe the EIR falls short in addressing important issues involving habitat-sensitive site design and development practices to minimize the impact of development on wildlife.

Of particular concern in reading the EIR is that there is little or no material regard, concern or mitigation by the developer(s) of the proposed World Logistics Center along the borders and adjacent lands of the San Jacinto Wildlife Area and the greater Northern San Jacinto Valley. This a massive project proposal that will place a shadow of development in the very backyard of an extremely protected, sensitive area of Riverside County that has been set aside as a mitigation for the California Water Projects. It is therefore ironic we find ourselves asking the City of Moreno Valley to consider protecting what was already intended by the State of California to be protected.

One can only look at the light pollution and footprint of the one million square foot Sketchers warehouse on Theodore Road from a duck blind in the early morning darkness to understand what forty more such buildings will bring to the sensitive wildlife areas. We need to protect this area at all costs. We must address the environmental issues in relation to the loss of wildlife

habitat. This is too important an area to pollute with buildings that will subtract from the senior rights of the wildlife that have inhabited this area for millennia. It is in this spirit, I offer some counter ideas on assessing development taken directly from the New Hampshire Department of Environmental Services.

I am an accountant by trade rather than a biologist, so rather than trying to become a biologist, I offer the narrative from two very important Environmental Fact Sheets published by the New Hampshire Department of Environmental Services. The Fact Sheets are attached as Exhibits 1 & 2. While the fact sheets are specific to New Hampshire, the environmental movement knows no boundaries and sound science is applicable in California or any other City, County, State, Territory, or Country for that matter, as we are learning from the global warming issues. It is the fragmentation process of looking only as far as our city boundaries and coffers that result in dire mistakes being made that have consequences that reach from Canada to Mexico on the Pacific Flyway.

The following are important direct excerpts from these referenced publications. Where possible and applicable, I substituted California agencies for the New Hampshire public agencies referenced in the document.

“Habitat-Sensitive Site Design and Development Practices to Minimize the Impact of Development on Wildlife

The rapid increase in human population and rate of development in New Hampshire is placing significant stress on our native wildlife populations. Land that was once habitat for wildlife species is being converted into residential and commercial subdivisions, roads, and other uses. The development of land and related activities impact both the quantity and quality of wildlife habitat. This fact sheet provides an overview of those impacts and offers some strategies for developers and towns to reduce the impact of development on native wildlife. This fact sheet is part of a two-part series; a second fact sheet focuses on actions a local municipality should pursue to better conserve wildlife habitat.

How Development Impacts Wildlife Habitat Loss

The loss of habitat through the conversion of land from its natural state to a developed landscape represents the single greatest impact of increased human activity on native wildlife. All animal species require certain habitat features to survive. Development typically eliminates or significantly changes many important habitat features found in a natural area, thus reducing or eliminating the habitat value of that area. For example, a diverse wildlife population depends upon the natural diversity of native plants found in most undeveloped areas. Development often changes the vegetative community, making it more difficult for many native species to survive. Those species able to survive in urban settings may thrive, but the rest are forced to find new territory or perish.

Habitat Fragmentation

Habitat fragmentation is a less obvious consequence of development, reducing both the quantity and quality of habitat. Fragmentation is a process whereby large tracts of the natural landscape are gradually developed and subdivided until only patches of original habitat remain. The patches are often too small and too far apart to support the basic survival and reproductive needs of many wildlife species during various stages of their life-cycle or in different times of the year. When a species' habitat is separated by distances that make movement from one patch to another impossible, the impacts on the genetic health of the population are significant and reduce a species ability to reproduce and withstand stress. In addition, smaller habitat patches and the wildlife that depend on them are more vulnerable to the catastrophic effects of natural disturbances such as fire and ice storms. Fragmentation also results in higher populations of generalist predators, resulting in increased predation on those species that attempt to use the remaining habitat blocks.

Changing Landscape

The impact of human activity on wildlife extends beyond the actual area of development. When evaluating the impact of human activity on wildlife, we should consider a "disturbance zone"- the entire area where habitat value has been meaningfully reduced. The encroachment of human activity into a natural area creates more "edge effects." Edge effects are changes in environmental conditions and animal behavior and well-being that result from being in close proximity to the border between habitat areas. Unlike natural borders, human disturbances often create "harder" edges with greater detrimental impacts on wildlife. Even seemingly small manmade disturbances, such as power line easements, can have major consequences for wildlife. In addition, the encroachment of human activity reduces the amount of interior habitat area relative to edge or border area. While borders between two different habitats are often an essential part of the ecology of an area, when habitat becomes so small that it is all edge and no interior, it loses its ability to support those species that require an isolated interior for some portion of their life, e.g. some nesting birds. Landscape disturbance caused by development can also serve to introduce invasive species into natural habitats, further degrading the quality of remaining habitat areas.

The Impact of Roads

Roads may be the "single most destructive element of the habitat fragmentation process." They can:

- Disrupt or prevent passage across the disturbed area.
- Provide an entrance for exotic species or predators.
- Increase mortality.
- Increase unnatural disturbances from sources such as pollution and fire.

Source: Noss, 1993, Schonewald-Cox and Buechner 1990 and Bennett 1991, as cited in Duerksen, et al.

Changing Aquatic Habitat

Development also affects the quality and quantity of aquatic habitat. The more hard surface present after development, the less rainwater infiltrates the soil. Rainwater instead runs off the land at an increased volume and rate. This reduces the recharge of groundwater and increases flooding, streambed erosion, and sedimentation. Runoff from developed areas also is often warmer and polluted with pathogens (e.g. bacteria and viruses), household chemicals, metals, fertilizers, pesticides, oil, and grease. As vegetative buffers along water bodies are lost, sunlight can further warm water beyond a threshold at which native species can survive and reproduce. The structural habitat of aquatic systems also can be significantly degraded by modifications associated with roads and development. The quality and flow of rivers, streams and wetlands can be reduced by inadequate or inappropriately designed culverts, creation of new dams, and channel straightening or modification.

Daily Human Activity

Human activity introduces changes to the surrounding environment that can negatively impact natural habitat. Changes in lighting in an area, for example, can significantly affect some species' behavioral and biological rhythms, which are guided by natural cycles of light and dark. Nocturnal species, particularly birds, can become disoriented by night-time lighting. Domestic pets, particularly cats, may prey excessively on wildlife, such as ground-nesting birds. The availability of household trash can alter the composition of wildlife communities by providing food for animal populations that thrive on trash (such as rats, raccoons, and skunks) to the detriment of those that do not, e.g. small mammals and song birds. Human recreational activity in an area may directly impact wildlife and reduce the quality of the habitat provided. Human activities can disturb sensitive habitats, like wetlands, and disturb or "flush" wildlife. Flushing wildlife raises an animals' stress level and increases energy consumption. If repeated frequently, such disturbance can impact reproduction and survivorship.

Habitat-Sensitive Site Design and Development Practices

This section offers developers and towns a few basic site design and development practices to minimize the impact of development on habitat and reduce the impact of human activity on wildlife.

Practice #1 Applicants should review the habitat conservation goals cited in local and regional plans and manuals on habitat identification and protection.

A development plan should reflect the town's and/or region's habitat conservation objectives. Local master plans, habitat conservation plans, local open space plans, regional land trust or conservation organization's plans, and natural resource inventories can provide baseline information on local and regional goals for habitat conservation and help identify important habitat features that should be conserved. The California Department of Wildlife can provide more specific information on what natural features to look for and conserve. Consideration of local and regional habitat objectives in preparing a development proposal helps to establish a positive working relationship with the community, protects natural features that make the land attractive, and supports timely project review and approval.

Practice #2 Apply principles of conservation design to minimize impacts and preserve natural undeveloped lands.

Practice #3 Preserve large and contiguous blocks of natural, undisturbed vegetation, looking for opportunities to connect to undeveloped lands on adjacent parcels.

Leaving only small isolated patches of undeveloped land greatly reduces the habitat value of that land for wildlife. Development should be designed so that remaining open space is located adjacent to other open space, thereby creating large contiguous tracts of habitat. The larger the tract, the more likely it is to sustain large, healthy, and diverse populations of wildlife. Municipalities and developers should explore mechanisms, such as density averaging or density transfer, to allow the transfer of development from areas of high habitat value to other areas that are better suited for development.

Practice #4 Conserve rare and outstanding landscape elements, such as unique features or habitats, by directing development to other areas.

Habitats that are unusual state-wide or in a particular geographic region are often vital to rare wildlife species. Salt marshes, riparian areas, vernal pools, enriched forests, and large wetland complexes deserve particular attention. Uplands adjacent to these areas are also important because several habitat types are often necessary for meeting the needs of wildlife species during different seasons and life-cycle stages. Development should be guided away from lands featuring intact diverse habitat types and toward more homogenous areas of lesser habitat value. Communities should consider obtaining conservation easements on areas of high habitat value to conserve this valuable natural resource.

Practice #5 Identify and conserve wildlife corridors through the property to facilitate wildlife movement across developed areas.

Undeveloped corridors of land that connect habitat areas should be preserved wherever possible. Carefully designed strips of protected land can allow for wildlife movement between larger habitat areas, helping to preserve the habitat value of adjacent lands. To be effective, corridors must be designed with actual wildlife movements in mind, be of sufficient width to provide adequate cover, and remain in a natural, vegetated state. Often wildlife corridors will align with wetlands and ridges. A site-specific wildlife assessment can be prepared to identify appropriate corridors through a property.

Examples of Important Habitat

Habitat of Rare Wildlife Species - Lands inhabited by species listed as endangered, threatened, or of special concern should be considered a priority for conservation.

Unfragmented Lands - Large tracts of contiguous open space that feature a mix of habitat types are more valuable to wildlife than small, fragmented patches.

Riparian Areas & Shorelines - The interaction of land and water fosters biodiversity and is invaluable for many reptiles, amphibians, and migratory birds.

Priority Wetlands - Swamps, marshes, tidal flats, wet meadows, and bogs.

Agricultural and Other Open Land - Some species are dependent on open fields, an increasingly rare habitat type.

Other Unique or Critical Habitats - Habitat types that are rare state-wide or to a particular geographic region are vital for maintaining regional biodiversity.

Connecting Lands - Areas with very-low development density between large unfragmented lands that provide wildlife with habitat, food, and cover, as well as corridors for movement.

Practice #6 Maintain significant buffers of undeveloped land between important habitat areas and developed areas.

Pedestrian and vehicular activity affects wildlife even if it occurs at a great distance. Buffers of undeveloped land between important habitat areas and developed areas can reduce the negative impacts of human activity on wildlife. Two guidance documents, "Buffers for Wetlands and Surface Waters: A Guidebook for New Hampshire Municipalities" and "Buffer Zones and Beyond: Wildlife Use of Wetland Buffer Zones and their Protection under the Massachusetts Wetland Protection Act," provide information on appropriate buffers for wildlife.

Practice #7 Maintain or replace natural features and functions within developed areas.

Measures should be taken to mitigate negative impacts to wildlife habitat that occur during and after construction:

- Capture and infiltrate rainwater on-site to maintain the natural water cycle. Techniques for managing stormwater on-site, such as rain gardens on individual lots, are often less expensive than conventional stormwater treatment and retention systems. See www.lowimpactdevelopment.org for more information on this topic.
- Maintain the structure and function of aquatic systems. For example, culverts should have sufficiently large openings to maintain natural water flow, have natural stream bottoms, and be sized for bank-full stream width (i.e., the width of the stream during the 1½ year flow event) to reduce potential future erosion near culvert openings. To ensure that fish can access the upper reaches of their habitat, culverts should have a trough or narrow channel in the bottom running the full length of the culvert to maintain sufficient water depth during lowflow periods to support fish passage.
- Use native vegetation for landscaping. Using native vegetation supports wildlife needs for food and cover, avoids introducing invasive species that can threaten natural ecosystems, and minimizes watering needs.
- Minimize clearing, grading, and compaction of soil.
- De-compact remaining open soil after construction is complete and replace an adequate amount of top soil to facilitate faster regrowth of vegetation and better absorption of rainwater. This has benefits for both terrestrial and aquatic habitats.

Actions for Local Municipalities

This section offers some basic actions to pursue to reduce the impact of development and human activity on native wildlife.

Specifically state habitat conservation goals in your master plan, open space plan, and/or habitat conservation plan. *Development proposals and regulatory changes are more likely to be consistent with a community's habitat conservation goals if those goals and objectives are clearly stated in a town's master plan. If a separate open space plan or habitat conservation plan is prepared, it should be adopted as an official part of the master plan. Including habitat conservation goals and objectives (or other plans focusing on habitat conservation) as part of the local master plan provides the basis for local land use regulations and changes in local zoning to support habitat conservation.*

Prepare a natural resources inventory (NRI) to identify habitat areas that merit conservation. *Awareness of a town's natural resources is vital to informed decision-making about habitat conservation. A basic natural resources inventory is the first step. This should include a base map, land cover map, wetlands composite map, aerial photographs, tax map, topographic map, and wildlife information (see NRI Guidebook by UNH Cooperative Extension). Priority areas for habitat conservation can be easily identified by overlaying these maps and noting the co-occurrence of natural resource features important for wildlife. Also, the California Department of Wildlife has prepared habitat assessment maps for the entire state in support of California's Comprehensive Wildlife Conservation Plan, which was submitted in 2005 and approved in 2007.*

Map the town's "green infrastructure" and plan for conservation as well as development within a community. *Natural resource features that are vital to human and wildlife well-being are a community's "green infrastructure." Consideration of these landscape features in open space and habitat conservation plans is essential to comprehensive natural resource planning. Comprehensive planning considers both conservation and development. It is vital to achieving a balance between economics and environmental health, between private property rights and community goals. Green Infrastructure is an interconnected network of protected land and water that supports native species, maintains natural ecological processes, sustains the quality of air and water resources, and contributes to the health and quality of life for all communities and people. A basic natural resources inventory (NRI) will help identify green infrastructure as the first step in planning for its conservation. Once specific areas are identified, their locations and an explanation of their importance should be clearly stated in community plans. With appropriate regulatory mechanisms, communities can plan for open space in the same way they plan for transportation networks and other types of development. For more information on Green Infrastructure see also www.greeninfrastructure.net.*

Revise local zoning and development ordinances to reflect habitat conservation goals cited in local and regional plans. *Developers and communities can work together to reduce the impact on habitat. New lots often have greater value if the natural amenities that make the land attractive in the first place are preserved. A community that provides opportunities for innovative approaches will generally attract a higher quality development. Subdivision and site plan regulations should include incentives to promote the conservation of habitat, open space, and natural resources. A community also can plan for areas where*

higher density development is more appropriate to balance reductions in development in areas of greater habitat value. Municipalities can strengthen requirements in their local zoning and ordinances:

- *Require site-specific natural resource inventories and/or wildlife assessments.*
- *Require pre-proposal meetings with the planning board where the focus is on understanding the natural resource features of the site and providing input on the potential development plan.*
- *Require that development proposals demonstrate how they will conserve important habitat features.*
- *Require conservation-design subdivisions as the preferred format for new residential subdivisions.*

Ensure that your community has an adequate management plan in place. *Appropriate management of habitat areas can ensure that conservation goals are met and maintained over the long-term. Basic strategies for maintaining the quality of protected habitat include enforcement of use restrictions and regular monitoring of habitat quality.*

Examples of Regulatory Options

- *Overlay zone for wetlands and streams. Overlay zones establish requirements beyond standard zoning regulations for specified areas.*
- *Require conservation/open space subdivision design in areas designated by the town as important for habitat conservation.*
- *Develop a habitat conservation checklist for application review. A checklist may increase adherence by applicants and planning boards to habitat-related objectives and design criteria.*
- *Transfer of development rights (TDRs) programs redirect development from areas that are a priority for conservation to areas identified by the community as appropriate for growth.*
- *Encourage maximum setbacks/buffers in projects with important interior wildlife habitat areas. A buffer is a naturally vegetated area adjacent to a habitat area. A setback is a minimum distance between development and an important landscape feature.*
- *Maintain an additional unfragmented vegetated buffer along roadsides where streams and wetlands cross roads (300 ft. total minimum).*

Raise funds to purchase development rights to permanently conserve important habitat areas. *Towns have many options for raising funds for land conservation. These include, but are not limited to:*

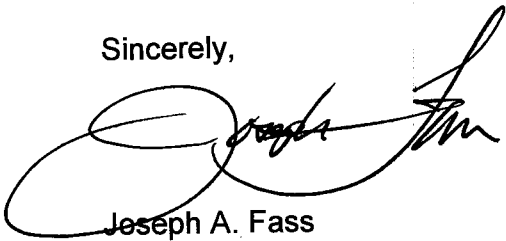
- Authorization of bonds for purchasing land.
- Allocation of the land use change tax to a town conservation fund.
- Private land trusts may provide money for the purchase of conservation lands, as do certain government grant and loan programs.

Control invasive and exotic species. To maintain healthy populations of native flora and fauna, invasive and exotic species must be controlled. Invasives are non-native species that proliferate rapidly and often have no local natural predators. This allows them to out-compete native species, often without filling the natives' vital roles in ecosystems".

Closing

Given the scale of the project, the substantial direct impact on the environment of the Northern San Jacinto Valley and the San Jacinto Wildlife Area, it is critical for an EIR to develop a plan that includes addressing Habitat Loss, Habitat Fragmentation, Changing Landscape, the Impact of Roads, Changing Aquatic Habitat, and Human & Vehicle Activity. Furthermore, if development is warranted under these caveats, habitat-sensitive site design and development practices and goals need to be established so development can be considered with a wider goal of conservation of species and habitat benefiting from such development. Otherwise, the degradation of the Wildlife Area will be a legacy the public will suffer long after the tax dollars are earned and spent by the City of Moreno Valley.

Sincerely,



Joseph A. Fass

Enclosures (Exhibit 1 & 2)

Cc: Honorable Mayor and Council Members – City of Moreno Valley
 14177 Frederick Street
 Moreno Valley, CA 92552

State Clearinghouse
 P.O. Box 3044
 Sacramento, CA 95812-3044

Mr. Thomas Jelenic
 Vice President of Planning and Program Management'

Highland Fairview
14225 Corporate Way
Moreno Valley, CA 92553

References and Resources

Arendt, Randall G. 1996. *Conservation Design for Subdivisions*. Island Press, Washington, D.C.

Boyd, Lynn. July 2001. *Buffer Zones and Beyond: Wildlife Use of Wetland Buffer Zones and their Protection under the Massachusetts Wetland Protection Act*. Wetland Conservation Professional Program, Department of Natural Resource Conservation, University of Massachusetts. Available at <http://www.umass.edu/nrec/onlinedocs.html>.

Benedict, Mark A. and Edward T. McMahon. 2001. *Green Infrastructure: Smart Conservation for the 21st Century*. Sprawl Watch Clearinghouse Monograph Series, Washington, D.C.

Chase, Vicki, Laura Deming, and Francesca Latawiec. November 1995 (revised May 1997). *Buffers for Wetlands and Surface Waters: A Guidebook for New Hampshire Municipalities*. Audubon Society of New Hampshire and NH Office of State Planning.
Duerksen, C., Elliot, D., Hobbs, N., Johnson, E., and J. Miller. 1997. *Habitat Protection Planning: Where the Wild Things Are*. American Planning Association, Chicago, IL. PAS Report 470/471.

Kanter, John, Suomala, Rebecca, and Ellen Snyder. 2001. *Identifying and Protecting New Hampshire's Significant Wildlife Habitat: A Guide for Towns and Conservation Groups*. Nongame and Endangered Wildlife Program of the NH Fish and Game Department, Concord, NH. Natural Lands Trust. September 2001. *Growing Greener: Conservation by Design*.

For more information about rain gardens, see
U.S. Environmental Protection Agency. *Nonpoint Source News-Note*. August/September 1995 Issue #42. <http://www.epa.gov/OWOW/info/NewsNotes/issue42/urbrnf.html>

For more information about preserving rural character in NH, see NH OSP. *Preserving Rural Character: The Agricultural Connection*. Winter 2000 Technical Bulletin.
<http://nh.gov/oep/resourcelibrary/documents/TB6.pdf>

Corser, Susan. *Preserving Rural Character Through Cluster Development*. PAS Memo. July 1994.
<http://nh.gov/oep/resourcelibrary/referencelibrary/c/clusterregulationsordinances/index.htm>
Site Specific Wildlife Assessment Form. DRAFT. Currently under development by NH Fish and Game Dept., Audubon Society of NH, UNH Cooperative Extension, Jordan Institute, and NH Association of Natural Resource Scientists, for use by wetland and soil consultants and others working on land use planning and development projects.

New Hampshire Department of Environmental Sciences ID-4 and ID-5, 2004

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

ENVIRONMENTAL Fact Sheet



29 Hazen Drive, Concord, New Hampshire 03301 • (603) 271-3503 • www.des.nh.gov

ID-4

2004

Habitat-Sensitive Site Design and Development Practices to Minimize the Impact of Development on Wildlife

The rapid increase in human population and rate of development in New Hampshire is placing significant stress on our native wildlife populations. Land that was once habitat for wildlife species is being converted into residential and commercial subdivisions, roads, and other uses. The development of land and related activities impact both the quantity and quality of wildlife habitat. This fact sheet provides an overview of those impacts and offers some strategies for developers and towns to reduce the impact of development on native wildlife. This fact sheet is part of a two-part series; a second fact sheet focuses on actions a local municipality should pursue to better conserve wildlife habitat.

How Development Impacts Wildlife

Habitat Loss

The loss of habitat through the conversion of land from its natural state to a developed landscape represents the single greatest impact of increased human activity on native wildlife. All animal species require certain habitat features to survive. Development typically eliminates or significantly changes many important habitat features found in a natural area, thus reducing or eliminating the habitat value of that area. For example, a diverse wildlife population depends upon the natural diversity of native plants found in most undeveloped areas. Development often changes the vegetative community, making it more difficult for many native species to survive. Those species able to survive in urban settings may thrive, but the rest are forced to find new territory or perish.

Habitat Fragmentation

Habitat fragmentation is a less obvious consequence of development, reducing both the quantity and quality of habitat. Fragmentation is a process whereby large tracts of the natural landscape are gradually developed and subdivided until only patches of original habitat remain. The patches are often too small and too far apart to support the basic survival and reproductive needs of many wildlife species during various stages of their life-cycle or in different times of the year. When a species' habitat is separated by distances that make movement from one patch to another impossible, the impacts on the genetic health of the population are significant and reduce a species ability to reproduce and withstand stress. In addition, smaller habitat patches and the wildlife that depend on them are more vulnerable to the catastrophic effects of natural disturbances such as fire and ice storms. Fragmentation also results in higher populations of generalist predators, resulting in increased predation on those species that attempt to use the remaining habitat blocks.

Changing Landscape

The impact of human activity on wildlife extends beyond the actual area of development. When evaluating the impact of human activity on wildlife, we should consider a "disturbance zone"- the entire area where habitat value has been meaningfully reduced. The encroachment of human activity into a natural area creates more "edge effects." Edge effects are changes in environmental conditions and animal behavior and well-being that result from being in close proximity to the border between habitat areas. Unlike natural borders, human disturbances often create "harder" edges with greater detrimental impacts on wildlife. Even seemingly small manmade disturbances, such as power line easements, can have major consequences for wildlife.

In addition, the encroachment of human activity reduces the amount of interior habitat area relative to edge or border area. While borders between two different habitats are often an essential part of the ecology of an area, when habitat becomes so small that it is all edge and no interior, it loses its ability to support those species that require an isolated interior for some portion of their life, e.g. some nesting birds.

Landscape disturbance caused by development can also serve to introduce invasive species into natural habitats, further degrading the quality of remaining habitat areas.

The Impact of Roads

Roads may be the "single most destructive element of the habitat fragmentation process." They can:

- Disrupt or prevent passage across the disturbed area.
- Provide an entrance for exotic species or predators.
- Increase mortality.
- Increase unnatural disturbances from sources such as pollution and fire.

Source: Noss, 1993, Schonewald-Cox and Buechner 1990 and Bennett 1991, as cited in Duerksen, et al.

Changing Aquatic Habitat

Development also affects the quality and quantity of aquatic habitat. The more hard surface present after development, the less rainwater infiltrates the soil. Rainwater instead runs off the land at an increased volume and rate. This reduces the recharge of groundwater and increases flooding, streambed erosion, and sedimentation. Runoff from developed areas also is often warmer and polluted with pathogens (e.g. bacteria and viruses), household chemicals, metals, fertilizers, pesticides, oil, and grease. As vegetative buffers along water bodies are lost, sunlight can further warm water beyond a threshold at which native species can survive and reproduce.

The structural habitat of aquatic systems also can be significantly degraded by modifications associated with roads and development. The quality and flow of rivers, streams and wetlands can be reduced by inadequate or inappropriately designed culverts, creation of new dams, and channel straightening or modification.

Daily Human Activity

Human activity introduces changes to the surrounding environment that can negatively impact natural habitat. Changes in lighting in an area, for example, can significantly affect some species' behavioral and biological rhythms, which are guided by natural cycles of light and dark. Nocturnal species, particularly birds, can become disoriented by night-time lighting. Domestic pets, particularly

cats, may prey excessively on wildlife, such as ground-nesting birds. The availability of household trash can alter the composition of wildlife communities by providing food for animal populations that thrive on trash (such as rats, raccoons, and skunks) to the detriment of those that do not, e.g. small mammals and song birds.

Human recreational activity in an area may directly impact wildlife and reduce the quality of the habitat provided. Human activities can disturb sensitive habitats, like wetlands, and disturb or "flush" wildlife. Flushing wildlife raises an animals' stress level and increases energy consumption. If repeated frequently, such disturbance can impact reproduction and survivorship.

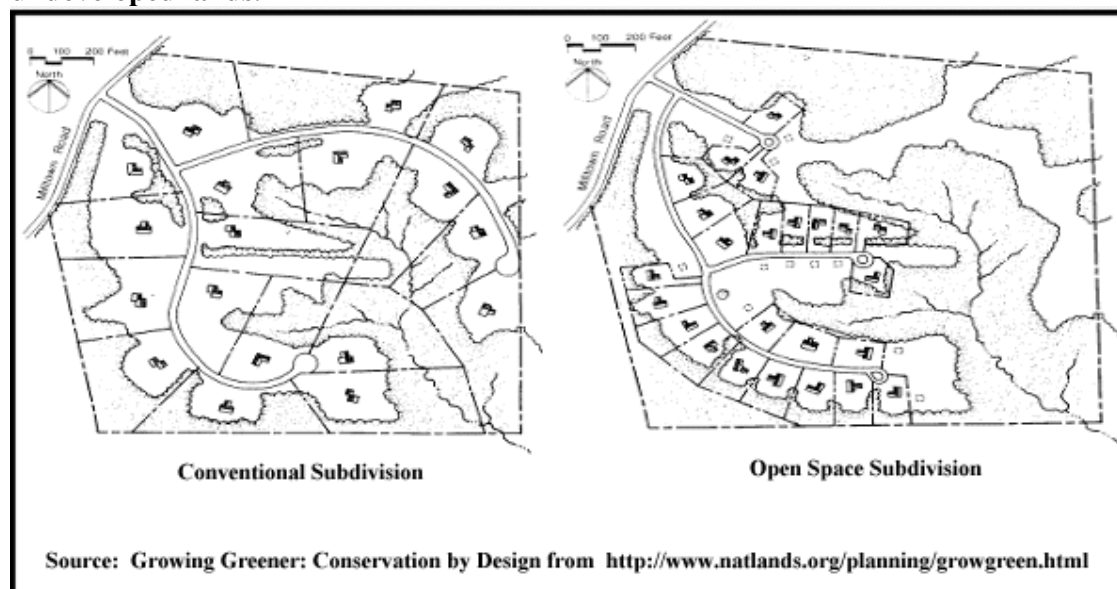
Habitat-Sensitive Site Design and Development Practices

This section offers developers and towns a few basic site design and development practices to minimize the impact of development on habitat and reduce the impact of human activity on wildlife.

Practice #1 Applicants should review the habitat conservation goals cited in local and regional plans and manuals on habitat identification and protection.

A development plan should reflect the town's and/or region's habitat conservation objectives. Local master plans, habitat conservation plans, local open space plans, regional land trust or conservation organization's plans, and natural resource inventories can provide baseline information on local and regional goals for habitat conservation and help identify important habitat features that should be conserved. Additional resources, such as Identifying and Protecting New Hampshire's Significant Wildlife Habitat: A Guide for Towns and Conservation Groups and New Hampshire's Comprehensive Wildlife Conservation Plan (due out by October 1, 2005) by the NH Fish and Game Department, can provide more specific information on what natural features to look for and conserve. Consideration of local and regional habitat objectives in preparing a development proposal helps to establish a positive working relationship with the community, protects natural features that make the land attractive, and supports timely project review and approval.

Practice #2 Apply principles of conservation design to minimize impacts and preserve natural undeveloped lands.



Practice #3 Preserve large and contiguous blocks of natural, undisturbed vegetation, looking for opportunities to connect to undeveloped lands on adjacent parcels.

Leaving only small isolated patches of undeveloped land greatly reduces the habitat value of that land for wildlife. Development should be designed so that remaining open space is located adjacent to other open space, thereby creating large contiguous tracts of habitat. The larger the tract, the more likely it is to sustain large, healthy, and diverse populations of wildlife. Municipalities and developers should explore mechanisms, such as density averaging or density transfer, to allow the transfer of development from areas of high habitat value to other areas that are better suited for development.

Practice #4 Conserve rare and outstanding landscape elements, such as unique features or habitats, by directing development to other areas.

Habitats that are unusual state-wide or in a particular geographic region are often vital to rare wildlife species. Salt marshes, riparian areas, vernal pools, enriched forests, and large wetland complexes deserve particular attention. Uplands adjacent to these areas are also important because several habitat types are often necessary for meeting the needs of wildlife species during different seasons and life-cycle stages. Development should be guided away from lands featuring intact diverse habitat types and toward more homogenous areas of lesser habitat value. Communities should consider obtaining conservation easements on areas of high habitat value to conserve this valuable natural resource.

Practice #5 Identify and conserve wildlife corridors through the property to facilitate wildlife movement across developed areas.

Undeveloped corridors of land that connect habitat areas should be preserved wherever possible. Carefully designed strips of protected land can allow for wildlife movement between larger habitat areas, helping to preserve the habitat value of adjacent lands. To be effective, corridors must be designed with actual wildlife movements in mind, be of sufficient width to provide adequate cover, and remain in a natural, vegetated state. Often wildlife corridors will align with wetlands and ridges. A site-specific wildlife assessment can be prepared to identify appropriate corridors through a property.

Examples of Important Habitat

Habitat of Rare Wildlife Species - Lands inhabited by species listed as endangered, threatened, or of special concern should be considered a priority for conservation.

Unfragmented Lands - Large tracts of contiguous open space that feature a mix of habitat types are more valuable to wildlife than small, fragmented patches.

Riparian Areas & Shorelines - The interaction of land and water fosters biodiversity and is invaluable for many reptiles, amphibians, and migratory birds.

Priority Wetlands - Swamps, marshes, tidal flats, wet meadows, and bogs. For a legal definition, see New Hampshire Code of Administrative Rules Wt 101.82.

Agricultural and Other Open Land - Some species are dependent on open fields, an increasingly rare habitat type.

Other Unique or Critical Habitats - Habitat types that are rare state-wide or to a particular geographic region are vital for maintaining regional biodiversity.

Connecting Lands - Areas with very-low development density between large unfragmented lands that provide wildlife with habitat, food, and cover, as well as corridors for movement.

Practice #6 Maintain significant buffers of undeveloped land between important habitat areas and developed areas.

Pedestrian and vehicular activity affects wildlife even if it occurs at a great distance. Buffers of undeveloped land between important habitat areas and developed areas can reduce the negative impacts of human activity on wildlife. Two guidance documents, "Buffers for Wetlands and Surface Waters: A Guidebook for New Hampshire Municipalities" and "Buffer Zones and Beyond: Wildlife Use of Wetland Buffer Zones and their Protection under the Massachusetts Wetland Protection Act," provide information on appropriate buffers for wildlife.

Practice #7 Maintain or replace natural features and functions within developed areas.

Measures should be taken to mitigate negative impacts to wildlife habitat that occur during and after construction:

- Capture and infiltrate rainwater on-site to maintain the natural water cycle. Techniques for managing stormwater on-site, such as rain gardens on individual lots, are often less expensive than conventional stormwater treatment and retention systems. See www.lowimpactdevelopment.org for more information on this topic.
- Maintain the structure and function of aquatic systems. For example, culverts should have sufficiently large openings to maintain natural water flow, have natural stream bottoms, and be sized for bank-full stream width (i.e., the width of the stream during the 1½ year flow event) to reduce potential future erosion near culvert openings. To ensure that fish can access the upper reaches of their habitat, culverts should have a trough or narrow channel in the bottom running the full length of the culvert to maintain sufficient water depth during low-flow periods to support fish passage
- Use native vegetation for landscaping. Using native vegetation supports wildlife needs for food and cover, avoids introducing invasive species that can threaten natural ecosystems, and minimizes watering needs.
- Minimize clearing, grading, and compaction of soil.
- De-compact remaining open soil after construction is complete and replace an adequate amount of top soil to facilitate faster regrowth of vegetation and better absorption of rainwater. This has benefits for both terrestrial and aquatic habitats.

References and Resources

Arendt, Randall G. 1996. *Conservation Design for Subdivisions* . Island Press, Washington, D.C.

Boyd, Lynn. July 2001. *Buffer Zones and Beyond: Wildlife Use of Wetland Buffer Zones and their Protection under the Massachusetts Wetland Protection Act* . Wetland Conservation Professional Program, Department of Natural Resource Conservation, University of Massachusetts. Available at <http://www.umass.edu/nrec/onlinedocs.html>.

Benedict, Mark A. and Edward T. McMahon. 2001. *Green Infrastructure: Smart Conservation for the 21st Century*. Sprawl Watch Clearinghouse Monograph Series, Washington, D.C.

Chase, Vicki, Laura Deming, and Francesca Latawiec. November 1995 (revised May 1997). *Buffers for Wetlands and Surface Waters: A Guidebook for New Hampshire Municipalities*. Audubon Society of New Hampshire and NH Office of State Planning.

Duerksen, C., Elliot, D., Hobbs, N., Johnson, E., and J. Miller. 1997. *Habitat Protection Planning: Where the Wild Things Are*. American Planning Association, Chicago, IL. PAS Report 470/471.

Kanter, John, Suomala, Rebecca, and Ellen Snyder. 2001. *Identifying and Protecting New Hampshire's Significant Wildlife Habitat: A Guide for Towns and Conservation Groups*. Nongame and Endangered Wildlife Program of the NH Fish and Game Department, Concord, NH.

Natural Lands Trust. September 2001. *Growing Greener: Conservation by Design*.

For more information about rain gardens, see

U.S. Environmental Protection Agency. *Nonpoint Source News-Note*. August/September 1995 Issue #42. <http://www.epa.gov/OWOW/info/NewsNotes/issue42/urbrnf.html>

For more information about preserving rural character in NH, see

NH OSP. *Preserving Rural Character: The Agricultural Connection*. Winter 2000 Technical Bulletin. <http://nh.gov/oep/resourcelibrary/documents/TB6.pdf>

Corser, Susan. *Preserving Rural Character Through Cluster Development*. PAS Memo. July 1994. <http://nh.gov/oep/resourcelibrary/referencelibrary/c/clusterregulationsordinances/index.htm>

Site Specific Wildlife Assessment Form. DRAFT. Currently under development by NH Fish and Game Dept., Audubon Society of NH, UNH Cooperative Extension, Jordan Institute, and NH Association of Natural Resource Scientists, for use by wetland and soil consultants and others working on land use planning and development projects.

ENVIRONMENTAL Fact Sheet



29 Hazen Drive, Concord, New Hampshire 03301 • (603) 271-3503 • www.des.nh.gov

ID-5

2004

Minimizing the Impact of Development on Wildlife: Actions for Local Municipalities

The rapid increase in human population and rate of development in New Hampshire is placing significant stress on our native wildlife populations. Land that was once habitat for wildlife species is being converted into residential and commercial subdivisions, roads, and other uses. The development of land and related activities impact both the quantity and quality of wildlife habitat. This fact sheet provides an overview of those impacts and offers some strategies for developers and towns to reduce the impact of development on native wildlife. This fact sheet is part of a two-part series; a second fact sheet focuses on habitat-sensitive site design and development practices.

How Development Impacts Wildlife

Habitat Loss

The loss of habitat through the conversion of land from its natural state to a developed landscape represents the single greatest impact of increased human activity on native wildlife. All animal species require certain habitat features to survive. Development typically eliminates or significantly changes many important habitat features found in a natural area, thus reducing or eliminating the habitat value of that area. For example, a diverse wildlife population depends upon the natural diversity of native plants found in most undeveloped areas. Development often changes the vegetative community, making it more difficult for many native species to survive. Those species able to survive in urban settings may thrive, but the rest are forced to find new territory or perish.

Habitat Fragmentation

Habitat fragmentation is a less obvious consequence of development, reducing both the quantity and quality of habitat. Fragmentation is a process whereby large tracts of the natural landscape are gradually developed and subdivided until only patches of original habitat remain. The patches are often too small and too far apart to support the basic survival and reproductive needs of many wildlife species during various stages of their life-cycle or in different times of the year. When a species' habitat is separated by distances that make movement from one patch to another impossible, the impacts on the genetic health of the population are significant and reduce a species ability to reproduce and withstand stress. In addition, smaller habitat patches and the wildlife that depend on them are more vulnerable to the catastrophic effects of natural disturbances such as fire and ice storms. Fragmentation also results in higher populations of generalist predators, resulting in increased predation on those species that attempt to use the remaining habitat blocks.

Changing Landscape

The impact of human activity on wildlife extends beyond the actual area of development. When evaluating the impact of human activity on wildlife, we should consider a "disturbance zone" - the entire area where habitat value has been meaningfully reduced. The encroachment of human activity into a natural area creates more "edge effects." Edge effects are changes in environmental conditions and animal behavior and well-being that result from being in close proximity to the border between habitat areas. Unlike natural borders, human disturbances often create "harder" edges with greater detrimental impacts on wildlife. Even seemingly small manmade disturbances, such as power line easements, can have major consequences for wildlife.

In addition, the encroachment of human activity reduces the amount of interior habitat area relative to edge or border area. While borders between two different habitats are often an essential part of the ecology of an area, when habitat becomes so small that it is all edge and no interior, it loses its ability to support those species that require an isolated interior for some portion of their life (e.g. some nesting birds).

Landscape disturbance caused by development can also serve to introduce invasive species into natural habitats, further degrading the quality of remaining habitat areas.

The Impact of Roads

Roads may be the "single most destructive element of the habitat fragmentation process." They can:

- Disrupt or prevent passage across the disturbed area.
- Provide an entrance for exotic species or predators.
- Increase mortality.
- Increase unnatural disturbances from sources such as pollution and fire.

Source: Noss, 1993, Schonewald-Cox and Buechner 1990 and Bennett 1991, as cited in Duerksen, et al.

Changing Aquatic Habitat

Development also affects the quality and quantity of aquatic habitat. The more hard surface present after development, the less rainwater infiltrates the soil. Rainwater instead runs off the land at an increased volume and rate. This reduces the recharge of groundwater and increases flooding, streambed erosion, and sedimentation. Runoff from developed areas also is often warmer and polluted with pathogens (e.g. bacteria and viruses), household chemicals, metals, fertilizers, pesticides, oil, and grease. As vegetative buffers along water bodies are lost, sunlight can further warm water beyond a threshold at which native species can survive and reproduce.

The structural habitat of aquatic systems also can be significantly degraded by modifications associated with roads and development. The quality and flow of rivers, streams and wetlands can be reduced by inadequate or inappropriately designed culverts, creation of new dams, and channel straightening or modification.

Daily Human Activity

Human activity introduces changes to the surrounding environment that can negatively impact natural habitat. Changes in lighting in an area, for example, can significantly affect some species'

behavioral and biological rhythms, which are guided by natural cycles of light and dark. Nocturnal species, particularly birds, can become disoriented by night-time lighting. Domestic pets, particularly cats, may prey excessively on wildlife, such as ground-nesting birds. The availability of household trash can alter the composition of wildlife communities by providing food for animal populations that thrive on trash (such as rats, raccoons, and skunks) to the detriment of those that do not, e.g. small mammals and song birds.

Human recreational activity in an area may directly impact wildlife and reduce the quality of the habitat provided. Human activities can disturb sensitive habitats, like wetlands, and disturb or "flush" wildlife. Flushing wildlife raises an animals' stress level and increases energy consumption. If repeated frequently, such disturbance can impact reproduction and survivorship.

Examples of Important Habitat

Habitat of Rare Wildlife Species - Lands inhabited by species listed as endangered, threatened, or of special concern should be considered a priority for conservation.

Unfragmented Lands - Large tracts of contiguous open space that feature a mix of habitat types are more valuable to wildlife than small, fragmented patches.

Riparian Areas & Shorelines - The interaction of land and water fosters biodiversity and is invaluable for many reptiles, amphibians, and migratory birds.

Priority Wetlands - Swamps, marshes, tidal flats, wet meadows, and bogs. For a legal definition see New Hampshire Code of Administrative Rules Wt 101.82.

Agricultural and Other Open Land - Some species are dependent on open fields, an increasingly rare habitat type.

Connecting Lands - Areas of very-low development density between large unfragmented lands that provide wildlife with habitat, food, and cover, as well as corridors for movement.

Other Unique or Critical Habitats - Habitat types that are rare state-wide or to a particular geographic region are vital for maintaining regional biodiversity.

Actions for Local Municipalities

This section offers some basic actions to pursue to reduce the impact of development and human activity on native wildlife.

- **Specifically state habitat conservation goals in your master plan, open space plan, and/or habitat conservation plan.** Development proposals and regulatory changes are more likely to be consistent with a community's habitat conservation goals if those goals and objectives are clearly stated in a town's master plan. If a separate open space plan or habitat conservation plan is prepared, it should be adopted as an official part of the master plan. Including habitat conservation goals and objectives (or other plans focusing on habitat conservation) as part of the local master plan provides the basis for local land use regulations and changes in local zoning to support habitat conservation.
- **Prepare a natural resources inventory (NRI) to identify habitat areas that merit conservation.** Awareness of a town's natural resources is vital to informed decision-making about habitat conservation. A basic natural resources inventory is the first step. This should include a base map, land cover map, wetlands composite map, aerial photographs, tax map, topographic map, and wildlife information (see NRI Guidebook by UNH Cooperative

Extension). Priority areas for habitat conservation can be easily identified by overlaying these maps and noting the co-occurrence of natural resource features important for wildlife. Also, the New Hampshire Fish and Game Department has prepared habitat assessment maps for the entire state in support of New Hampshire's Comprehensive Wildlife Conservation Plan, which is due out by October 1, 2005. Contact Fish and Game for more information.

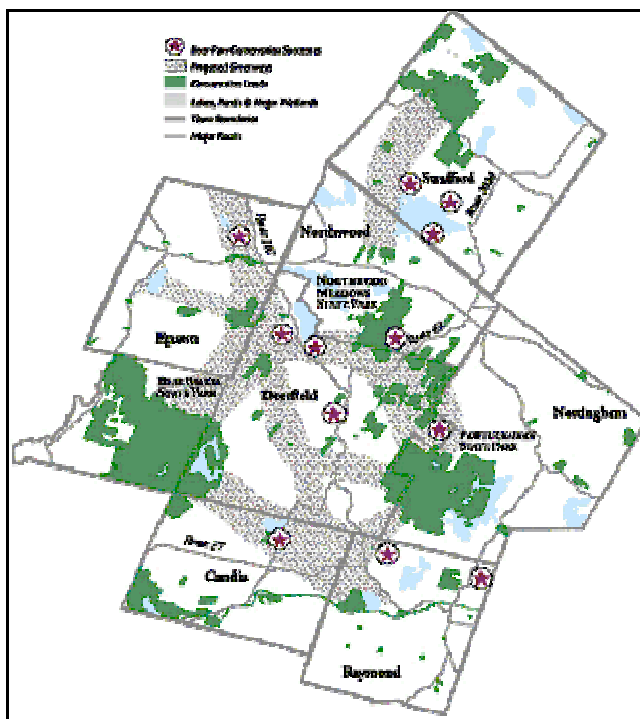
- **Map the town's "green infrastructure" and plan for conservation as well as development within a community.** Natural resource features that are vital to human and wildlife well-being are a community's "green infrastructure." Consideration of these landscape features in open space and habitat conservation plans is essential to comprehensive natural resource planning. Comprehensive planning considers both conservation and development. It is vital to achieving a balance between economics and environmental health, between private property rights and community goals.

Green Infrastructure is an interconnected network of protected land and water that supports native species, maintains natural ecological processes, sustains the quality of air and water resources, and contributes to the health and quality of life for all communities and people.

A basic natural resources inventory (NRI) will help identify green infrastructure as the first step in planning for its conservation. Once specific areas are identified, their locations and an explanation of their importance should be clearly stated in community plans. With appropriate regulatory mechanisms, communities can plan for open space in the same way they plan for transportation networks and other types of development.

For more information on Green Infrastructure see also www.greeninfrastructure.net.

Bear-Paw Regional Greenways Map



- **Revise local zoning and development ordinances to reflect habitat conservation goals cited in local and regional plans.** Developers and communities can work together to reduce the impact on habitat. New lots often have greater value if the natural amenities that make the land attractive in the first place are preserved. A community that provides opportunities for innovative approaches will generally attract a higher quality development. Subdivision and

site plan regulations should include incentives to promote the conservation of habitat, open space, and natural resources. A community also can plan for areas where higher density development is more appropriate to balance reductions in development in areas of greater habitat value.

Municipalities can strengthen requirements in their local zoning and ordinances:

- Require site-specific natural resource inventories and/or wildlife assessments.
 - Require pre-proposal meetings with the planning board where the focus is on understanding the natural resource features of the site and providing input on the potential development plan.
 - Require that development proposals demonstrate how they will conserve important habitat features.
 - Require conservation-design subdivisions as the preferred format for new residential subdivisions.
- **Ensure that your community has an adequate management plan in place.** Appropriate management of habitat areas can ensure that conservation goals are met and maintained over the long-term. Basic strategies for maintaining the quality of protected habitat include enforcement of use restrictions and regular monitoring of habitat quality.

Examples of Regulatory Options

- Overlay zone for wetlands and streams. Overlay zones establish requirements beyond standard zoning regulations for specified areas.
 - Require conservation/open space subdivision design in areas designated by the town as important for habitat conservation.
 - Develop a habitat conservation checklist for application review. A checklist may increase adherence by applicants and planning boards to habitat-related objectives and design criteria.
 - Transfer of development rights (TDRs) programs redirect development from areas that are a priority for conservation to areas identified by the community as appropriate for growth.
 - Encourage maximum setbacks/buffers in projects with important interior wildlife habitat areas. A buffer is a naturally vegetated area adjacent to a habitat area. A setback is a minimum distance between development and an important landscape feature.
 - Maintain an additional unfragmented vegetated buffer along roadsides where streams and wetlands cross roads (300 ft. total minimum).
- **Raise funds to purchase development rights to permanently conserve important habitat areas.** Towns have many options for raising funds for land conservation. These include, but are not limited to:
 - Authorization of bonds for purchasing land.
 - Allocation of the land use change tax to a town conservation fund.
 - Private land trusts may provide money for the purchase of conservation lands, as do certain government grant and loan programs.

For more information, see "Saving Special Places: Community Funding for Land Conservation" (www.spnhf.org/pdf/savingplaces.pdf) by the Society for the Protection of New Hampshire Forests, or contact the Center for Land Conservation Assistance at (603) 224-9945 or the Land and Community Heritage Investment Program at www.lchip.org.

- **Control invasive and exotic species.** To maintain healthy populations of native flora and fauna, invasive and exotic species must be controlled. Invasives are non-native species that

proliferate rapidly and often have no local natural predators. This allows them to out-compete native species, often without filling the natives' vital roles in ecosystems. For more information, visit the website of the NH Invasive Species Program at http://agriculture.nh.gov/divisions/plant_industry/index.htm, NH Exotic Species Program at DES at <http://des.nh.gov/wmb/exoticspecies/>, or the EPA webpage on invasive species in ocean, coasts, and estuaries at http://www.epa.gov/owow/invasive_species/.

References and Resources

Benedict, Mark A. and Edward T. McMahon. 2001. *Green Infrastructure: Smart Conservation for the 21st Century*. Sprawl Watch Clearinghouse Monograph Series, Washington, D.C.

Boyd, Lynn. July 2001. *Buffer Zones and Beyond: Wildlife Use of Wetland Buffer Zones and their Protection under the Massachusetts Wetland Protection Act*. Wetland Conservation Professional Program, Department of Natural Resource Conservation, University of Massachusetts. Available at <http://www.umass.edu/nrec/onlinedocs.html>.

Chase, Vicki, Laura Deming, and Francesca Latawiec. November 1995 (revised May 1997). *Buffers for Wetlands and Surface Waters: A Guidebook for New Hampshire Municipalities*. Audubon Society of New Hampshire and the NH Office of State Planning.

Duerksen, C., D. Elliot, N. Hobbs, E. Johnson, and J. Miller. 1997. *Habitat Protection Planning: Where the Wild Things Are*. American Planning Association, Chicago, IL.

Kanter, John, Rebecca Suomala, and Ellen Snyder. 2001. *Identifying and Protecting New Hampshire's Significant Wildlife Habitat: A Guide for Towns and Conservation Groups*. Nongame and Endangered Wildlife Program of the NH Fish and Game Department, Concord, NH.

Stone, Amanda J. Lindley. 2001. *Natural Resources Inventories, A Guide for New Hampshire Communities and Conservation Groups*. UNH Cooperative Extension.

Grace Espino-Salcedo

Subject: RE: Response to FEIR World Logistics Center SCH# 2012021045

From: Mark Gross
Sent: Thursday, June 11, 2015 6:04 PM
To: Kent Norton
Cc: Wayne Peterson (wpeterson@highlandfairview.com); tjelenic@highlandfairview.com; Brian Hixson (bhixson@highlandfairview.com); Richard Sandzimier; Grace Espino-Salcedo; Dawn Fiscus
Subject: FW: Response to FEIR World Logistics Center SCH# 2012021045

Kent,

FYI-

Grace/ Dawn – Please include in the PC letter file

Thanks

Mark Gross

**Senior Planner
 Community & Economic Development
 City of Moreno Valley**

p: 951.413.3215 | e: markg@moval.org W: www.moval.org

14177 Frederick St., Moreno Valley, CA 92553

From: Joe Fass [<mailto:jfass@pricefass.com>]
Sent: Thursday, June 11, 2015 5:33 PM
To: Mark Gross
Cc: Perry, Stan (RBC Dain); George Hague
Subject: RE: Response to FEIR World Logistics Center SCH# 2012021045

Enclosed, please find additional Comments on Section 1.2.2 of the FPEIR

Thank you

Joseph Fass

From: Mark Gross [<mailto:markg@moval.org>]
Sent: Thursday, June 11, 2015 8:26 AM
To: 'Joe Fass'
Subject: RE: Response to FEIR World Logistics Center SCH# 2012021045

Thank you for your comments.

Mark Gross
Senior Planner
Community & Economic Development
City of Moreno Valley

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

p: 951.413.3215 | e: markg@moval.org w: www.moval.org
 14177 Frederick St., Moreno Valley, CA 92553



From: Joe Fass [<mailto:jfass@pricefass.com>]
Sent: Wednesday, June 10, 2015 9:05 PM
To: Mark Gross
Cc: Perry, Stan (RBC Dain); George Hague; Roger Casper; Malcolm Smith
Subject: Response to FEIR World Logistics Center SCH# 2012021045

Good Evening Mr. Gross

Attached please find my comments to the above referenced FEIR regarding the proposed development and construction of 40 million square feet of warehouse space. The proposed project is adjacent to the San Jacinto Wildlife Area, my fragmented ownership of 385 +/- acres of wetlands habitat and the Northern San Jacinto Valley proper. I will appreciate it if you would consider my comments as an integral part of the approval process the City of Moreno Valley is contemplating. My understanding is that Moreno Valley's City Charter was never set up to be economically self-sustaining source of civic expansion, but rather as a bedroom community for residents to leave for work and return home to. A series of warehouses will not improve the situation the City is in, but rather, it will be robbing the general public and the citizens of Moreno Valley of the opportunity to discover the treasures that wilderness and open spaces can provide. I appreciate your support in taking a step back and attempting to visualize what is at risk if the project moves forward. There are so many other places this massive project can be implemented in the vastness of both San Bernardino and Riverside Counties without risking fragile already working and inter-dependent natural habitats. If the project goes forward, the City and County will be helping the few rather than the many by implementing a strategy that undermines the current and future generations who value wilderness.

I personally have never considered the number of acres of warehouse space as a positive attribute when considering where I might want to live. I can't see how Moreno Valley can envision this as anything other than a short term solution to a series of social and economic issues that will not be solved by compromising valuable habitat.

Thank you
 Sincerely

Joseph Fass
 310-874-0829

Joseph Fass
211 Campbell Ave
Redlands, CA 92373
310-874-0829
jfass@pricfass.com

June 11, 2015

Mr. Mark Gross
 City of Moreno Valley
 Community Development Department
 14177 Frederick Street
 PO Box 88005
 Moreno Valley, CA 92552

RE: World Logistics Center Final Environmental Impact Report (EIR)
 SCH# 2012021045

Dear Mr. Gross:

The FPEIR Volume 3 is over 1,300 pages in length. However, early in the document, in Section **1.2.2 City of Moreno Valley**, the creators of the document paint a dismal picture depicting a city behind other cities in development. "...a large number of Moreno Valley residents commute great distances to jobs outside the City, with average daily commutes of 76 minutes. Long commutes result in more time in traffic, more time breathing polluted air, more stress, less time at home, and less time with families." The section further describes a city that "Does not have a sufficient tax base to fully fund its operations and provide the levels of service expected by its citizens".

The FPEIR states per capita income in Moreno Valley is nearly 40 percent below the State of California average. While this makes Moreno Valley seem poor, what is not stated are the following facts: The average per capita income in 2007 for California was \$41,571, while in San Bernardino County it was \$21,608 and \$24,885 in Riverside County. Median household income for these areas was \$59,928 (California), \$55,995 (San Bernardino), and \$57,736 (Riverside). As a result of the current economic recession, total personal income in the Inland Empire is expected to decrease by -3% in 2009, while per capita income declines by -4.3% to \$27,270. Moreno Valley has not distinguished itself as poor in relation to the other Inland Empire (IE) Counties, and therefore the trick of statistics paints a bleaker picture than reality. In fact, since the IE is the home to many warehouses, one might ask if that in itself contributes to the lower per capita comparisons to Statewide averages. Is it possible additional low-pay warehouse work will continue to keep cities in the IE depressed in comparison to the State as a whole?

Other facts on Moreno Valley described in the FPEIR that are apparently driving the fulfillment center/WLC desires are that 20 percent of the population is living below the poverty level, a

higher than expected dropout rate for the high schools and other similar economic comparative indicators. The FPEIR presented no evidence that building 40 million square feet of warehouse space can even start to cure such economic indicators.

According to the website <http://www.city-data.com/poverty/poverty-Moreno-Valley-California.html>, Moreno Valley does not have a disproportionate share of residents living below the poverty level. In fact as a whole the city is equal to the California average. The actual high school drop put rates in Moreno Valley are comparable to Riverside County as a whole and only slightly higher than California. <http://www.pe.com/articles/school-668137-students-graduation.html> <http://www.quesq.com/Riverside-County-Has-More-High-School-Dropouts/487640>.

Finally, to cap off the need for fulfillment centers, Section 1.2.2 states *“According to the Inland Empire Economic Partnership January 2014 Quarterly Economic Report, Logistics has been the fastest growing sector in the Inland Empire’s economic base. The logistics industry offers an opportunity for upward mobility for workers providing access to skill ladders leading to the middle class and the number one contributor to job growth and upward mobility in the Inland Empire Region”*.

However, an interesting counter point of facts and statistics is offered in the Study published September 2013 by the USC Program for Environmental & Regional Equity called **Warehouse Work Path to the Middle Class or Road to Economic Insecurity by Juan D. De Lara, Ph.D.** attached as Exhibit 1. In this study, the author determined that the average blue collar warehouse worker earned \$22,000 per year and the average non Blue Collar job earned \$35,000 per year. Furthermore, in the section titled **“Temps: The Invisible Warehouse Workforce”**, the Author states: *“Once we have established that blue-collar warehouse workers earn far less than the much touted \$45,000 logistics wage, we must turn our attention to another group of workers that are normally excluded from economic data and policy discussions about the logistics industry. Temp workers are a key component of the just-in-time distribution system that enabled retailers like Walmart to expand their corporate empires by reducing inventory and increasing speed to market”*. The study estimates that approximately 15 to 30 percent of temporary workers are employed in local warehouses making \$10,067 compared to direct-hire warehouse workers hired at \$22,000.

In conclusion, the study points out, *“To put it simply, not enough of the global logistics economy trickles-down to meet the needs of local families. This is especially true when we account for the region’s growing ranks of blue collar workers.”*

Through all of this, the City may still argue that 20,000 workers will increase the local economics of the city, regardless of the wages produced. However, if the tax base does not improve beyond the increased cost of providing city services to these low paid workers, the City of Moreno Valley has only exacerbated its financial condition rather than improved upon it.

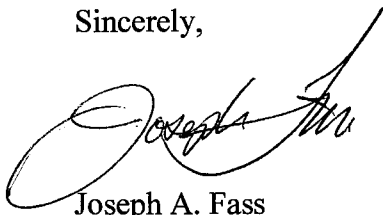
To the extent the reasons to contemplate a World Logistics Center may be based on incorrect data or shifting economics, it might benefit the City decision makers to reconsider the entire project by updating its economic models, leaving out the socio-economic conditions that will

remain static if not continue to be exacerbated by the contemplated project. It is disconcerting that without even debating the full 1,300 pages of the FPEIR I find the premise for the entire project to be suspect in terms of a true benefit to the City, notwithstanding the admitted increased blight, traffic, pollution, important habitat disruption and low wages. Further, I find it ironic that it is important to build this project because of the residents average commute time and breathing of pollution but the pollution from 14,000 diesel trucks daily is not of similar consequence to the residents of Moreno Valley and the greater IE as a result of this project.

It is also reasonable to point out the potential for workers living outside Moreno Valley making long commutes for low wages resulting in more time in traffic, more time breathing polluted air, more stress, less time at home and less time with families. Similar to pollution issues and danger to habitat in eh Northern San Jacinto Valley, the impact of a massive project such as this cannot be controlled within the borders of Moreno Valley. As such, the benefits to the city and residents of Riverside and San Bernardino County need to be assessed in relation to reasonable expectations that appropriate due diligence has been performed.

The series of refutable statements as to why such a project may be important to Moreno Valley (elaborated in Sections 1.2.2) suggests further study and updated information would be warranted.

Sincerely,



Joseph A. Fass

Enclosed Exhibit 1



Warehouse Work

*Path to the Middle Class or
Road to Economic Insecurity?*

Juan D. De Lara, Ph.D.



INLAND EMPIRE RESEARCH BRIEF

Warehouse Work: Path To The Middle Class Or Road To Economic Insecurity?

By Juan D. De Lara, Ph.D. - University of Southern California

September 2013

President Obama's recent visit to an Amazon.com warehouse in Chattanooga, Tennessee was supposed to provide a glimpse into what good middle class jobs look like in today's economy. According to the President, warehouse jobs offer American families economic stability at a time when employment can be difficult to find. Major retailers like Amazon and Walmart regularly gain public and political support by claiming that their supply chain workers earn middle class wages. According to Amazon, their typical warehouse employee makes more than 30 percent above what an average retail worker earns.¹ Few would oppose jobs that offer economic stability for working men and women, but the idea that warehouse jobs are categorically middle class often obscures the low wage cycle that many blue-collar workers endure in the logistics industry. When political leaders and

What Is The Logistics Industry?

Regional planners measure the logistics industry by aggregating data for the following eight economic sectors:

- Warehousing and Storage
- Wholesale Trade
- Couriers
- Support Activities for Transportation
- Truck Transportation
- Air Transportation
- Rail Transportation

corporations talk about a middle class logistics wage, they are effectively lumping blue-collar and high-skilled workers together with managers in order to create an industry average. Before claiming that warehouse jobs provide a pathway to the middle class, we need to assess whether official industry wage models accurately measure what workers in this sector actually earn.

Paying the Price for Cheap Goods

A series of research briefs that highlight key economic and policy issues that affect warehousing and logistics in Riverside and San Bernardino counties.

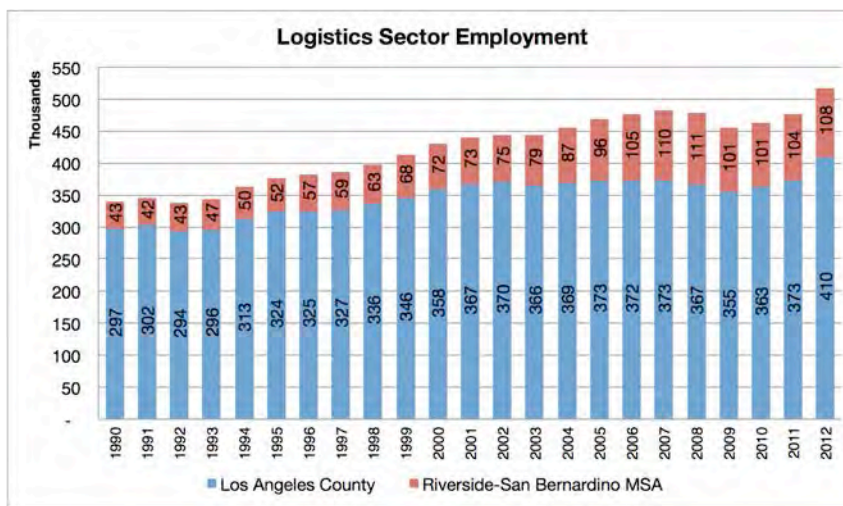


Figure 1: Based on data from the CA Employment Development Department

Jobs and Logistics

Southern California was among a number of regions that turned to logistics in an effort to recoup some of the manufacturing jobs that were lost during the economic restructuring of the 1980s and 1990s. Together with shippers and rail companies, local policy makers built an extensive network of

trains, trucks, and warehouses that made Southern California into the largest port complex in the United States. Port container shipments and logistics-related employment reached record highs during the first decade of the 2000s. By 2012, the industry employed approximately 521,000 people in Los Angeles, Riverside, and San Bernardino counties (see Figure 1). To industry boosters, such robust growth signaled a possible solution to Southern California's need for well-paid blue-collar jobs.

However, recent investigations by California's Labor Commissioner's Office revealed that employers at major warehouses in the Inland Empire (otherwise known as Riverside and San Bernardino counties) regularly subjected their workers to a number of labor law violations. These investigations, as well as concerns raised by warehouse workers during interviews, raise serious questions about whether the logistics industry truly provides a path to the middle class for the region's growing population. If the logistics industry is supposed to be a solution to America's and Southern California's jobs crisis, we should figure out whether the sector's much-celebrated average middle class wage of \$45,000 per year actually trickles down to blue-collar workers.

The Numbers Game: What Average Industry Wage Models Don't Tell Us

According to the industry model developed by the Southern California Association of Governments, logistics workers in Riverside and San Bernardino counties earn an average yearly wage of \$45,000 per year (see Figure 2). Regional boosters use these relatively high wages to promote the warehouse industry by arguing that



Figure 2: Average based on QCEW data from the CA Employment Development Department.

ports provide the building blocks for a more sustainable and diverse economic future by providing a path to middle-class jobs for the region's blue-collar workers.²

Yet, a closer look at occupational wage data reveals serious flaws in this notion. To begin with, it is important to understand how the logistics industry's hiring structure shields major retailers from accusations that they pay low wages to warehouse workers. When inspectors for the California Labor Commissioner's office fined Schneider Logistics, Rogers Premier, Impact Logistics, and Quetico, LLC more than \$2.3 million for alleged payroll irregularities and overtime theft in 2011 and 2013, these companies were operating as contractors for warehouses that processed products from major retailers.³ Even though the warehouse workers affected by these labor law violations were sorting goods that belonged to Walmart and other companies, the retailers distanced themselves from any responsibility for wages and working conditions paid by their contractors. Herein lies a key problem with companies who tout middle class warehouse wages. Retailers like Walmart, Target and Amazon often hire third party logistics companies (3PLs) to operate their distribution centers at much lower costs. Retailers can claim that they pay relatively high wages to their direct-hire warehouse employees because they tend to unload the lower wage

functions to logistics contractors - who technically serve as the employer of record to the workers who process goods for companies like Walmart and Amazon.

A more accurate picture of blue-collar warehouse wages requires us to straighten out the facts about how we approach economic data for the logistics industry. Let's begin by looking more closely at the much touted \$45,000 logistics wage.

This figure includes wages from all occupations and sectors in the logistics industry – including distribution managers and logisticians - a comparison that clearly does not apply to the average blue-collar worker with a limited educational background. Once the managerial and high-skilled occupations are removed, it is clear that casting a wide net across the entire logistics industry artificially inflates wage scales for blue-collar warehouse occupations.

As **Figure 3** shows, if we simply measure income for actual blue-collar occupations that normally make up the bulk of the warehouse sector, the idea of a \$45,000 logistics wage becomes rather far-fetched. When we control for job type (see sidebar) and industry, we find that warehouse jobs within logistics pay a median annual income of \$22,000 per year. Female workers, who account for 33 percent of

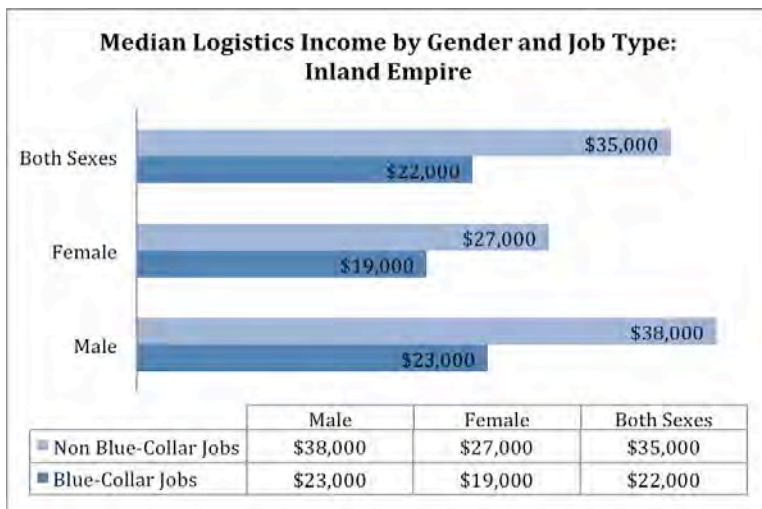


Figure 3: Data based on 2007-2011 American Community Survey.

blue-collar warehouse occupations, earned \$19,000, roughly \$4,000 less than men.

Temps: The Invisible Warehouse Workforce

Once we have established that blue-collar warehouse workers earn far less than the much touted \$45,000 logistics wage, we must turn our attention to another group of workers that are normally excluded from economic data and policy discussions about the logistics industry. Temp workers are a key component of the just-in-time distribution system that enabled retailers like Walmart to expand their corporate empires by reducing inventory and increasing speed to market. As retailers developed new technologies that allowed them to expand sales volume, they created new flexible labor markets to accommodate the ebbs and flows of fluctuating supply and demand.

Unlike their predecessors, modern warehouses act as high turnover distribution centers that employ flexible workforces and sophisticated technologies to quickly deliver goods that consumers want. For example, Walmart officials claim that a new breed of distribution center - called a cross-dock - enabled them to surpass Kmart in retail sales.⁴ Because retail demand and supply is constantly

Defining Blue-Collar Warehouse Jobs

This list includes the six major occupations that are normally employed in warehouses:

- Industrial Truck and Tractor Operators (Forklift Drivers)
- Laborers and Material Movers
- Packers and Packagers
- Shipping, Receiving, and Traffic Clerks
- Stock Clerks and Order Fillers

fluctuating, the new generation of distribution centers rely on a more flexible and temporary labor supply. When Amazon announced that it would hire workers for two new distribution centers in Chattanooga, TN, company officials said that 3,000 out of the 4,500 total employees would be seasonal or temp workers.⁵ We do not have to look too far to understand how local retailers rely on temp workers to meet seasonal and market variations. Of the 11 dedicated Walmart distribution centers that we were able to identify in the Inland Empire, nine employ temporary workers.⁶

It is unclear how many of the region's roughly 30,000 temporary workers are actually employed in local warehouses.⁷ Depending on the economic model, between 15 percent (4,500) to 30 percent (9,000) of all temp workers are employed in blue-collar warehouse occupations. Even if the overall number of temp workers remains relatively small when compared to employment in the overall logistics sector, they play a key role in the industry's ability to maximize sales. Nonetheless, they are often unaccounted for in official logistics-related data because the temporary employment agencies that act as the employers of record are not included in the logistics sector.

While warehouse operators enjoy the benefits of flexible labor - including reduced overhead and salaries - temp workers experience this as low wages and irregular work hours. According to the Bureau of Labor Statistics, the average full time temporary worker who is employed year-round earned \$19,965 in 2012. But temp warehouse workers earned far less, especially when compared to direct-hire employees.

Blue-collar warehouse workers who are hired directly by a retailer or third party logistics



Figure 4: Data taken from 2007-2011 American Community Survey

company earn a median annual wage of \$22,000. Temp workers - who are hired to do the same jobs and work at least 20 hours per week - earn a median income of \$10,067 per year (see **Figure 4**).⁸ What explains the wage disparity? To begin with, many temp workers are placed in relatively low wage warehouse occupations that are more susceptible to market fluctuations. Underemployment is another major factor that drives down yearly income for a large portion of temporary warehouse workers. Approximately 70 percent of all temp workers in warehouse occupations reported working less than 40 weeks (roughly less than 10 months) out of the year. When they did find work, close to 40 percent of temporary workers in warehouse occupations reported working less than 30 hours per week. The combination of low wage occupations and underemployment results in wages that fall far below the industry average.

Delivering On The Promise Of Good Jobs

By now it should be clear that most blue-collar warehouse workers earn far less than the average logistics annual wage of \$45,000. While it is true that skilled logistics workers and managers earn relatively high wages when compared to service sector industries, the

median \$22,000 blue-collar warehouse income does not deliver on the promise of middle class security for Inland Empire workers.⁹ To put it simply, not enough of the global logistics economy trickles-down to meet the needs of local families. This is especially true when we account for the region's growing ranks of blue-collar workers.

Any conversation about the future of the logistics industry as a key driver in the Inland Empire's regional economy should begin with an honest assessment of blue-collar vs. white-collar wages. More importantly, policy and industry leaders should be concerned about who has access to wages at the higher end of the scale. Regional policy makers who have supported logistics-based development because it was one of the few growing industries that promised to pay decent wages, should ensure that the path to middle class economic security is open to the region's growing blue-collar workforce. Given the region's changing demographics, one big challenge will be to address the racial disparities in logistics sector wages.

To put it simply, not enough of the global logistics economy trickles-down to meet the needs of local families. This is especially true when we account for the region's growing ranks of blue-collar workers.

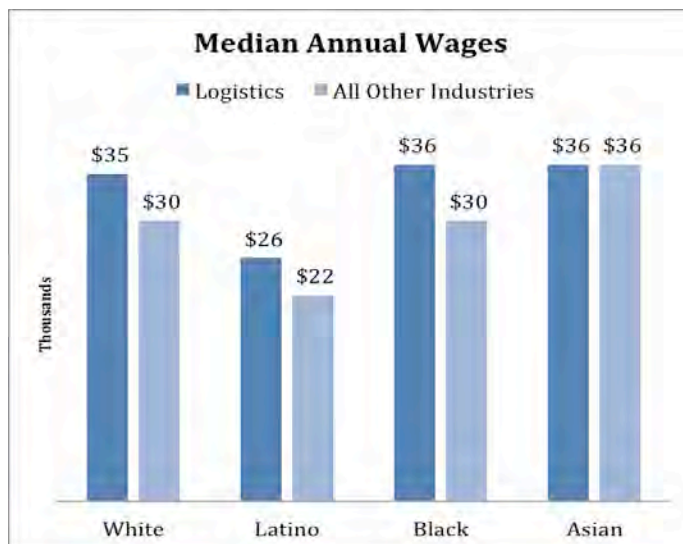


Figure 5: Data taken from 2007-2011 American Community Survey

Figure 5 shows that there is a significant wage gap between white and Latino logistics workers.

Yet, when compared to other industries, the logistics sector does pay higher wages to workers who are white, Black and Latino.¹⁰ As policy makers continue to tout the industry, they should also figure out how to make sure that the promise of goods jobs and middle class wages are available to all blue-collar families.

¹ Fox, Emily Jane. 2013. "How Amazon's New Jobs Really Stack Up." *CNN Money*, July 30. <http://money.cnn.com>.

² Husing, John. 2004. "Logistics & Distribution: An Answer to Regional Upward Social Mobility." Southern California Association of Governments.

³ Quetico LLC announced that it would appeal the fines. Please see <http://www.dir.ca.gov/DIRNews/> for more details on the citations.

⁴ A typical cross-dock facility includes receiving, sorting, and shipping functions. Trucks deliver containers filled with goods to the cross-dock and workers use forklifts or their hands to unload the containers. Workers then sort goods into specific shipments and load customer/store orders onto awaiting trucks.

⁵ Pare, Mike. 2011. "3,000 Temps Among 4,500 Amazon Is Hiring." *Times Free Press*, October 19.

⁶ We were able to identify 11 distribution facilities that process Walmart goods in the Inland Empire. At the time of this report, it appears that one of the nine facilities mentioned - operated by Schneider Logistics - was eliminating temporary workers from its payroll. Perhaps this was in direct response to fines for labor law violations.

⁷ Temp workers are employed by temporary staffing agencies (NAICs 56132). These agencies provide short and longer-term employees to their clients. Temporary employment soared to 41,608 during 2006, but there was a slight decline as the economy struggled during the post-2008 Great Recession.

⁸ In order to get a more accurate assessment, we calculated the median income - for temp workers in blue-collar warehouse occupations - by including only those who reported working an average of 20 or more hours per week for the time that they were able to find jobs. It's important to note that this may include many workers who were not employed year-round.

⁹ According to estimates from the Economic Policy Institute (www.epi.org), the average household of four (two parents and two children) would need to earn \$65,741 per year in order to achieve a modest level of economic security in Riverside and San Bernardino counties.

¹⁰ Racial categories are defined as follows: Black alone or in combination with one or more other races, Asian alone or in combination with one or more other races, White alone or in combination with one or more other races, Latino of any race. (2007 - 2011 American Community Survey)



USC Program for Environmental and Regional Equity

W: <http://dornsife.usc.edu/pere>

E: pere@dornsife.usc.edu

P: 213.740.3643

F: 213.740.5680

CITY COUNCIL
MORENO VALLEY
RECEIVED
15 JUN 11 PM 3:47

June 5, 2015

Council Member LaDonna Jempson
City Council of Moreno Valley
c/o Clerk's Office City Hall
14177 Frederick Street
Moreno Valley, CA 92553

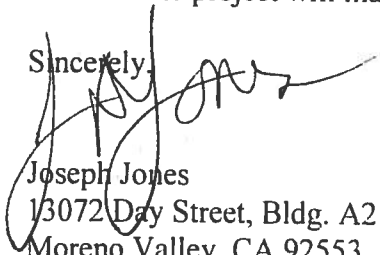
My name is Joseph Jones. I am a semi retired broadcast and advertising executive. My wife and I have 2 daughters that graduated from Moreno Valley High School before going on to graduate from UCLA. As a resident of Moreno Valley for the last 13 years I support the World Logistics Center project because the project will not only provide more jobs but also shorten our long commutes. The commutes to and from Los Angeles has become more and more difficult allowing less time to spend with family. These jobs, together with the millions of tax revenues generated from the project, will also provide much needed funds for city services such as police, fire and schools.

Moreno Valley can ill afford to miss another opportunity as was the case with the Coca Cola plant and Nordstrom. There is just too much competition for businesses not just between cities but also between states.

The \$3 billion World Logistics Center project will not only be a tremendous boost to our local economy it will also generate millions in city fees. This money will help improve our public safety, build schools, streets, fire stations and other much needed public service facilities.

I believe the project will make Moreno Valley a much better place to live and work.

Sincerely,



Joseph Jones
13072 Day Street, Bldg. A212
Moreno Valley, CA 92553

Grace Espino-Salcedo

Subject: RE: WLC and 20,000 comuters a day

From: jerdon king [<mailto:jerdonking@yahoo.com>]

Sent: Thursday, June 11, 2015 10:40 AM

To: Dr. Yxstian A. Gutierrez

Subject: WLC and 20,000 comuters a day

Dr. Yxstian Gutierrez,

Could you please address these concerns?

The World Logistics Center is front and center in our city again.
There are questions your voters have about the traffic.

WLC says 20,000 jobs.

That means at three shifts equals 6666 people per shift. More than that if its not three shifts.

That means at shift change there will be 13,333 commuters on the streets of Moreno Valley.

What freeway on ramps and off ramps will handle this amount of traffic, what SPECIFICALLY are the plans to handle this traffic flow.

Jerdon D. King II
951.243.8592 Home
951.533.6801 Cell

Cindy Miller

Executive Assistant to Mayor/City Council

City Council Office

City of Moreno Valley

p: 951.413.3006 | e: cindym@moval.org W: www.moval.org

14177 Frederick St., Moreno Valley, CA 92553

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Grace Espino-Salcedo

Subject: RE: World Logistics Center Project

From: Jerdon King [mailto:jerdonking@yahoo.com]
Sent: Wednesday, June 10, 2015 11:24 AM
To: Jane Halstead, CMC; Ewa Lopez, CMC; Kathy Gross
Subject: World Logistics Center Project

I have questions about this project

1. What streets will handle 20,000 cars a day, plus delivery trucks?
2. How will 20,000 jobs at \$12.00 an hour (average wage of warehouse workers) increase the value of my home ?

Jerdon D. King II
951.243.8592 Home
951.533.6801 Cell

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Grace Espino-Salcedo

Subject: RE: Comment Letter and attachments for tonight's Planning Commission Hearing on World Logistics Center PA12-0010, etc.

From: Laurel McKee [<mailto:laurel@socalceqa.com>]

Sent: Thursday, June 11, 2015 5:00 PM

To: Jane Halstead, CMC; Ewa Lopez, CMC; Kathy Gross

Subject: Comment Letter and attachments for tonight's Planning Commission Hearing on World Logistics Center PA12-0010, etc.

Dear City Clerk:

Please distribute this to members of the Planning Commission and Planning Staff prior to tonight's meeting.

Thank you,

Laurel McKee for
Raymond W. Johnson

The above email is for intended recipient only and is confidential and protected by attorney/client privilege. If you are not the intended recipient, please advise the sender immediately. Unauthorized use or distribution is prohibited and may be unlawful.

Laurel L. McKee
Administrative Assistant to Raymond W. Johnson, Esq., AICP, LEED GA
Abigail A. Smith, Esq., Kimberly Foy, Esq., and Kendall Holbrook, Esq.
JOHNSON & SEDLACK
26785 Camino Seco
Temecula, CA 92590
Telephone: (951) 506-9925
Facsimile: (951) 506-9725
E-Mail: Laurel@SoCalCEQA.com

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Johnson & Sedlack

ATTORNEYS at LAW

Raymond W. Johnson, Esq., AICP, LEED GA 26785 Camino Seco, Temecula, CA 92590
 Carl T. Sedlack, Esq., Retired
 Abigail A. Smith, Esq.
 Kimberly Foy, Esq.
 Kendall Holbrook, Esq.

E-mail: Ray@SoCalCEQA.com

Abby@SoCalCEQA.com
 Kim@SoCalCEQA.com
 Kendall@SoCalCEQA.com
 Telephone: (951) 506-9925
 Facsimile: (951) 506-9725

June 11, 2015

Planning Commission
 City of Moreno Valley
 14177 Frederick Street
 Moreno Valley, CA 92523
 (951) 413-3000
 CityClerk@moval.org

VIA E-MAIL and U.S. MAIL

**Re: World Logistics Center PA12-0010 General Plan Amendment (PA12-0010),
 Development Agreement (PA12-0011), Change of Zone (PA12-0012), Specific
 Plan (PA12-0013), Annexation (PA12-0014), Tentative Parcel Map No. 36457
 (PA12-0015), Environmental Impact Report (P12-016)**

To Planning Commissioners:

Our firm and over a hundred other people, groups, and regulatory agencies, submitted extensive comments on the Draft EIR for the World Logistics Center (WLC) which have not been adequately addressed in the Final EIR. The Planning Commission should require the EIR be revised and recirculated to adequately evaluate impacts and incorporate all feasible mitigation for impacts to/from agriculture, air quality, health risks, GHGs, biological resources, hydrology/water quality, water supply, noise, and traffic, among other effects.

We are particularly concerned the EIR fails to adequately evaluate and mitigate the traffic fiasco which will be caused by this Project and associated air quality and health risks from diesel emissions from some 14,000+ daily truck trips. The EIR has failed to advance any remedy for the locally and regionally significant problems. Notably CARB, SCAQMD, Caltrans, RCTC, RCTLMA, and other agencies responsible for these impacts have all expressed concerns with the project, the EIR, and the lack of mitigation proposed for the Project.

In addition to the legally inadequate EIR, we believe the City has become or will become unlawfully intertwined with the project by incorporating unauthorized properties in the General Plan Amendment, Change of Zone, and Specific Plan Applications of

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Highland Fairview. Before the City considers approval of the WLC project, these issues must be considered and addressed.

Improper Inclusion of unauthorized properties in General Plan Amendment, Change of Zone, and Specific Plan

On May 22, 2012 the City Council voted to direct planning staff to include all properties not providing authorization in its consideration of HF's General Plan Amendment, Zone Change, and Specific Plan applications related to the WLC. The City has or will have acted illegally in moving forward with a vote on a GPA, Zone Change, and Specific Plan that includes these properties.

Highland Fairview's (HF) application for the World Logistics Center project sought a General Plan Amendment and Change of Zone for 1,155-acres owned by CDFW, SDG&E, and Southern California Gas Company; none of which have provided authorization for the Project.

Within the Specific Plan area, the May 22, 2012 agenda stated HF's application included 21 parcels (with 18 owners) that have not provided authorization for the WLC Project, comprising 294 acres or 11% of the Specific Plan Area. All but three properties are currently zoned for residential uses which would be incompatible with the Specific Plan's proposed land uses. The non-participating Specific Plan parcels are all located either adjacent to the primary truck access route for the WLC Specific Plan or surrounded on 3 or more sides by participating properties.

Today's agenda states HF has confirmed interest in 2,263 of 2,610-acres, so that 347- acres (13%) of the Specific Plan Area is owned by now 16 private, unauthorizing entities. (Agenda Packet p. 77) There is no discussion whether any changes to the scope of the GPA and Change of Zone unauthorizing properties has occurred.

Improper Initiation of GPA, Zone Change, and Specific Plan

The General Plan Amendment and Change of Zone have not been properly initiated for the unauthorizing properties. Here, HF initiated the amendments to the General Plan and Zoning without the authorization of impacted land owners. HF cannot initiate a GPA or Zone Change for these sites.

Alternatively, the City has never initiated a GPA or Zone Change for the impacted properties. Instead, the City Council voted to recommend staff include all properties not providing authorization in its consideration of HF's application for the WLC including the General Plan Amendment, Zone Change, and Specific Plan. Such an action is not an authorized manner of initiating such an amendment under the City's Municipal Code.

The City's Municipal Code § 9.02.050 provides amendments to zoning districts can be initiated by the following actions:

- “1. Recommendation of staff or the planning commission;
2. Recommendation of the city council;
3. An application from a property owner or his authorized agent, relating to his property, filed with all required applications; or
4. An application from any affected party, which does not request redistricting of property.”

Municipal Code § 9.02.040 provides amendments to the general plan may be initiated by:

- “1. Recommendation of the planning commission and city council concurrence;
2. Recommendation of the city council; and
3. A privately filed application involving a change in land use designation for a specific property shall be submitted by the property owner or the owner's authorized agent and shall be accompanied by all required applications.”

If the City seeks to initiate a GPA and/or Zone Change on these sites, it has the authority to do so, but it has not done so here. HF's privately filed application cannot include properties outside its ownership or agency interest.

Similarly, authority to initiate the preparation of a Specific Plan is vested with the planning commission or community development department with the concurrence or direction of the city council; or may be privately initiated and processed. Municipal Code § 9.13.020. There is no authority for a non-owner to initiate a Specific Plan or for the city to expand the scope of a privately initiated specific plan. Further, an additional 53 acres have evidently been added to the unauthorized properties within the Specific Plan since the May 22, 2012 hearing with no notice or intent expressed by the City whatsoever relative to this land. The City has no authority to expand the Specific Plan proposed by HF to these private and non-authorizing properties.

Improper Notice and Disclosure of City's Involvement

The current Agenda, Final EIR, and all related documents for approval of the WLC provide inadequate notice of the City's role in Project approval. All documents state the applicant to be “Highland Fairview, Inc.” However, as a result of the City's improper inclusion of an additional 1,155-acres in the GPA and Zone Change, and an additional now 347- acres in the Specific Plan, the WLC is essentially now a joint proposal of HF *and the City*. In essence, the City has acted as if it initiated a GPA, Zone

Change, and Specific Plan for these properties; and so must disclose its role with respect to these actions. The notice currently provided is inadequate, and understates the City's involvement in the current project.

Unlawful Taking for Private Purpose

If the City votes to approve the WLC with these unauthorized properties included, the City will be unlawfully taking private property for *private use and without just compensation*. A taking includes not only the physical seizure of land but regulatory takings, deprivation of access, reduction in property value, etc. In 2012 while discussing the recommendation to have staff consider unauthorized properties in the GPA, Zone Change, and Specific Plan, the Council implied landowners would be forced to sell their property as a result of the WLC project. Among other reasons, takings may be needed to address land use, transportation, and biological issues associated with the WLC.

When the City Council voted to recommend Staff consider of all properties, including those not providing authorization, in its consideration of the WLC Project applications, the City Attorney cautioned that appraisals of the affected properties were needed before any formal action is taken by the City Council on the proposed applications to determine whether and to what extent the City's actions would constitute a "taking" under the U.S. and/or California Constitutions. To my knowledge, no appraisals have been done. Nevertheless, the Council failed to consider whether such an action would even be legally permitted in this context where taken for a private developer. It is not.

The City may take private property for public use so long as it pays just compensation to the private landowner for the taking. A taking can only legally be made for a public, *not private*, use. Cal. Code Civ. Proc. § 1230.030. In this instance, taking of these properties is not for public use where any taking would benefit HF, a private developer, and its application for the WLC; *not* the public. Accordingly, any taking of property to achieve this expanded project scope is illegal.

Even if for some "public purpose," the City must pay just compensation for the taking. Under Cal. Gov. Code § 7267 that this requires the City obtain an appraisal and make an offer to the owner of record of real property to be acquired before the agency may commence court proceedings to formally acquire property and pay just compensation for such acquisition. The City has not begun this process or disclosed to the public that such action may be necessary as a result of approving the WLC for this private developer.

In the event the City does not address this issue before approval of the WLC, the City nevertheless will be opening itself to inverse condemnation claims from the non-

consenting property owners at the expense of taxpayers. Beyond physical takings, it is reasonably foreseeable that such claims will be upheld for diesel PM emissions from the enormous truck presence caused by the project-case law has recognized inverse condemnation claims for noxious odors. *Varjabedian v. City of Madera* (1977) 20 Cal.3d 711. Inverse condemnation claims will also exist as a result of the immense truck traffic, gridlock, and traffic noise presence, where action for inverse condemnation can be based on substantial impairment of the right of ingress and egress. *Breidert v. Southern Pac. Co.* (1964) 61 Cal.2d 659, 663, *see also, Border Business Park, Inc. v. City of San Diego* (2006) 142 Cal. App. 4th 1538. Residences surrounded on 3 sides by warehousing and truck traffic may also have a viable claim. The public and decisionmakers must be informed of this issue prior to any consideration for project approval.

As the City cannot take property for HF's private use, any consideration for project approval must exclude the unauthorized 1,155- acres in the GPA and Zone Change and 347- acres in the Specific Plan. The EIR must be revised and recirculated to address this issue.

Gift of Public Funds

If the City votes to approve the Project including the unauthorized take of some portion of 1,155- acres in the GPA and Zone Change and now 347-acres in the Specific Plan, the result is an illegal gift of public funds to HF. The California Constitution prohibits gifts of public resources to private citizens or organizations. Cal. Const. art. XVI, § 6 ("nor shall it [the Legislature] have power to make any gift or authorize the making of any gift, of any public money or thing of value to any individuals, municipal or other corporation whatever;..."); See also *City and County of San Francisco v. Patterson*, 202 Cal. App. 3d 95, 103-04. This prohibition against gifts of public funds applies to Moreno Valley as it does to all public agencies except charter cities¹.

If the City votes to approve this Project and thus to take private property in favor of HF, it will have illegally gifted public funds to this private company for a private purpose. Stated another way, the use of taxpayer money to help pave the way for and develop HF's project is illegal. Again, these properties must be omitted from HF's application for the WLC and its associated GPA, Zone Change, and Specific Plan.

Misleading Information and Lack of Setback from Biological Habitat Area

¹ It is notable that in 2013, 2 out of 3 of the City Councilmembers that voted in favor of including unauthorized properties in the GPA, Zone Change, and Specific Plan ran the push to prepare a charter for the City and get it on the ballot. The charter ran aground as residents questioned the haste, underlying motives, and potential problems associated with the change to charter city and never received a meaningful answer.

The inclusion of non-authorizing properties, including over 1,000 acres for open space and biological habitat area, misleads the public about the project's impacts to, at least, biological resources and recreation. These areas are already intended to be preserved as wildlife habitat, as recognized by the General Plan and the property owners. Their inclusion in the WLC misleads the public and decision makers into believing this project creates open space and biological habitat when its existence is completely unrelated to the WLC.

Furthermore, the EIR erroneously characterizes open space habitat included in the WLC as a "buffer zone" or "setback" between warehousing and open space not included in the WLC, namely the San Jacinto Wildlife area. There is no buffer zone created by the project at all. Rather the project would allow warehouse development right up to existing open space and habitat areas wrongly incorporated into the project.

Comments on FEIR

Independently Prepared EIR

The City failed to independently prepare the EIR. CEQA requires a draft EIR be prepared by a lead agency or prepared independently under contract to the lead agency. Before using an EIR prepared by another person, the lead agency must subject the draft to the agency's own review and analysis. The lead agency is responsible for the adequacy and objectivity of the EIR, and an EIR sent out for public review must reflect the independent judgment of a lead agency. (Guidelines § 15084, 15089) The EIR here is inadequate and shows substantial bias in favor of the Project. The City should independently prepare an EIR for the Project.

Responses to Comments

The FEIR fails to adequately respond to the significant environmental points raised in public comments. Guidelines § 15088 (c) requires that a response to comments evince a "good faith, reasoned analysis." "Conclusory statements unsupported by factual information will not suffice." (Guidelines § 15088 (c).) The FEIR fails to properly respond to comments and instead makes these conclusory statements unsupported by fact. The FEIR also groups together several comments and responds to only a portion of the issues raised by commenters. This is contrary to the policy of CEQA.

For example, Response to comment F-13-19 states that the commenter has not evidenced that the development would create a significant lighting impact even if consistent with the City's lighting ordinance. CEQA, however, places the burden of environmental review on the agency, not the public. The EIR does not show that this enormous project operating 24 hours a day will have a less than significant impact to nighttime lighting, sky glow, and lighting impacts to the adjacent wildlife areas.

Response to comment F-13-20 fails to respond to the comment made and is confusing. Preserved open space would remain preserved open space regardless of the project.

Response to Comment F-13-25, the report states, “the latest research demonstrates that new technology diesel exhaust does not contribute to cancer and the proposed project would prohibit traditional diesel engines.” The Air Resources Board’s evidences the FEIR’s reliance on the single Advanced Collaborative Emissions Study (ACES) study is misplaced and insufficient. CARB specific points to the flaws in the ACES study of limiting to NO2 and not particulate matter (PM), and using diluted NO2, and not relying on real world conditions.

Further, numerous other studies that contradict the findings of the ACES and connect diesel PM exposure with adverse human health effect. Diesel pm has been connected to heart disease, shorter life spans, asthma, respiratory diseases, gastrointestinal inflammation, reproductive health, changes in gene expression, and cancer. It is also currently being investigated as an environmental risk factor in autism spectrum disorders. (*See Attachments*) Even the ACES study found cardiovascular effects from exposure to diesel exhaust. Incorporation of zero emission technologies as they become commercially available is feasible mitigation that must be incorporated for the Project. Moreover, at this scale of development, this project can drive the commercial availability of zero-emission truck technology at the present date and at project buildout through restricting to zero- or near-zero- emission trucks.

Mitigation

In evaluating the feasibility of mitigation, the FEIR fails to take into account that the scale of the Project may render *feasible* mitigation which may be infeasible for a smaller project. For example, where technologies are commercially available at present (e.g. zero emission or alternatively fueled trucks), the scope of demand for the WLC project can reduce the cost of such technologies to a reasonable rate. Similarly, where a smaller project with restrictions may be unable to compete with unrestricted projects in the region, the enormous scale of this project creates the opportunity to drive regional restrictions in the same manner as the Ports in their Clean Truck Program as a substantial percentage of regional trucks will need to access the site. The enormity of the Project must be considered in evaluating the feasibility of mitigation measures.

Mitigation measures are largely uncertain, vague, and unenforceable. For example, the EIR proposed to *encourage* tenants through the terms in the lease agreement to become SmartWay partners, but will not actually require this as mitigation. This “mitigation measure” is unenforceable and uncertain to reduce project impacts.

Mitigation Measure 4.2.6.1A is vague, unenforceable, and fails to adopt adequate mitigation for the conservation of Unique Farmland where the measure does not state how much farmland will be preserved in a conservation easement to make up for land developed with the Project. Will the easement be purchased at a 1:1 ratio? 2:1? While MM4.2.6.1A describes the necessary quality of land it omits a certain description of *quantity*. There is no reason for this mitigation measure to be vague and uncertain where the Project will convert 25 acres of Unique Farmland. At a 1:1 ratio, the purchase of an adequate Agricultural Conservation Easement must consist of at least 25 acres. 2:1? 50 acres.

Response to comment F-13-22 states that the mitigation ratio for offsite mitigation to offset the loss of agricultural land will be based on the current agricultural economic productivity of the property compared to economic productivity of offsite property. As a result of the recent drought and/or HF's ownership of much of the site, agricultural economic productivity of Unique Farmland may be zero *at the moment*, despite high *potential* productivity. The quantity of equivalent Farmland preserved off-site to mitigate for the loss of onsite Unique Farmland should not be tied to a vague and uncertain analysis of agricultural economic productivity or "relative economic potential" of the off-site easement compared to onsite property but rather size and physical factors (e.g. location and accessibility, soils and topography, micro and macro climatic conditions, water availability and quality, etc.)

Several commenters suggested mitigation restricted to electric yard trucks (aka hostlers, yard goats). The response in the FEIR states, "it is not feasible to require an electric yard truck because they are not commercially available and it is unknown whether they will become commercially available." Electric yard trucks are presently commercially available and several warehouses in the City and region are already restricted to this use. (See, <http://orangeev.com/company-info/> and <http://www.transpowerusa.com/yard-tractors/>). CARB further stated the information provided in the EIR is out of date, and provided information on zero emission technology available for use at warehouse/ distribution centers. There is no question that this technology is currently available at present, and will certainly be available and feasible at project buildout.

Statement of Overriding Considerations

The proposed the statement of overriding considerations is unsupported by substantial evidence as no specific economic, legal, social, technological or other benefits of a proposed project outweigh its unavoidable adverse environmental impacts. The EIR finds the Project will cause significant and unavoidable impacts to aesthetics, air quality, including associated health risks, land use, noise, transportation and circulation. These are not some small, remaining impacts after mitigation, but rather adverse effects which

span the City and region and result in significant harm to human environmental health. The meager benefits of the Project to the public cannot outweigh the substantial impacts.

The proposed findings substantially overstate, and restate, job creation as an overriding benefit of the Project. In fact, the Project do little for job creation and the City's economy. For example, the proposed findings state the Project will generate 13,000 construction jobs over 15 years because it will create 850 jobs per year. This shows the project will generate 850 jobs for 15 years, *not* 13,000 jobs (850 x 15= 12,750).

The findings state the Project would generate 20,000 ongoing direct jobs in the City. However, evidence of job creation at logistics warehouses have been historically overstated and are anticipated to be even fewer in the future as a result of automation. (*See, Moreno Valley: Sketchers' Warehouse has caused net job loss*, February 1, 2012, <http://www.pe.com/articles/moreno-649749-valley-skechers.html>) The other problem with warehousing jobs relates to labor issues: while some jobs may be created, employers often use staffing agencies to employ "temporary workers" though they may fork for years in the same building. (*As California Warehouses Grow, Labor Issues are a Concern*, July 22, 2012, http://www.nytimes.com/2012/07/23/us/in-california-warehouse-industry-is-expanding.html?_r=0)

Furthermore, by project buildout year 2030, self-driving tucks may be commercial available. (http://www.huffingtonpost.com/scott-santens/self-driving-trucks-are-going-to-hit-us_b_7308874.html) Such trucks are already in development, with market penetration currently anticipated by 2026.

Hence the alleged "job creation" and economic benefits of this Project are not supported. To the contrary, the Project will convert land proposed for commercial and other uses which may create jobs to this job poor logistics use.

The claim that the Project will further a balanced land use pattern is completely unsupported by substantial evidence. The existing General Plan contains a balance of land uses with industrial/ warehousing in the south and a range of residential, recreation, and commercial/business opportunities at the project site. Development pursuant to current designations would further this General Plan goal.

The claim the project will further attractive conditions fee of blight is also no supported where the Project site is currently undeveloped and the Project will cause adverse aesthetic impacts.

Installing needed infrastructure to meet the needs of the Project is not a benefit to the public, but to the applicant.

The Project will absolutely not provide a mix of industrial uses: it proposes logistics and smaller logistics. This proposed finding is completely unsupported. The Project will draw a significant amount of water in a time of unprecedented drought. That the Project will “minimize” such consumption does not refute this fact. The Project’s 14,000 truck trips/ day encourage bicycling? No sane bicyclist would pit their life against a semi-truck more often than every 10 seconds. The remainder of the alleged ways the Project furthers the General Plan, increases jobs and /or has economic benefits, etc. are similarly unsupported, contradicted by the EIR, and at times laughable (e.g. the Project will improve health, reduce commuting times and traffic).


The minimal benefits of money to the City are not worth the environmental and fiscal costs of the Project. This assessed money must be weighed against the costs of hospital and doctor’s visits, time expended sitting in traffic, air filtration systems, recreational costs, loss of potential jobs, etc. caused by the Project’s adverse environmental impacts. For example, a 2008 study found poor air quality costs Riverside and San Bernardino Counties \$6.3 billion in health care expenses, sick days, and deaths—an average of \$1,500 to \$1,600 per person. (Press Enterprise, 11/13/2008: Cal State Fullerton's Institute for Economic and Environmental Studies; *See*, County of Riverside General Plan- GPA 1096, Appendix M: Health Indicators, http://www.rivcoph.org/portals/0/pdf/health_indicators.pdf, p. 13) In all, the City cannot adopt the proposed Statement of Overriding Considerations for the Project as it is utterly unsupported by substantial evidence and, in any case, the benefits of the Project do not outweigh its significant effects.

Conclusion

For the reasons detailed herein, and in the numerous comments from the public as well as state and local agencies opposing this Project, I respectfully ask you vote to recommend denial of this Project in its entirety. At a minimum, consideration of the issues raised herein and substantial revision and recirculation to the EIR is needed before any vote is taken concerning recommending potential approval to the City Council.

Thank you for your consideration of these comments.

Sincerely,



Raymond W. Johnson, Esq., AICP, LEED GA
JOHNSON & SEDLACK

Raymond W. Johnson, Esq., AICP, LEED GA
JOHNSON & SEDLACK

RAYMOND W. JOHNSON, Esq., AICP, LEED GA
26785 Camino Seco
Temecula, CA 92590
(951) 506-9925
(951) 506-9725 Fax
EsqAICP@gmail.com

Johnson & Sedlack, an Environmental Law firm representing plaintiff environmental groups in environmental law litigation, primarily CEQA.

Representation

Represented various clients in litigation primarily in the fields of Environmental and Election law. Clients include:

- Sierra Club
- San Bernardino Valley Audubon Society
- Sea & Sage Audubon Society
- San Bernardino County Audubon Society
- Center for Community Action and Environmental Justice
- Endangered Habitats League
- Rural Canyons Conservation Fund
- California Native Plant Society
- California Oak Foundation
- Citizens for Responsible Growth in San Marcos
- Union for a River Greenbelt Environment
- Citizens to Enforce CEQA
- Friends of Riverside's Hills
- De Luz 2000
- Save Walker Basin
- Elsinore Murrieta Anza Resource Conservation District

City Planning

Current Planning

- Two years principal planner, Lenexa, Kansas (consulting)
- Two and one half years principal planner, Lee's Summit, Missouri
- One year North Desert Regional Team, San Bernardino County

- Twenty-five years subdivision design: residential, commercial and industrial
- Twenty-five years as applicants representative in various jurisdictions in: Missouri, Texas, Florida, Georgia, Illinois, Wisconsin, Kansas and California
- Twelve years as applicants representative in the telecommunications field

General Plan

- Developed a policy oriented Comprehensive Plan for the City of Lenexa, Kansas
- Updated Comprehensive Plan for the City of Lee's Summit, Missouri
- Created innovative zoning ordinance for Lenexa, Kansas
- One year General Plan Team, San Bernardino County
- Developed Draft Hillside Development Standards, San Bernardino County, CA
- Developed Draft Grading Standards, San Bernardino County
- Developed Draft Fiscal Impact Analysis, San Bernardino County

Environmental Analysis

- Two years, Environmental Team, San Bernardino County
- Review and supervision of preparation of EIR's and joint EIR/EIS's
- Preparation of Negative Declarations
- Environmental review of proposed projects
- Eighteen years as an environmental consultant reviewing environmental documentation for plaintiffs in CEQA and NEPA litigation

Education

B.A. Economics and Political Science, Kansas State University, 1970

Masters of Community and Regional Planning, Kansas State University, 1974

Additional graduate studies in Economics at the University of Missouri at Kansas City

J.D. University of La Verne, 1997

Dean's List; Class Valedictorian; Member, Law Review; Published, Journal of Juvenile Law

Professional Associations

Member, American Planning Association

Member, American Institute of Certified Planners

Member, Association of Environmental Professionals

Member, US Green Building Council, Green Associate

Johnson & Sedlack, Attorneys at Law

26785 Camino Seco
 Temecula, CA 92590
 (951) 506-9925

12/97- Present

Principal in the environmental law firm of Johnson & Sedlack. Primary areas of practice are environmental and election law. Have provided representation to the Sierra Club, Audubon Society, AT&T Wireless, Endangered Habitats League, Center for Community Action and Environmental Justice, California Native Plant Society and numerous local environmental groups. Primary practice is writ of mandate under the California Environmental Quality Act.

Planning-Environmental Solutions

26785 Camino Seco
 Temecula, CA 92590
 (951) 506-9925

8/94- Present

Served as applicant's representative for planning issues to the telecommunications industry. Secured government entitlements for cell sites. Provided applicant's representative services to private developers of residential projects. Provided design services for private residential development projects. Provided project management of all technical consultants on private developments including traffic, geotechnical, survey, engineering, environmental, hydrogeological, hydrologic, landscape architectural, golf course design and fire consultants.

San Bernardino County Planning Department

Environmental Team
 385 N. Arrowhead
 San Bernardino, CA 92415
 (909) 387-4099

6/91 - 8/94

Responsible for coordination of production of EIR's and joint EIR/EIS's for numerous projects in the county. Prepared environmental documents for numerous projects within the county. Prepared environmental determinations and environmental review for projects within the county.

San Bernardino County Planning Department

General Plan Team
 385 N. Arrowhead
 San Bernardino, CA 92415
 (909) 387-4099

6/91 - 6/92

Created draft grading ordinance, hillside development standards, water efficient landscaping ordinance, multi-family development standards, revised planned development section and fiscal impact analysis. Completed land use plans and general plan amendment for approximately 250 square miles. Prepared proposal for specific plan for the Oak Hills community.

San Bernardino County Planning Department

North Desert Regional Planning Team
 15505 Civic
 Victorville, CA
 (619) 243-8245

6/90 - 6/91

Worked on regional team. Reviewed general plan amendments, tentative tracts, parcel maps and conditional use permits. Prepared CEQA documents for projects.

Broadmoor Associates/Johnson Consulting

229 NW Blue Parkway
 Lee's Summit, MO 64063
 (816) 525-6640

2/86 - 6/90

Sold and leased commercial and industrial properties. Designed and developed an executive office park and an industrial park in Lee's Summit, Mo. Designed two additional industrial parks and residential subdivisions. Prepared study to determine target industries for the industrial parks. Prepared applications for tax increment financing district and grants under Economic Development Action Grant program. Prepared input/output analysis of proposed race track. Provided conceptual design of 800 acre mixed use development.

Shepherd Realty Co.

Lee's Summit, MO

6/84-2-86

Sold and leased commercial and industrial properties. Performed investment analysis on properties. Provided planning consulting in subdivision design and rezoning.

Contemporary Concepts Inc.

Lee's Summit, MO
 Owner

9/78-5/84

Designed and developed residential subdivision in Lee's Summit, Mo. Supervised all construction des

Environmental Design Association

Lee's Summit, Mo.
 Project Coordinator

6/77-9/78

Was responsible for site design and preliminary building design for retirement villages in Missouri, Texas and Florida. Was responsible for preparing feasibility studies of possible conversion projects. Was in charge of working with local governments on zoning issues and any problems that might arise with projects. Coordinated work of local architects on projects. Worked with marketing staff regarding design changes needed or contemplated.

City of Lee's Summit, MO

220 SW Main
 Lee's Summit, MO 64063
 Community Development Director

4/75-6/77

Supervised Community Development Department staff. Responsible for preparation of departmental budget and C.D.B.G. budget. Administered Community Development Block Grant program. Developed initial Downtown redevelopment plan with funding from block grant funds. Served as a member of the Lee's Summit Economic Development Committee and provided staff support to them. Prepared study of available industrial sites within the City of Lee's Summit. In charge of all planning and zoning matters for the city including comprehensive plan.

Howard Needles Tammen & Bergdoff

9200 Ward Parkway
 Kansas City, MO 64114
 (816) 333-4800
 Economist/Planner

5/73 - 4/75

Responsible for conducting economic and planning studies for Public and private sector clients. Consulting City Planner for Lenexa, KS. Conducted environmental impact study on maintaining varying channel depth of the Columbia River including an input/output analysis. Environmental impact studies of dredging the Mississippi River. Worked on the Johnson County Industrial Airport industrial park master plan including a study on the demand for industrial land and the development of target industries based upon location analysis. Worked on various airport master plans. Developed policy oriented comprehensive plan for the City of Lenexa, KS. Developed innovative zoning ordinance heavily dependent upon performance standards for the City of Lenexa, KS.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

THE HEALTH EFFECTS OF AIR POLLUTION ON CHILDREN

Fall 2000

Michael T. Kleinman, Ph.D.
Professor, Department of Community and Environmental Medicine
University of California, Irvine.

Table of Contents

- Introduction 1**
- Why are Children More Susceptible to Air Pollution Than Adults?..... 1**
 - The Lung's Important Role in Health 2
 - USC Children's Health Study..... 2
- Which Air Pollutants Have the Greatest Impact on the Health of Children and Adults?..... 2**
 - Ozone* 2
 - Ozone formation 3
 - Ozone Air Quality Standards 3
 - How Ozone Damages Lungs..... 4
 - Is Ozone-Related Lung Damage Permanent?..... 5
 - Research and Air Quality Standards 5
 - How to Reduce Ozone Exposure 6
 - Carbon Monoxide* 6
 - Who is Most Sensitive to the Health Effects of Carbon Monoxide?..... 6
 - Air Quality Standards for Carbon Monoxide 7
 - Sources of Carbon Monoxide 7
 - Health Effects of Carbon Monoxide 7
 - Prenatal Effects of Carbon Monoxide 8
 - Airborne Particles* 8
 - The Challenge of Measuring Particle Pollution 8
 - Sources of Particle Pollution..... 9
 - Historic Air Pollution Disasters..... 9
 - Health Effects of Particulate Pollution..... 10
 - Nitrogen Oxides* 11
 - Health Effects of Nitrogen Dioxide..... 11
 - Improvements in Nitrogen Dioxide Measurements 12
 - Lead*..... 13
 - Sources of Lead Pollution..... 13
 - Sulfur Oxides* 13
 - Diesel Emissions* 14
 - What's in Diesel? 14
- What Can Be Done to Reduce the Effects of Air Pollution on Children's Health? 15**

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Introduction

Air pollution has many effects on the health of both adults and children. The purpose of this article will be to examine what is known about how air pollution affects health, especially children's.

Over the past several years the incidence of a number of diseases has increased greatly. Asthma is perhaps the most important disease with an increasing incidence, but other diseases, such as allergic reactions, bronchitis and respiratory infections also have been increasing. The cause of these increases may be due at least in part to the effects of air pollution. This review will address the following questions:

1. Why are children more susceptible to the effects of air pollution than adults?
2. Which air pollutants have the greatest impact on the health of children and adults?
3. What can be done to reduce the effects of air pollution on children's health?

Why are Children More Susceptible to Air Pollution Than Adults?

In many health effects research studies, children are considered as if they were small adults. This is not really true. There are many differences between children and adults in the ways that they respond to air pollution. For example, children take in more air per unit body weight at a given level of exertion than do adults. When a child is exercising at maximum levels, such as during a soccer game or other sports event, they may take in 20 percent to 50 percent more air -- and more air pollution -- than would an adult in comparable activity.

Another important difference is that children do not necessarily respond to air pollution in the same way as adults. Adults exposed to low levels of the pollutant ozone will experience symptoms such as coughing, soreness in their chests, sore throats, and sometimes headaches. Children, on the other hand, may not feel the same symptoms, or at least they do not acknowledge them when asked by researchers. It is currently not known if children actually do not feel the symptoms or if they ignore them while preoccupied with play activities.

This probably does not mean that children are less sensitive to air pollution than adults. There are several good studies that show children to have losses in lung functions even when they don't cough or feel discomfort. This is important because symptoms are often warning signals and can be used to trigger protective behavior. Children may not perceive these warning signals and might not reduce their activities on smoggy days.

Children also spend more time outside than adults. The average adult, except for those who work mostly outdoors, spends most of their time indoors -- at home, work, or even at the gym. Children spend more time outside, and are often outdoors during periods when air pollution is at its highest.

The typical adult spends 85 percent to 95 percent of their time indoors, while children may spend less than 80 percent of their time indoors. Children may also exert themselves harder than adults when playing outside.

Perhaps the most important difference between adults and children is that children are growing and developing. Along with their increased body size, children's lungs are growing and changing, too.

The Lung's Important Role in Health

The lung is an extremely complex organ. While most organs in your body are made up of a few different types of cells, the lung contains more than 40 different kinds of cells. Each of these cells is important to health and maintaining the body's fitness.

Air pollution can change the cells in the lung by damaging those that are most susceptible. If the cells that are damaged are important in the development of new functional parts of the lung, then the lung may not achieve its full growth and function as a child matures to adulthood. Although very little research has been conducted to address this extremely important issue, this review will discuss the information that is available.

USC Children's Health Study

Recent results from the Children's Health Study, conducted by investigators at the University of Southern California, suggest that children with asthma are at much greater risk of increased asthma symptoms when they live in communities with higher levels of ozone and particles and participate in three or more competitive sports. Having said all this, the purpose of this review is not to discourage children or adults from normal daily activities and outdoor exercise. Exercise has very important, beneficial outcomes. Appropriate exercise and prudent exposures of children and adults should be encouraged even in an environment that may always contain some amount of air pollution.

Which Air Pollutants Have the Greatest Impact on the Health of Children and Adults?

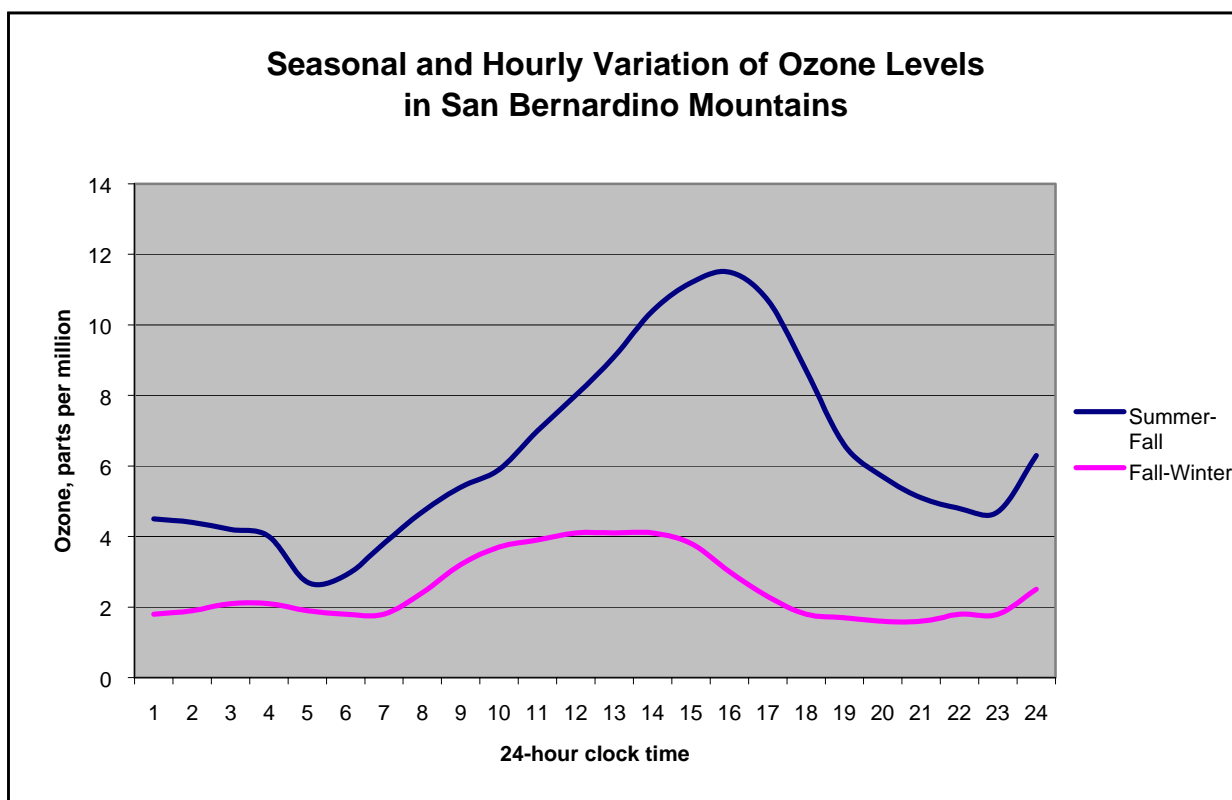
Ozone

Ozone is one of the most important air pollutants affecting human health in regions like Southern California.

Ozone (O₃) is a molecule built of three atoms of oxygen linked together in a very energetic combination. When ozone comes into contact with a surface it rapidly releases this extra force in the form of chemical energy. When this happens in biological systems, such as the respiratory tract, this energy can cause damage to sensitive tissues in the upper and lower airways.

Ozone formation

Because ozone forms as a product of solar energy and photochemical reactions of pollutants, it is not surprising that the highest concentrations of ozone in the atmosphere occur when sunlight is most intense. Thus, ozone generally reaches peak levels during the middle of the day in the summer months. These types of air pollution patterns are called diurnal and seasonal variations. The following graph shows that ozone levels in the San Bernardino Mountains are highest in the summer and fall, and peak in the late afternoon.



Ozone Air Quality Standards

Federal and state agencies have set air quality standards for ozone. An ozone level greater than 0.08 parts per million (ppm) averaged over eight hours is considered unhealthy. This level has been set because both laboratory and community studies have demonstrated measurable effects of ozone at or above that threshold.

The effects of ozone on people include:

- irritation of the nose and throat;
- increased mucus production and tendency to cough;
- eye irritation and headaches for some; and
- during severe episodes, chest pain and difficulty taking a deep breath without coughing.

How Ozone Damages Lungs

What happens when you breathe air that is contaminated with ozone? Like oxygen, ozone is soluble in the fluids that line the respiratory tract. Therefore some ozone can penetrate into the gas-exchange, or alveolar, region of the deep lung.

The following photos show how ozone affects the sensitive tissue in the deep lung. The pictures are from the lungs of rats exposed to ozone in a laboratory under carefully controlled conditions. The human lung is similar --although not identical -- to the rat's lung in terms of the types of cells and the overall structure of the alveolar region.

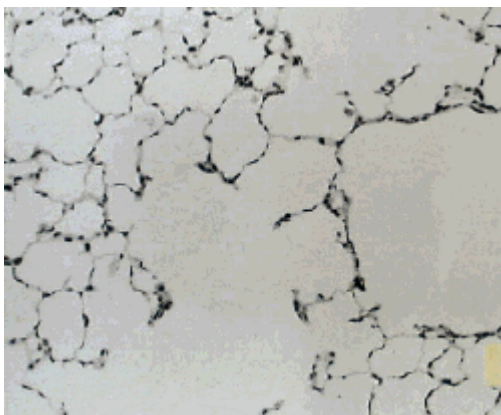


Figure 1

Figure 1 shows a magnified view of the structure of the normal gas-exchange region of the lung. It is called the gas-exchange region because oxygen inhaled from the air is transferred to the hemoglobin in blood in small blood vessels located inside the thin walls separating the alveolar air spaces.

At the same time, carbon dioxide, produced by normal metabolism and dissolved in the blood, is excreted into the air and expired when you breathe out.

The walls of a normal alveolus are very thin. There are only two layers of cells and a thin interstitial matrix separating the air in the alveolar space, or lumen, from the fluid inside the blood vessels. The cells that line the healthy alveoli are mostly very broad and very thin, and are called Type I lung cells or Type I pneumocytes. This provides a very large surface area across which gases can be efficiently transported.

Figure 2 shows the effects of breathing 0.2 ppm ozone for 4 hours. In Southern California air pollution levels can approach 0.2 ppm -- a Stage 1 ozone alert -- during the smoggiest summer days. The photo shows evidence of additional cells, called macrophages, and some material that may be fragments of ozone-injured alveolar wall cells inside the alveolar space.

Macrophages are immune system cells that respond to the injury of the delicate cells that line the alveolar lumen. These macrophages play important roles in protecting the lungs from inhaled bacteria,

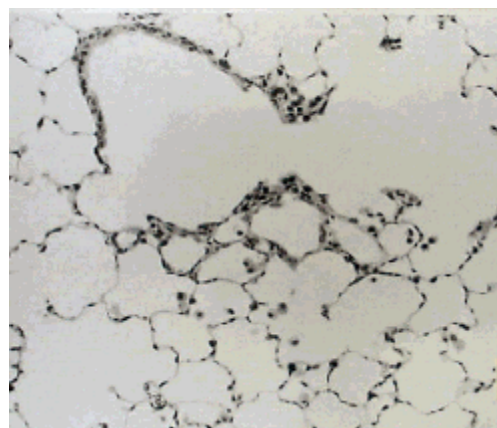


Figure 2

fungi and viruses, and are also important in helping to repair lung tissue injury caused by inhaled pollutants.

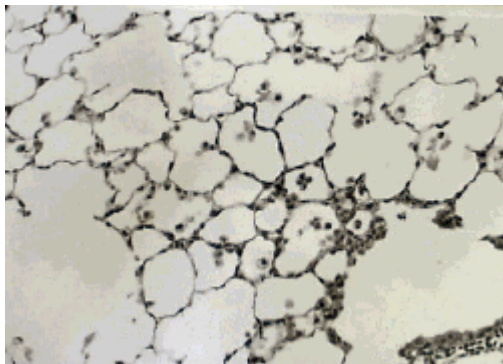


Figure 3

Figure 3 shows more extensive damage following exposure a higher concentration of ozone, 0.6 ppm. The alveolar walls are thicker and there is evidence of cells infiltrating within the walls. There are more macrophages in the alveolar spaces and the thin, Type I cells have been damaged and replaced with thicker Type II, almost cube-shaped cells that are more resistant to the toxic effects of ozone. All of these changes occurred within 48 hours after exposure. If exposure continues for more than three days, the evidence of cell injury seems to be reduced, except for the continuing presence of the Type II cells.

Is Ozone-Related Lung Damage Permanent?

People actually report that the symptoms they feel when first exposed to ozone seem to go away, even though their exposure continues.

Following ozone injury, if the lung is not exposed to ozone for approximately five to seven days, it can for the most part repair itself provided the injury is not too extensive. However, long-term studies with laboratory animals have shown that there may be residual and in some cases permanent damage. This damage might be thought of as accelerated aging of the lung. Thus, frequent exposures to ozone can cause transient damage. The lung's defenses can repair most but probably not all of that damage within a relatively short time in most healthy individuals.

Research and Air Quality Standards

Health scientists probably know more about the effects of ozone on human health than about any other pollutants. This is because ozone is pervasive in the environment. Also there are excellent methods of measuring ozone so the pollutant can be studied using epidemiological methods. The findings of these epidemiological studies can be verified using well-controlled laboratory studies with human volunteers and laboratory animals. Thousands of scientific papers on the health effects of ozone have been published and these have been critically reviewed in documents that provide the scientific basis for National and State Ambient Air Quality Standards. (Ambient refers to outdoor air.)

These so-called Criteria Documents are important because they are extensively reviewed by scientists, public agencies, industry representatives, environmental groups such as the American Lung Association and the Natural Resources Defense Council,

and the public. National and state ambient air quality standards set the goals for healthy air quality in Southern California and across the country.

Based upon the most recent studies, it is now apparent that ozone plays an important role in causing acute health effects, such as heightening asthma symptoms and developing bronchitis symptoms.

The role of ozone in producing long-term or chronic effects is less clear, at least from the available epidemiological studies. However, laboratory animal studies suggest that there can be long-term consequences.

How to Reduce Ozone Exposure

The U.S. Environmental Protection Agency (EPA) has recommended that ozone should not exceed 0.08 ppm averaged over an 8-hr period. When ozone exceeds this level, active children and adults, those with respiratory disease such as asthma, and other people with unusual susceptibility to ozone should limit prolonged outdoor exposure.

Incidentally, personal tobacco smoking during periods of high ozone exposure doubled the risk of asthmatic individuals needing to go to the emergency room for treatment of asthma symptoms.

Carbon Monoxide

Carbon monoxide (CO), a colorless, odorless gas, is a byproduct of combustion.

When inhaled, carbon monoxide reacts very rapidly with hemoglobin in the blood, preventing uptake and transport of oxygen. Because carbon monoxide readily and firmly attaches to hemoglobin, it stays in the blood for a relatively long time. Thus, during an exposure carbon monoxide concentrations in blood can rise in a matter of minutes, then stay high for hours.

Who is Most Sensitive to the Health Effects of Carbon Monoxide?

Most of the health effects directly associated with carbon monoxide are most likely due to decreases in oxygen delivery to vital organs such as the heart and the brain.

People with heart disease may be especially sensitive to the effects of carbon monoxide. In addition, people with lung diseases that limit efficient use of inhaled oxygen, such as asthma and emphysema, may also be susceptible. Even in people without heart or lung diseases, reduced delivery of oxygen to skeletal muscles, especially during exercise, can reduce the ability to perform strenuous work.

At high levels of carbon monoxide exposure, impaired delivery of oxygen to the central nervous system can reduce the ability to respond quickly to external stimuli. After exposures that convert 5 percent to 10 percent of the circulating hemoglobin to carboxyhemoglobin (COHb), people's ability to recognize and react to flashes of light in a test system are reduced. At 10 percent to 30 percent carboxyhemoglobin, nausea,

headaches, unconsciousness, and sometimes death can result. The severity of symptoms increases with the concentration of carboxyhemoglobin.

Air Quality Standards for Carbon Monoxide

Both the EPA and the State of California have set air quality standards for carbon monoxide based on the results of epidemiological and laboratory findings. Ambient levels of carbon monoxide should not exceed 9 ppm, when averaged over an 8-hour interval, and should not exceed 20 ppm in any one-hour period. (The USEPA has a slightly higher 1-hour standard of 35 ppm).

Sources of Carbon Monoxide

The major sources of carbon monoxide pollution are automotive exhaust and emissions from large industrial combustion sources such as electrical power plants. Because these sources produce many contaminants in addition to carbon monoxide -- such as fine particles and nitrogen oxides -- it is often difficult to isolate the health effects of ambient carbon monoxide from those of other pollutants.

In addition to carbon monoxide generated outside, there are also important indoor sources of the pollutant. The most important of these are combustion sources such as gas ovens, gas burners, water heaters, and heating systems. However, in most cases emissions from well-maintained and vented gas appliances are small.

Tobacco smoking is a more significant source of carbon monoxide. Tobacco smoke can contain very high concentrations of carbon monoxide (1,000 ppm to 50,000 ppm). Carbon monoxide levels in the homes of children whose relatives smoke tobacco products can be higher than the carbon monoxide levels outdoors.

Health Effects of Carbon Monoxide

There are hundreds of cases per year of deaths or severe illness due to carbon monoxide poisoning from faulty appliances, indoor emissions of automobile exhaust and industrial exposures. These cases show that carbon monoxide poisoning causes symptoms very similar to those of the flu. In fact, the true number of cases is not really known because many people may have been poisoned slightly and thought that they were just fighting off a cold or the flu. Thus it is very important to make sure that home appliances are well-maintained and that all combustion sources are properly vented to the outdoors.

Epidemiological studies have shown significant association between several health effects and carbon monoxide, although as mentioned earlier it is difficult to completely isolate carbon monoxide's effects from those of other air pollutants.

For example, asthmatic children in Taiwan who were exposed to high levels of traffic-related air pollution -- using carbon monoxide and nitrogen dioxide as marker compounds-- reported more respiratory symptoms than children with lower exposures.

A study of physician office visits in London showed associations between air pollution and doctor visits for asthma and other lower respiratory disease. For children, levels of nitrogen dioxide, carbon monoxide, and sulfur dioxide were associated with increased numbers of medical consultations. However, in adults, the only consistent association was with levels of airborne particles. This suggests that children and adults might respond differently to pollution exposures.

Prenatal Effects of Carbon Monoxide

Carbon monoxide may also have prenatal effects. Pregnant women who were exposed to high levels of ambient carbon monoxide (5 ppm to 6 ppm) were at increased risk of having low birth-weight babies. It has long been known that women who smoke cigarettes during pregnancy have low birth-weight babies, but this is the first study of similar findings in women exposed to environmental carbon monoxide.

Babies exposed to carbon monoxide during the maturation of their organs may suffer permanent changes to those organs. Studies using newborn rats showed that carbon monoxide exposure could cause changes in the heart muscle tissue. This in turn could increase the severity of effects of artery constrictions when they became adults. Other animal studies have shown that long-term carbon monoxide exposure can contribute to a disease called ventricular hypertrophy, in which the cells of the heart's ventricle chambers are enlarged and possibly weakened.

Airborne Particles

Particles, including nitrates, sulfates, carbon¹ and acid aerosols² are a complex group of pollutants.

Unlike ozone, which has a specific chemical composition, airborne particles vary in size and composition depending on time and location. Although the components of particles may have common sources, the types and amounts of particles collected at any one time and location may be unique.

To add to the problem, gaseous pollutants including ozone, sulfur dioxide, nitrogen dioxide and carbon monoxide often are present in the atmosphere at the same time as are particles. It is not always possible to clearly differentiate between the health effects of the gases, the particles, and possibly the combination of particles and gases. This complexity presents a tremendous challenge to the scientific community and to public in trying to understand how inhaled particles affect human health.

The Challenge of Measuring Particle Pollution

Precisely measuring particulate pollution is more difficult and labor intensive than measuring gaseous pollutants such as ozone. For this reason, particle concentrations are not measured on a daily basis in most communities. Frequently, they are measured once every six days.

¹ Both elemental and organic. Elemental carbon is pure carbon from combustion sources, including diesel particulate. Organic carbon is a semi-volatile hydrocarbon from combustion and some evaporative sources.

² Aerosol is the scientific term used to describe particles suspended in a fluid, such as air.

Particle samples are collected on filters that are then weighed. Particle concentrations are reported in terms of micrograms of particles per cubic meter ($\mu\text{g}/\text{m}^3$) of collected air.

Originally, the particle samples were relatively indiscriminate with respect to particle size and often contained very large particles. These large particles contributed a great deal to the weighed particle mass, but might not have been very important with respect to lung health. This is because most of the particles were too large to penetrate through the nasal and head airways to reach the lung. A more health-related sample was needed.

After a great deal of scientific consideration it was decided that particulate matter with aerodynamic diameters³ less than or equal to 10 microns (μm) should be collected. Ambient air quality standards were developed for this material, which is called PM_{10} .

Sources of Particle Pollution

Researchers noted that the sources of relatively large-size particles (greater than 3 microns in aerodynamic diameter) were quite distinct from the sources of particles less than 1 micron in diameter.

The larger, so-called "coarse" particles are mostly produced by mechanical processes, such as automobile tire wear on the road, industrial cutting, grinding and pulverizing processes and re-suspension of particles from the ground or other surfaces by wind and human activities. The chemical composition of coarse particles may be somewhat similar to the chemical composition of soil in that area, along with industrial compounds from activities such as mining or smelting operations. The coarse fraction of urban aerosols also contains bits of plants, molds, spores and some bacteria. Thus the characteristics of the coarse particles may vary greatly in different communities.

In contrast, the smaller or so-called "fine" particles in the urban aerosol come from combustion sources, such as power plants, automobile, truck, bus and other vehicle exhaust or from the reactions that transform some of the pollutant gases into solid or liquid particles. These distinctions may be important because the current air pollution health effects literature suggests, although not with certainty, that for some key health effects the fine particles are more important than the coarse particles. These findings have led EPA to propose a new nationwide $\text{PM}_{2.5}$ standard that would reduce exposure to particles that are 2.5 microns or less in diameter.

Historic Air Pollution Disasters

Epidemiological studies have consistently associated adverse health effects with exposures to particulate air pollution. Early studies implicated particulate and sulfur dioxide pollution in the acute illnesses and premature deaths associated with extremely

³ Aerodynamic diameter is used to define particles' size. Particle deposition on a surface, or in the lung, depends on the particle's aerodynamic and diffusion characteristics. A particle's aerodynamic characteristics depend on its density, shape, actual size, and velocity while its diffusion characteristics are functions of its size and the density of the air in which it is suspended.

severe pollution episodes in Donora, Penn., London, and New York in the 1940s, 1950s, and 1960s. The particle levels in a four-week pollution disaster in London in 1955 were more than 50 times higher than the California standard.⁴ Twenty percent of that aerosol was composed of acid sulfates -- probably sulfuric acid. The number of people hospitalized for lung or heart-related diseases was extraordinarily high, but more importantly there were more than 4,000 premature, or "excess," deaths in the London population.

Fortunately, major efforts by government agencies, the public, and industries have made it very unlikely there will ever be a similar episode in modern urban communities. However, the lessons learned from these disasters are still relevant. Despite the fact that our levels of airborne particles are much lower than those that occurred during the disasters, EPA estimates that there are still more than 6,000 excess deaths in the United States that could be associated with inhaled particles.

Health Effects of Particulate Pollution

Current ambient levels of PM₁₀ -- 30 to 150 micrograms per cubic meter -- are associated with increases in the numbers of people that die daily from heart or lung failure. Most of these deaths are among the elderly. However there is a strong body of evidence that some children are also adversely affected by particulate matter.

The American Thoracic Society's Environmental and Occupational Health Assembly reviewed current health effects literature. They report that daily fluctuations in PM₁₀ levels have been related to:

- acute respiratory hospital admissions in children;
- school and kindergarten absences;
- decreases in peak lung air flow rates in normal children; and
- increased medication use in children and adults with asthma.

The USC Children's Health Study suggests that children with asthma living in a community with high particle concentrations may have suppressed lung growth. After children moved into cleaner cities their lung growth returned to the normal rate, but they did not recover the lost potential growth, according to John Peters, the study's principle investigator.

It is difficult to positively assign a quantitative risk associated with particulate matter because nearly all studies of its health effects find other pollutants present that may account for some of the effects.

Part of the problem is due to the nature of the data being collected. The levels of particulate matter vary during the course of the day and peak values can be quite high. Few studies have evaluated the effect of these short-term "spikes." However, at least one epidemiological study of children with asthma suggested that changes in symptoms

⁴ The California standard for particulate matter (PM₁₀) is 50 micrograms per cubic meter averaged over 24 hours

and lung function correlate more strongly with 1-hour peaks than with 24-hour average concentrations.

Other studies, primarily with laboratory animals, suggest that the chemical composition⁵ and surface areas of the particles may be more important than particle mass. Scientists are continuing to study the health effects of particles and are developing better methods for measuring the important constituents. It may be possible in the near future to more accurately assess the effects of inhaled particles on human health.

Nitrogen Oxides

Nitrogen oxides are produced during most combustion processes. Mobile sources and power plants are the major contributors in Southern California.

About 80 percent of the immediately released nitrogen oxide is in the form nitric oxide (NO). Small amounts of nitrous oxide (N₂O) are also produced. Nitrous oxide is a "greenhouse" gas that is suspected of playing an important role in global warming.

Nitric oxide reacts with oxygen in the air to produce nitrogen dioxide (NO₂). Further oxidation during the day causes the nitrogen dioxide to form nitric acid and nitrate particles. In the dark, nitrogen dioxide can react with ozone and form a very reactive free radical. The free radical then can react with organic compounds in the air to form nitrogenated organic compounds, some of which have been shown to be mutagenic and carcinogenic.

Health Effects of Nitrogen Dioxide

Nitrogen dioxide is the most important nitrogen oxide compound with respect to acute adverse health effects. Under most chemical conditions it is an oxidant, as is ozone. However, it takes about 10 times more nitrogen dioxide than ozone to cause significant lung irritation and inflammation.

Nitrogen dioxide differs from ozone in that it suppresses the immune system to a much greater degree. As discussed below, some epidemiological studies have shown that children exposed to high levels of ambient nitrogen dioxide may be at increased risk of respiratory infections. Studies with laboratory animals have indeed shown that if mice are exposed first to nitrogen dioxide and later to bacteria at a level that would not infect a healthy control animal, their normal lung defense mechanisms are suppressed and the bacteria are able to infect the host.

⁵ The idea that all particles are equally toxic is not scientifically justified. There are many good examples that can be taken from studies of particles in the workplace. For example, certain types of particles that contain quartz -- a natural mineral composed of silicon dioxide but with a specific crystal structure -- are very potent lung irritants. Repeated exposures to this material can lead to a serious, permanent lung disease called lung fibrosis. Other mineral particles that are fibrous, such as specific forms of asbestos, can cause lung cancer. Other particles such as titanium dioxide do not seem to cause occupational diseases.

Average levels of nitrogen dioxide in the United States range from 0.02 to 0.04 ppm. Levels in major urban areas in Southern California may be higher, but the region has not exceeded the federal standard⁶ for nitrogen dioxide since 1991.

During the 1970s, one of the first studies relating respiratory illnesses and changes in lung function to ambient nitrogen dioxide concentrations reported that children living in areas with high nitrogen dioxide concentrations had greater incidences of lung-related illness than children living in areas with lower concentrations. Since then, other epidemiological studies have suggested that children with asthma are more likely than children without asthma to have reduced lung function and symptoms of respiratory irritation, such as cough and sore throat, when outdoor average nitrogen dioxide concentrations exceed about 0.02 ppm.

Some studies also have suggested that children younger than five years old may be more severely affected by nitrogen dioxide than older children. Several epidemiological studies have suggested that for children, the most important effect of ambient exposure to nitrogen dioxide might be increased susceptibility to respiratory infections and increased severity of responses to inhaled allergens.

Although many epidemiological studies show significant associations between outdoor nitrogen dioxide concentrations and adverse health outcomes, some studies do not corroborate these effects. In part, this is because it is often difficult to fully account for the influences of indoor sources of nitrogen dioxide.

Improvements in Nitrogen Dioxide Measurements

More recent studies have used special devices, called passive dosimeters, that can be worn by children to collect nitrogen dioxide for later analysis. These measurements give epidemiologists the ability to better assess a child's total nitrogen dioxide exposure over the course of the day. These studies show that there can be a great deal of individual variation in exposures, even for children living in the same communities. Thus, it is not surprising that epidemiological studies that do not estimate a nitrogen dioxide dose may reach different conclusions.

However, laboratory studies involving controlled exposures of human volunteers and laboratory animals have demonstrated plausible effects of nitrogen dioxide on human health. For example, if one exposes rats or other animals to nitrogen dioxide, and then examines their respiratory tract tissues, it is very evident that the pollutant can cause short-term injury similar to that seen after ozone exposure.

Long-term exposures to high concentrations of nitrogen dioxide can produce chronic damage to respiratory tract tissue that resembles the lung disease emphysema.

The pollutant's suppression of immune system functions reduces the ability of the host to fight off bacterial and viral infections. Human volunteers who inhaled weakened

⁶ 0.053 ppm as an annual average

influenza virus after being exposed to nitrogen dioxide in laboratories were more susceptible to the infection than a control group that did not inhale nitrogen dioxide.

Other studies show that nitrogen dioxide decreases the body's ability to generate antibodies when challenged by pathogens, and may reduce the ability of the respiratory system to remove foreign particles such as bacteria and viruses from the lung.

Lead

People can be exposed to lead (Pb) through air, food and water. Lead is a toxic heavy metal that causes nerve damage and impairs the body's ability to make hemoglobin, leading to a form of anemia.

Sources of Lead Pollution

Large amounts of lead were emitted to the atmosphere when it was used as a gasoline additive.⁷ The emitted lead could be inhaled. In addition, lead fallout from the air caused widespread contamination of soil, plants, food products, and water.

Lead is often measured in children's blood as an index of environmental exposure. Even low levels⁸ of lead in the blood of children aged 6 to 7 are linked to measurable changes in intelligence quotient and certain perceptual-motor skills. Higher levels of lead exposure can also result in kidney damage and may be related to high blood pressure in adults.

Sulfur Oxides

Most manmade emissions of the gas sulfur dioxide (SO₂) come primarily from the combustion of fossil fuels such as coal, oil, and diesel fuel.

Most of the sulfur in fossil fuel is converted sulfur dioxide, but a small amount is also converted to sulfuric acid. In the atmosphere, gaseous sulfur dioxide can also be converted to sulfuric acid and sulfate-containing particles. Thus, atmospheric concentrations of sulfur dioxide are often highly associated with acidic particles, sulfuric acid particles and sulfate particle concentrations.

The current National Ambient Air Quality Standards for sulfur dioxide are 18 micrograms per cubic meter averaged annually, and 365 micrograms per cubic meter averaged over 24 hours. Southern California does not exceed the national air quality standard because its industries primarily burn low-sulfur fuels such as natural gas. Much of the sulfur oxide air pollution in Southern California is likely to be associated with diesel emissions.

⁷ Lead in the form of tetraethyl lead was added to gasoline in the United States in large amounts from the 1950s until it was banned in the mid-1970s.

⁸ 10 to 30 micrograms per 100 milliliters

Sulfur dioxide is a very water-soluble gas and therefore most of the sulfur dioxide that is inhaled is absorbed in the upper respiratory tract and does not reach the lung's airways. However, the small amount of sulfur dioxide that does penetrate into the airways can provoke important health effects, primarily in individuals with asthma.

For those with asthma, even relatively short-term, low-level exposures to sulfur dioxide can result in airway constriction leading to difficulty in breathing and possibly contribute to the severity of an asthmatic attack.

A number of epidemiological studies have shown associations between ambient sulfur dioxide and rates of mortality (death) and morbidity (illness). However, because sulfur dioxide is often strongly correlated with fine particles and especially sulfate-containing particles, it is difficult to separate the effects of sulfur dioxide from those of the particle compounds.

A study in France found an increase of 2.9 visits to the emergency room for every 20 micrograms per cubic meter increase in atmospheric sulfur dioxide. The results pertained to days when the average sulfur dioxide levels were above 68 micrograms per cubic meter but below the U.S. health standard.

In London, asthma and other lower respiratory diseases in children were most significantly associated with exposures to nitrogen dioxide, carbon monoxide, and sulfur dioxide. In adults the only consistent association was with particulate matter.

Hospital admissions for children with asthma may increase by 20 percent following acute exposure to ozone peaks and possibly with sulfur dioxide. Chronic exposure to increased levels of fine particles, sulfur dioxide, and nitrogen dioxide may be associated with up to threefold increase in nonspecific respiratory symptoms. Thus, recent literature suggests that sulfur dioxide affects adults and children differently and that chronic and acute effects may also be different.

Diesel Emissions

Diesel fuel is burned to power buses, trucks, road-building equipment, trains, boats and ships and electricity-generating equipment. When diesel fuel is burned, the exhaust includes both particles and gases. Diesel emissions are important constituents of ambient air pollution.

What's in Diesel?

Diesel particles consist mainly of elemental carbon and other carbon-containing compounds. Hundreds of compounds have been identified as constituents of diesel particles. These include polycyclic aromatic hydrocarbons (PAHs) and other compounds that have been associated with tumor formation and cancer. In 1998, the California Air Resources Board designated diesel particulate a cancer-causing toxic air contaminant.

Diesel particles are microscopic. More than 90 percent of them are less than 1 micron in diameter. Due to their minute size, diesel particles can penetrate deeply into the lung. There is evidence that once in the lung, diesel particles may stay there for a long time.

In addition to particles, diesel exhaust contains several gaseous compounds including carbon monoxide, nitrogen oxides, sulfur dioxide and organic vapors, for example formaldehyde and 1,3-butadiene. Formaldehyde and 1,3-butadiene have been classified as toxic and hazardous air pollutants. Both have been shown to cause tumors in animal studies and there is evidence that exposure to high levels of 1,3-butadiene can cause cancer in humans.

AQMD's recent landmark research project, the Multiple Air Toxics Exposure Study II, found that diesel particulate is responsible for about 70 percent of the total cancer risk from all toxic air pollution in the greater Los Angeles metropolitan area.

Diesel emissions may also be a problem for asthmatics. Some studies suggest that children with asthma who live near roadways with high amounts of diesel truck traffic have more asthma attacks and use more asthma medication.

Some human volunteers, exposed to diesel exhaust in carefully controlled laboratory studies, reported symptoms such as eye and throat irritation, coughing, phlegm production, difficulty breathing, headache, lightheadedness, nausea and perception of unpleasant odors. Another laboratory study, in which volunteers were exposed to relatively high levels of diesel particles for about an hour, showed that such exposures could cause lung inflammation.

Thus current epidemiological and laboratory evidence suggests that at typical urban concentrations, diesel exhaust may contribute significantly to the health effects of air pollution.

What Can Be Done to Reduce the Effects of Air Pollution on Children's Health?

After reviewing the literature on how children's exposures differ from those of adults, it is evident that:

- children are outdoors more hours per day than most adults;
- they exert themselves to a greater degree while they are outside than most adults; and
- they participate in more organized activities than adults.

There are definite health benefits to having children participate in outdoor activities. However, scientific evidence also suggests that air pollution exposures can injure children's lungs and other organs.

Air quality information in the form of health reports and air quality advisories are now a regular part of life in California. One logical step is to reduce strenuous activities during pollution episodes and try to take advantage of those hours when airborne pollutant levels are lower.

At the public level there is a long-standing commitment to improve air quality. When you look at the air pollution levels in California today you can see that a great deal of progress has been made. There has been a cost for this progress. For instance, some products are more expensive. In return, the lower levels of pollutant exposure compared to 20 years ago should decrease the adverse effect of air pollution on the long-term health of our developing children.

###

Diesel and Health in America: The Lingering Threat



CLEAN AIR TASK FORCE

February 2005

Packet Pg. 304

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Find out about the risks
of breathing diesel exhaust
where you live:

www.catf.us/goto/dieselhealth



CLEAN AIR TASK FORCE

18 Tremont Street, Suite 530, Boston, MA 02108
Tel: 617-624-0234 / Fax: 617-624-0230

Credits –

Written by: **Conrad G. Schneider**, *Advocacy Director*
and **L. Bruce Hill, Ph.D.**, *Senior Scientist*

Edited by: **Maria Padian**

Designed by: **Jill Bock Design**

Printed by: **Spectrum Printing & Graphics, Inc.**

This report has been printed on recycled (20% post consumer waste), Processed Chlorine Free (PCF) paper with soy inks.

Acknowledgements –

The John Merck Fund, The Heinz Endowments, The Beldon Fund, The New York Community Trust, and The Turner Foundation have provided support for the Clean Air Task Force **Diesel Initiative**, including this report. Dana Lowell and Tom Balon of M.J. Bradley & Associates and David Schoengold of MSB Energy Associates provided technical support. Patricia Monahan of the Union of Concerned Scientists provided valuable comments.

February 2005

Foreword

Scientists have been examining relationships between air pollution and death and disease for decades but only now are we beginning to understand the impacts of one of the most toxic sources of emissions today – the diesel engine. Diesels churn out a hazardous mix of gaseous and particle pollutants. What's more, diesel exhaust is emitted at ground level – where we breathe it – by trucks and buses around us in traffic, at school and transit bus stops, and by heavy construction or agricultural equipment. Diesel exhaust contains numerous dangerous compounds, ranging from respiratory irritants to carcinogens including a host of air toxics, particulate matter, carbon monoxide and nitrogen oxides.

While scientists have concluded that combustion-related particulate matter from all combustion sources is associated with premature death from heart attacks and cancer, we also are finding that carbon particles from mobile sources may be particularly unhealthy. These particles adsorb other metals and toxic gases produced by diesel engines – such as cancer causing-PAH (polycyclic aromatic hydrocarbons) – onto their surfaces making them even more dangerous. Furthermore, research on personal exposures demonstrates that these small particles easily penetrate our indoor environment where they may be trapped for days when ventilation is poor.

This report presents for the first time estimates of the health toll from diesel vehicle pollution. Using methodology approved by the U.S. Environmental Protection Agency's Science Advisory Board (SAB), the analysis finds that approximately 21,000 people die prematurely each year due to particulate matter pollution from diesels. Other serious adverse health impacts include tens of thousands of heart attacks, asthma attacks, and other respiratory ailments that can lead to days missed at work and at school.

Using more highly time-resolved studies we are increasingly able to understand the inflammation mechanism by which particles can lead to atherosclerosis, heart attacks, strokes and ultimately, untimely deaths. From all we know today, we can confidently say that reducing diesel exhaust in our environment will mean improving public health, and as this report demonstrates, reducing preventable premature deaths. We do not need to wait. Technology is available today that can reduce particulate matter emissions by up to 90 percent. Now is the time to clean up our old trucks, buses, heavy equipment and locomotives to provide a cleaner future for us and our children.



Howard Frumkin, M.D., Dr.P.H., FACP, FACOEM

*Professor and Chair, Department of Environmental and Occupational Health
Emory University, Rollins School of Public Health*



Executive Summary

Everyone has experienced it: getting hit right in the face by a cloud of acrid diesel smoke. Perhaps you were standing on a street corner when a bus or truck whizzed by. Or maybe you were standing at a bus stop or stuck behind a dump truck grinding up a hill. But breathing diesel exhaust isn't just unpleasant. It is hazardous to your health. In fact, health research indicates that the portion of the exhaust you can't see may be the most dangerous of all. Asthma attacks, respiratory disease, heart attacks, and even premature death – all of these are among the most serious public health problems linked to emissions from the nation's fleet of diesel vehicles. The good news is that the technology exists right now to clean up emissions from these engines, so that most of the adverse health impacts can be prevented.

Today in the U.S. more than 13 million diesel vehicles help to build our cities and towns, transport our food and goods, and take us to and from work. More than three quarters of all Americans live near intersections, bus stops, highways, bus and truck depots, or construction sites with heavy equipment – all of which are concentrated sources of diesel exhaust. In rural areas, those who live near heavy diesel agricultural equipment suffer their share of exposure to diesel as well.

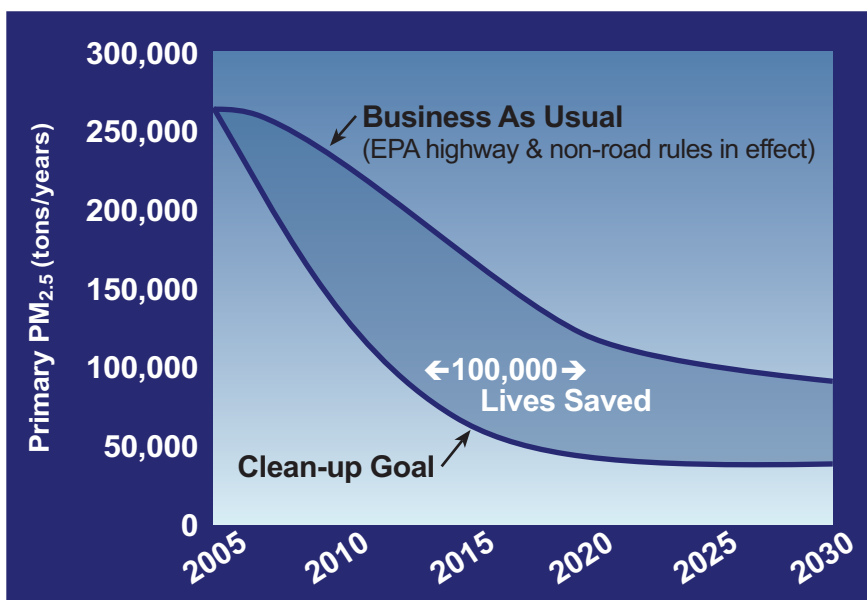
The U.S. Environmental Protection Agency has issued important regulations that will require dramatic reductions in emissions from new diesel vehicles starting in 2007 – but only the new ones. These regulations, to be phased in over the next quarter century, apply only to *new* engines. What about the diesels on the road today? The lifespan of the



average diesel vehicle is nearly 30 years. Many diesels are driven over a million miles. Because of this longevity, we will be left with the legacy of pollution from dirty diesel vehicles for decades to come. That is, *unless* we take action to reduce emissions from vehicles currently on the road. We don't have to wait. Control technologies exist right now that can significantly reduce deadly fine particle emissions from diesel vehicles, in some cases by upwards of 90 percent.

American know-how, witnessed by the success of the manufacturers of engines, control devices, and fuel refiners in developing innovative solutions for reducing diesel exhaust, provides a lifesaving opportunity we can seize today. Pollution from dirty diesels on the road now can be dramatically reduced using a combination of cleaner fuels, retrofit emission controls, rebuilt engines, engine repowerings, and accelerated purchase of new, cleaner

vehicles. Unlike so many other vexing environmental issues, these affordable solutions present a highly unusual opportunity to actually address a major risk to public health and the environment. In fact, we could virtually eliminate this problem if diesel manufacturers, fleet owners, environmentalists, concerned citizens, and government regulators make the commitment to work together.



An Aggressive Program to Reduce Diesel Emissions Could Save About 100,000 Lives between Now and the Year 2030.

What are the health impacts of these dirty diesel vehicles? What benefits will we realize if we act now to clean them up? The Clean Air Task Force commissioned Abt Associates, an highly-respected consulting firm that U.S. EPA and other agencies rely upon to assess the benefits of national air quality policies, to quantify for the first time the health impacts of fine particle air pollution from America's diesel fleet. Using this information, we were able to estimate the expected benefits – in lives saved – from an aggressive but feasible program to clean up dirty diesel buses, trucks, and heavy equipment across the U.S.

This report summarizes the findings of the Abt Associates study. It then reviews the degree to which diesel vehicles increase the level of fine particle pollution in the air we breathe, and recommends reduction measures that will save thousands of lives each year.

Key findings include:

- Reducing diesel fine particle emissions 50 percent by 2010, 75 percent by 2015, and 85 percent by 2020 would save nearly 100,000 lives between now and 2030. These are additional lives saved above and beyond the projected impact of EPA's new engine regulations.
- Fine particle pollution from diesels shortens the lives of nearly 21,000 people each year. This includes almost 3,000 early deaths from lung cancer.
- Tens of thousands of Americans suffer each year from asthma attacks (over 400,000), heart attacks (27,000), and respiratory problems associated with fine particles from diesel vehicles. These illnesses result in thousands of emergency room visits, hospitalizations, and

What We Must Do to Protect Public Health from Today's Dirty Diesels.

Although the EPA has mandated the phase-in of cleaner new engines and fuels beginning in 2007 for highway vehicles and heavy equipment, EPA has limited authority to mandate emissions controls on the fleet of existing diesel vehicles. To date, EPA has adopted a "voluntary" approach. Nevertheless, in order to meet the new ambient air quality standards for fine particles, states and cities must require controls to reduce diesel emissions. Diesel cleanup is also an important next step in areas that are having difficulty meeting existing and new ambient air quality standards for ozone such as Houston and Dallas, Texas.

States can enact legislation requiring diesel cleanup as some, such as California and Texas, have already begun to do. States should also consider measures to require early engine retirement and speed fleet turnover. For vehicles like long-haul trucks, ships, and locomotives that are engaged in interstate transport, federal regulations, federal

lost work days. Together with the toll of premature deaths, the health damages from diesel fine particles will total \$139 billion in 2010.

- Nationally, diesel exhaust poses a cancer risk that is 7.5 times higher than the **combined** total cancer risk from all other air toxics.
- In the U.S., the average lifetime nationwide cancer risk due to diesel exhaust is over 350 times greater than the level U.S. EPA considers to be "acceptable" (i.e., one cancer per million persons over 70 years).
- Residents from more than two-thirds of all U.S. counties face a cancer risk from diesel exhaust greater than 100 deaths per million population. People living in eleven urban counties face diesel cancer risks greater than 1,000 in a million – one thousand times the level EPA says is acceptable.
- People who live in metropolitan areas with a high concentration of diesel vehicles and traffic feel their impacts most acutely. The risk of lung cancer from diesel exhaust for people living in urban areas is three times that for those living in rural areas.

The vast majority of the deaths due to dirty diesels could be avoided by an aggressive program over the next 15 years to require cleanup of the nation's existing diesel fleet. Practical, affordable solutions are available that can achieve substantial reductions in diesel risk. The only thing that stands between us and dramatically healthier air is the political will to require these reductions and the funding to make it a reality.

legislation, or both may be needed. Funding for such initiatives may pose a challenge for public fleets (school buses, transit vehicles, garbage trucks, etc.), so support for expanded state and federal funding to help the cleanup of fleets owned by cash-strapped states and cities will be necessary. Local and state budget writers will need a strong commitment to come up with the necessary appropriations or bonds to fund the local share.

Particle filters combined with the use of Ultra Low Sulfur Diesel (ULSD) fuel have been found to reduce diesel particles and particle-bound toxics from diesel exhaust by up to 90 percent. Under the new engine rules, ULSD will be available for highway vehicles nationwide starting in 2006. It is already available in cities in 21 states. Not all vehicles can be retrofitted with a particle filter, but there are a variety of options available for the cleanup of every vehicle regardless of make or model year.

Cities and states should:

- Establish ambitious goals for reducing risk to their citizens by cleaning up existing diesels;
- Identify priority geographic areas and diesel “hotspots” for immediate attention;
- Adopt a package of options for reducing diesel exhaust including:
 - Retrofits accomplished by replacing mufflers with an optimal mix of filters or oxidation catalysts depending on vehicle age and type;
 - Requiring Ultra Low Sulfur Diesel and cleaner alternative fuels;
 - Closed crankcase ventilation systems to eliminate engine exhaust from penetrating the cabin of vehicles such as school and transit buses;
 - Engine rebuild and replacement requirements;
 - Truck stop electrification programs to give long-haul truckers a way to power their rigs overnight without running their engines;
 - Contract specifications requiring cleanup of trucks and construction equipment used in public works projects.
- Adopt diesel cleanup measures as federally-enforceable requirements in State Implementation Plans (SIPs) for the attainment of the fine particle and ozone air quality standards;
- Create and fund programs, such as California’s “Carl Moyer” and the Texas Emission Reduction Plan (TERP) program, which provide funding for diesel equipment

owners to replace or rebuild high-polluting diesel engines;

- Adopt and enforce anti-idling ordinances and legislation.

The Federal government should:

- Pass legislation providing funding for the cleanup of municipal and state fleet vehicles;
- Explore regulatory options for reducing emissions from existing interstate fleets such as long-haul trucks, shipping, and locomotives;
- Retain and enforce the tighter new engine and cleaner fuel standards for highway and non-road diesels.



Retrofits are effective in reducing particle emissions from heavy equipment. The tractor on the left is retrofitted with a particle emissions control device.

New Findings

While numerous medical studies have linked diesel exhaust to a host of serious adverse health outcomes, no single study has yet quantified the death and disease attributable to diesel across America – until now. Researchers estimate that as many as 60,000 people in the U.S. die prematurely each year because of exposure to fine particles from all sources.¹ And some researchers believe that this figure may even underestimate the total number of particle-related deaths.² A reanalysis of the major particle mortality study in over 150 cities suggests that particles from motor vehicles may be more toxic than average.³

We know that diesel exhaust is a hazardous mixture of gases and particles including carcinogens, mutagens, respiratory irritants or inflammatory agents and other toxins that cause a range of diverse health effects. Diesel particles act like magnets for toxic organic chemicals and metals. The smallest of these particles (ultrafine particles)

can penetrate deep into the lung and enter the bloodstream, carrying with them an array of toxins.⁴ Diesel exhaust can contain 40 hazardous air pollutants as listed by EPA, 15 of which are listed by the International Agency for Research on cancer (IARC) as known, probable or possible human carcinogens.⁵ Thousands of studies also have documented that fine particles are associated with respiratory and cardiovascular diseases and death. Additional studies have documented effects in infants and children such as Sudden Infant Death syndrome (SIDS) and retarded lung development.⁶

Now, for the first time, this report reveals the staggering toll of death and disease from diesel exhaust in our air – and the dramatic benefits of requiring the cleanup of the nation’s existing diesel fleet. Abt Associates, using peer-reviewed, state-of-the-art research methodology employed by U.S. EPA in assessing the national benefits of proposed

National Annual Diesel Fine Particle Health Impacts⁷

Annual Cases in the U.S., 2010

Premature Deaths	21,000
Lung Cancer Deaths	3,000
Hospital Admissions	15,000
Emergency Room Visits for Asthma	15,000
Non-fatal Heart Attacks	27,000
Asthma Attacks	410,000
Chronic Bronchitis	12,000
Work Loss Days	2,400,000
Restricted Activity Days	14,000,000

rules and legislation, finds that nearly 21,000 people will die prematurely in 2010 in the U.S. as a result of exposure to fine particle emissions from mobile diesel sources (i.e., all on-and non-road engines such as highway, construction, rail, and marine engines). The average number of life-years lost by those who die prematurely from exposure to fine particles is 14 years.⁸

The deaths from diesel fine particle pollution equal or exceed the death toll from other causes commonly understood to be major public policy priorities. For instance, drunk driving causes more than 17,000 deaths per year.⁹ There are more than 20,000 homicides in the U.S. each year.¹⁰ Moreover, the approximately 15,000 prema-

Cancer Risk

CATF has calculated the national average lifetime excess cancer risk posed by diesel. We base these estimates on 1999 modeled directly-emitted diesel fine particle concentrations and by applying both the EPA range of individual risk estimates and the California Air Resources Board (CARB) diesel risk factor for lung cancer over the U.S. population.¹⁵ Although EPA has found diesel exhaust to be a “likely” human carcinogen, EPA has not adopted a risk factor but has, instead, provided a range of lung cancer risk.¹⁶ Based on the national average diesel particulate matter concentration, we find average lung cancer risk ranges from 12 to 1210 per million people over a 70-year lifetime using EPA’s range of lung cancer risk.¹⁷ Using the same methodology, CATF finds that, based on the single CARB risk factor, the nationwide average lifetime cancer risk posed by diesel exhaust is over 350 times greater than EPA’s “acceptable” level of one cancer in a million.

For comparison, according to EPA’s 1999 NATA assessment, the combined risk from all other air toxics is

ture deaths per year that could be avoided by achieving a 75 percent diesel-risk-reduction target exceed the 11,000 automobile fatalities avoided each year through the use of safety belts.¹¹

The Abt Associates analysis further shows that hundreds of thousands of Americans suffer from asthma attacks, cardiac problems, and respiratory ailments associated with fine particles from diesels. These health damages result in thousands of respiratory and cardio-pulmonary related hospitalizations and emergency room visits annually as well as hundreds of thousands of lost work days each year. For instance, the study finds that diesel pollution leads to 27,000 heart attacks and 400,000 asthma attacks each year.¹²

You can find the adverse health impacts from diesel for your state, metropolitan area, and county on the web at: www.catf.us/goto/dieselhealth.

The risk from diesel exhaust can be virtually eliminated by the application of emissions control strategies available today. For example, an aggressive but feasible program to reduce diesel particle emissions nationwide 50 percent by 2010, 75 percent by 2015, and 85 percent by 2020 would save about 100,000 lives between now and 2030 – beyond those lives that will be saved under EPA’s new engine regulations.¹³ Indeed, in the year 2000, the State of California set a Diesel Risk Reduction goal of a 75 percent reduction in diesel risk by 2010 and 85 percent by 2020 and the California Air Resources Board over the past few years has begun to issue regulations to achieve it.¹⁴

48 per million.¹⁸ Therefore, diesel exhaust presents a lung cancer risk that is 7.5 times higher than the cancer risk of all other air toxics – **combined!**¹⁹ In addition, CATF has calculated the cancer risk posed by diesel for residents of each U.S. county. Residents of over two-thirds of U.S. counties experience a cancer risk greater than 100 in a million from diesel exhaust. Moreover, residents of eleven urban U.S. counties face a diesel cancer risk equal to 1,000 new cases of cancer in a population of one million.

People who live in metropolitan areas with a high concentration of diesel vehicles and traffic feel their impacts



most acutely. For example, the estimated risk of lung cancer from diesel in metropolitan areas is much higher than in areas with fewer diesels. In the rural counties we estimate a risk of 142 cancers per million based on the CARB unit risk, but three times that rate, 415 cancer per million, in urban counties. Therefore, the risk of lung cancer for people living in urban areas is three times that for those living in rural areas.²⁰

The Economic Toll of Health Effects

Respiratory distress severe enough to require a trip to the emergency room can be a terrifying experience for patients and their families. Victims of asthma attacks say that during an attack they wonder if and when their next breath will come. In addition to its serious physical and emotional costs, air pollution also takes a large monetary toll. Emergency room and hospital treatment costs can cripple a family financially, with the average stay for a respiratory ailment lasting about a week.²¹ Bouts of respiratory illness and asthma attacks mean lost workdays and lost productivity. Although life is priceless, the government often monetizes loss of life when setting policies related to health and environmental protection. Using accepted valuation methodology employed by EPA in recent regulatory impact analyses, Abt Associates finds that the total monetized cost of the U.S. diesel fleet's fine particle pollution is a staggering \$139 billion in 2010.

State and Metropolitan Area Findings

Using modeled concentrations of directly-emitted diesel fine particles throughout the lower 48 states, Abt Associates developed health impact estimates for every state and major metropolitan area in 1999, the latest year for which EPA's best emissions inventory for diesel fine particles is available.²² Not surprisingly, heavily populated states with concentrated urban areas and significant diesel traffic fared the worst. Conversely, rural areas with a lower concentration of diesel vehicles fared much better. Similarly, metropolitan areas with large populations and heavy concentrations of diesel



You can find the community cancer risk from diesel for your state, metropolitan area, and county on the web at: www.catf.us/goto/dieselhealth. Personal risk varies with location and lifestyle. For example, if you live near a bus, truck, or train terminal, highway, construction site, or warehouse, or commute to work on congested roadways, your exposure may be higher than indicated by the county-wide average estimated here.



Pollution from motor vehicles, including diesels, can obscure city vistas such as illustrated in this split view of Dallas, Texas.

vehicles feel the impacts of diesel pollution most acutely.²³ In such large metropolitan areas, many hundreds of lives are shortened every year. However, because these state and metropolitan-area health estimates include only fine particles that are **directly emitted** from diesels – excluding any secondarily-formed particles from diesel emissions of nitrogen or sulfur oxides – they significantly understate the total adverse impact of diesel-related particles on public health.²⁴ Moreover, these estimates exclude any health impacts due to diesel's contribution to ozone smog.

■ States: Health Impacts from Diesel Fine Particles (1999)

Rank	State	Deaths	Cancer Deaths	Heart Attacks	Asthma Attacks	Chronic Bronchitis	Work Loss Days	Restricted Activity Days
1	New York	2,332	169	3,692	51,251	1,499	318,532	1,827,525
2	California	1,784	144	2,263	49,499	1,356	292,622	1,683,642
3	Pennsylvania	1,170	103	1,660	19,021	575	110,404	643,926
4	New Jersey	880	77	1,382	17,926	535	107,364	620,975
5	Texas	879	83	1,070	25,348	664	148,394	854,045
6	Illinois	878	76	1,193	19,162	539	112,205	649,445
7	Florida	805	77	980	13,926	438	81,462	474,601
8	Ohio	769	72	1,002	14,464	422	83,963	489,355
9	Michigan	484	43	667	10,511	299	61,109	355,260
10	Massachusetts	475	43	727	9,925	289	61,842	355,473
11	Maryland	409	39	454	8,418	246	50,275	291,675
12	Indiana	369	36	483	7,372	209	42,730	249,056
13	Georgia	329	29	377	8,514	235	51,808	298,317
14	Louisiana	324	32	339	7,131	188	40,740	236,444
15	Missouri	305	28	377	5,435	157	31,476	183,033
16	North Carolina	301	29	347	6,518	189	39,589	229,591
17	Tennessee	269	26	283	5,169	150	30,870	179,656
18	Washington	248	23	308	6,201	181	37,787	218,889
19	Virginia	248	24	303	5,991	174	36,963	214,083
20	Wisconsin	226	18	320	4,789	137	27,923	162,404
21	Arizona	214	19	268	5,215	144	30,053	173,721
22	Connecticut	206	18	340	4,091	125	24,097	140,140
23	Kentucky	198	22	213	3,764	110	22,385	130,403
24	Minnesota	193	15	291	4,713	134	27,979	161,954
25	Alabama	175	16	184	3,200	92	18,646	108,961

■ Metro Areas: Health Impacts from Diesel Fine Particles (1999)

Metropolitan Area	Rank	Deaths	Cancer Deaths	Heart Attacks	Metropolitan Area	Rank	Deaths	Cancer Deaths	Heart Attacks
New York, NY	1	2,729	202	4,342	San Diego, CA	21	150	13	191
Los Angeles, CA	2	918	72	1,193	Portland, OR	22	140	13	157
Chicago, IL	3	755	65	1,021	Minneapolis, MN	23	133	11	205
Philadelphia, PA	4	727	69	990	New Orleans, LA	24	128	13	131
Boston, MA	5	391	36	602	Riverside, CA	25	123	10	142
Houston, TX	6	356	35	444	Baton Rouge, LA	26	102	10	109
San Francisco, CA	7	291	23	358	Milwaukee, WI	27	95	8	130
Miami, FL	8	288	23	358	Columbus, OH	28	84	9	113
Baltimore, MD	9	285	28	290	Indianapolis, IN	29	82	8	107
Detroit, MI	10	279	25	378	Louisville, KY	30	82	9	91
Pittsburgh, PA	11	237	21	340	Memphis, TN	31	81	7	79
Washington, DC	12	226	19	302	Kansas City, MO	32	79	8	109
St. Louis, MO	13	217	20	263	Providence, RI	33	76	7	119
Dallas, TX	14	205	19	258	Bridgeport, CT	34	69	6	121
Atlanta, GA	15	199	17	239	Beaumont, TX	35	65	7	65
Tampa, FL	16	185	18	210	Orlando, FL	36	65	7	85
Phoenix, AZ	17	183	16	230	Allentown, PA	37	65	5	101
Cleveland, OH	18	180	15	232	Hartford, CT	38	63	5	100
Cincinnati, OH	19	171	18	219	Las Vegas, NV	39	62	7	71
Seattle, WA	20	165	15	208	Virginia Beach, VA	40	62	6	65

■ Metro Areas: Per Capita Impacts from Diesel Fine Particles (1999)

Rank Based on Mortality Risk	MSA	Deaths per 100,000 Adults	Heart Attacks per 100,000 Adults	Cancer Risk per Million	Rank Based on Mortality Risk	MSA	Deaths per 100,000 Adults	Heart Attacks per 100,000 Adults	Cancer Risk per Million
1	Beaumont, TX	29	29	865	26	Portland, OR	13	14	488
2	Baton Rouge, LA	27	29	992	27	Bridgeport, CT	13	22	494
3	New York, NY	25	40	959	28	Harrisburg, PA	12	19	412
4	Philadelphia, PA	22	29	658	29	York, PA	12	21	460
5	Trenton, NJ	20	31	699	30	Wheeling, WV	12	14	309
6	Baltimore, MD	19	19	584	31	Lebanon, PA	12	19	373
7	Huntington, WV	18	18	477	32	Evansville, IN	12	15	368
8	New Orleans, LA	17	18	889	33	Memphis, TN	12	12	397
9	Pittsburgh, PA	15	22	415	34	Savannah, GA	12	13	376
10	Cincinnati, OH	15	19	504	35	Dayton, OH	12	16	389
11	Boston, MA	15	23	563	36	Vineland, NJ	12	17	365
12	Chicago, IL	15	20	539	37	Tampa, FL	12	14	365
13	Mobile, AL	14	15	435	38	Louisville, KY	12	13	384
14	Longview, WA	14	15	441	39	Sandusky, OH	12	15	345
15	Houston, TX	14	18	691	40	Kankakee, IL	12	14	336
16	Allentown, PA	14	22	450	41	San Francisco, CA	12	14	480
17	Cleveland, OH	14	18	416	42	Muncie, IN	11	14	327
18	Toledo, OH	14	17	423	43	Duluth, MN	11	14	308
19	Los Angeles, CA	14	18	633	44	Michigan City, IN	11	15	370
20	Lancaster, PA	14	22	463	45	Salt Lake City, UT	11	14	533
21	Scranton, PA	14	18	319	46	New Haven, CT	11	18	365
22	St. Louis, MO	14	17	405	47	Steubenville, OH	11	13	279
23	Reading, PA	14	21	428	48	Milwaukee, WI	11	15	376
24	Lake Charles, LA	14	14	437	49	South Bend, IN	11	15	342
25	Springfield, OH	13	16	356	50	Detroit, MI	11	15	381

The Dirty Diesel Legacy

Since 1997, the U.S. EPA has promulgated major regulations that impose stringent emissions controls on new diesel vehicles, requiring tight emission standards and cleaner diesel fuel. These standards go into effect in 2007 and phase in over the next few decades. For example, the table below illustrates the progressively tighter standards

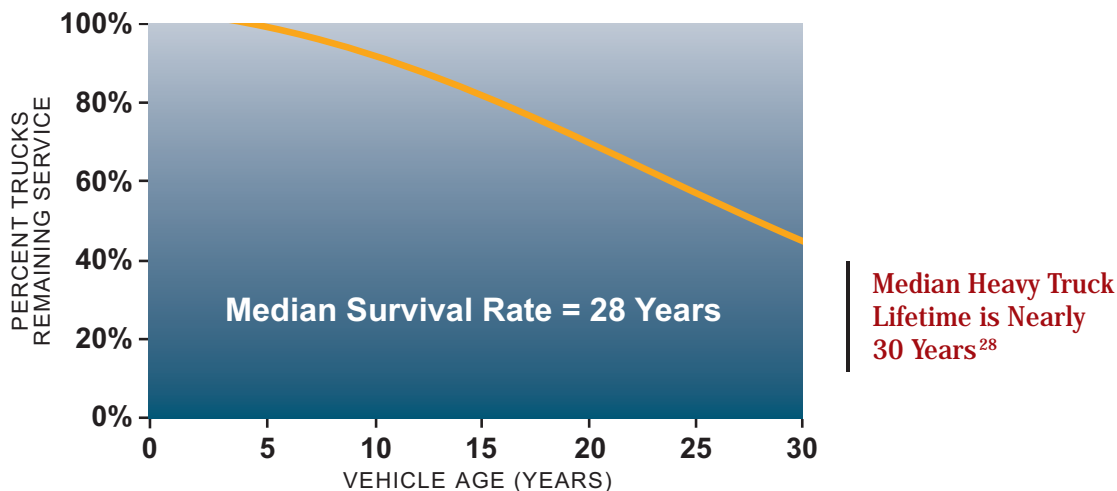
EPA Standards for New Trucks and Buses (g/bhphr)²⁵

YEAR	NO _x	PM _{2.5}
1984	10.7	0.60
1991	5.0	0.25
1998	4.0	0.10
2004	2.0	0.10
2007	0.2	0.01

for particulate matter and nitrogen oxides from trucks and buses over the next few years.

However, the emission rates of the diesel engines on the road and in use on construction sites and farms today are not affected by these rules. Considering that according to the U.S. Department of Energy the median lifetime for a heavy truck is nearly 30 years,²⁶ and a typical heavy duty diesel engine may power a truck for as long as one and a half million miles,²⁷ these vehicles will continue to pollute our air at unnecessarily high levels for years to come *unless* we act to clean them up now.





The Most Widespread Air Pollution Risk in the U.S.

There are few other sources of widespread pollution in our environment that rival diesel exhaust as an airborne toxin. America's 13 million diesel engines release a host of harmful substances including fine particles, ozone smog-forming nitrogen oxides, carbon monoxide, and a variety of toxic metals and organic gases such as formaldehyde, acrolein, and polycyclic aromatic hydrocarbons (PAH).²⁹ In this report we focus on the respiratory, cardiovascular, and cancer effects of diesel fine particles only.³⁰

Fine Particles are Linked to Heart Attacks, Asthma Attacks, and Stunted Lung Growth.

Fine particles have been linked to a wide variety of serious health impacts, from upper and lower respiratory ailments, such as asthma attacks and possible asthma onset, to

heart attacks, stroke, and premature death, including crib death in children.³¹ How risky is breathing air polluted with particles? A study published in the Journal of the American Medical Association found that living in the most polluted U.S. cities poses a risk similar to living with a smoker.³² Based on thousands of studies compiled by EPA, federal health



How Particulate Matter Kills

Fine particles, known as "PM_{2.5}", are particles less than 2.5 microns in diameter or 1/100th the width of a human hair, so small that they are often invisible. They can be deposited deep in the lung where they can affect both the respiratory and cardiovascular systems. Researchers believe that many deaths caused by particulate matter are related to cardiovascular illness. Fine particles aggravate cardiovascular disease and trigger heart attacks by invading the bloodstream and initiating an inflammatory response, disrupting heart rate and increasing blood clotting. In a recent experimental study, diesel particles caused blood clots providing "a plausible explanation for the increase in cardiovascular morbidity and mortality accompanying urban air pollution."³³

standards were established for fine particles in 1997.³⁴

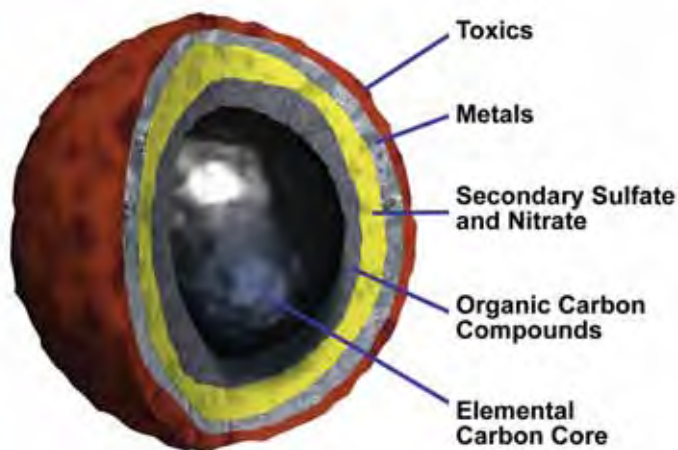
Health researchers have recently described serious health impacts of fine particles, including:

- Abnormal heart rhythms and heart attacks and atherosclerosis;³⁵
- Increased incidence of stroke;³⁶
- Permanent respiratory damage, characterized by fibrosis causing obstruction to airflow;³⁷
- Chronic adverse effects on lung development resulting in deficits in lung function.³⁸

Diesel Exhaust is a Likely Carcinogen that also Impairs Immune, Reproductive, and Nervous Systems.

In 1998, the Scientific Review Panel for the California Air Resources Board reviewed diesel exhaust as a toxic air contaminant and set a lifetime unit cancer risk from diesel particles at 3 in 10,000 persons for each microgram of annual average diesel exposure.³⁹ This is equivalent to 300 in a million excess lung cancers. In May 2002, EPA issued its Health Assessment for Diesel Exhaust which found diesel particulate matter to be a “likely” carcinogen. EPA did not settle on a unit risk factor but recommended a lifetime cancer risk range from 1 in 1,000 to 1 in 100,000.⁴⁰ The California unit risk falls within this range.⁴¹

Diesel particles are carbon at their core with toxics and carcinogenic substances attached to their surfaces.



Applying California’s cancer unit risk for diesel particulate matter to the national average concentration of directly-emitted diesel fine particles in 1999, results in a conservative estimate of 1,530 excess cases of lung cancer per year for 2005.⁴² An American Cancer Society study of 150 metropolitan areas across the U.S published in 2002 supports the particulate matter cancer link.⁴³

Other effects include:

- **Immune System Effects** – Diesel exposure is associated with numerous immune system responses in humans and animals culminating in increased allergic inflammatory responses and suppression of infection-fighting ability. These effects include disruption of chemical signals and production of antibodies, and an alteration in mobilization of infection-fighting cells.⁴⁴
- **Reproductive, Developmental, and Endocrine Effects** – Diesel emissions have also been associated with reproductive, developmental and endocrine effects in animals. Specifically, diesel exposure has been associated in animals with decreased sperm production,⁴⁵ masculinization of rat fetuses,⁴⁶ changes in fetal development (thymus,⁴⁷ bone⁴⁸ and nervous system⁴⁹) and endocrine disruption, i.e., production of adrenal and reproductive hormones.⁵⁰
- **Nervous System Effects** – In addition to animal studies that have shown neurodevelopmental effects, a human study of railroad workers suggested that diesel exposure may have caused serious permanent impairment to the central nervous system.⁵¹

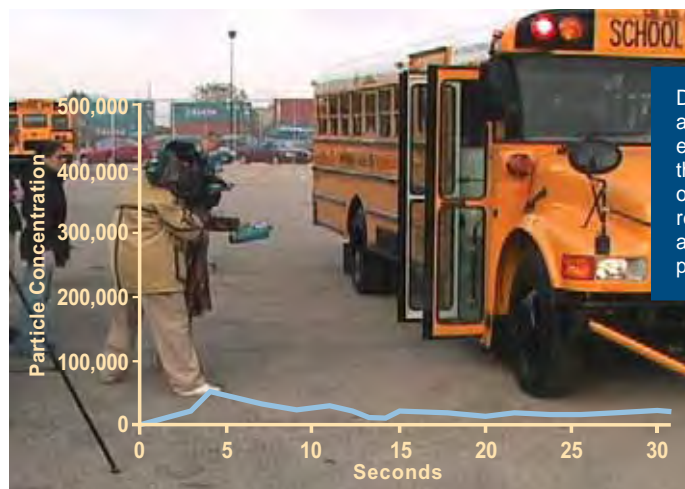
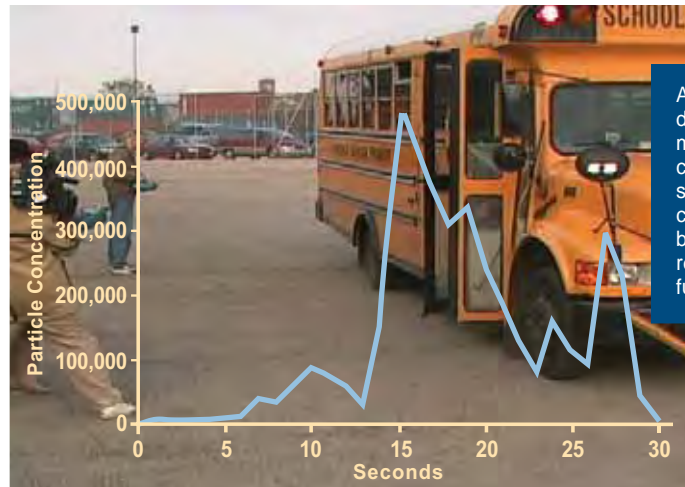
Cancer-causing Pollutants in Diesel Exhaust

Pollutant	Diesel Emissions % of all Mobile 1996 ⁵²	EPA Carcinogen Status	Cancer Risk (per million/microgram in 70-yr life)
Formaldehyde	52%	probable	1 in a million
Acetaldehyde	59%	probable	1 in a million
Butadiene	8%	probable	2 in a million
Acrolein	50%	possible	n/a
Benzene	5%	known	2-8 in a million
Diesel Particulate Matter	77%	probable ⁵³	EPA: 12 to 1210 in a million; CARB: 300 in a million ⁵⁴

Children and Seniors are at Greatest Risk

Health researchers believe that children are more susceptible than adults to the adverse health effects of air pollution for a variety of reasons.⁵⁵ For example, children are more active than adults and therefore breathe more rapidly. Children also have more lung surface area compared to their body weight and therefore they inhale more air pound-for-pound than adults do. Compared to adults, children also have higher lung volume to body size, higher respiration rates, and spend more active time in the polluted outdoor environment. Fine particles have been linked in medical studies to serious health impacts in children such as slowed lung function growth, increased emergency room visits, increased incidences of asthma and bronchitis, and crib death. Furthermore, proximity to traffic has been linked to increased prevalence of asthma respiratory infections and allergic symptoms and asthma hospitalizations in children.⁵⁶

Seniors are another important population at risk. Studies of the impacts of fine particles on seniors in Boston and Baltimore suggest that changes in their heart rhythms and control mechanisms occur when particle levels rise. In Phoenix, daily mortality increased in



Children Exposed on School Buses

CATF Study: Cabin particulate matter eliminated with retrofit emissions controls.

Twenty four million students ride to school every day on yellow school buses that travel a total of four billion miles a year. While riding on a school bus is the safest way a student can travel to school,⁵⁷ children may be exposed to harmful pollutants, a concern since students spend an average of an hour and a half a day on school buses.⁵⁸ A recent study undertaken by Clean Air Task Force in cooperation with Purdue University investigated cabin air quality on school buses in three cities (Chicago, IL; Atlanta, GA; and Ann Arbor MI). The study found that particulate matter routinely entered the bus cabin from the tailpipe and the engine through the open front door. At some stops, particulate matter in the bus

cabin exceeded levels in the outdoor air by as much as ten times. While idling or lined up in a schoolyard, rapid buildup of particulate matter in the buses also occurred. Most importantly, retrofit emissions controls worked: installation of a diesel particulate filter and the use of Ultra Low Sulfur Diesel (ULSD) fuel and a closed crankcase filtration device eliminated fine particles, ultrafine particles, black carbon and particle-bound PAH in the bus cabin. A closed crankcase filtration system by itself demonstrated major benefits and can provide immediate and low cost reductions in particulate matter levels on school buses. For a comprehensive report: www.catf.us/goto/schoolbusreport

seniors with increased levels of elemental and organic carbon (typical of diesels and other motor vehicles) and fine particles. Collectively, these studies demonstrate that

elevated fine particle levels put the elderly at risk and suggest a possible mechanistic link between fine particles and cardiovascular disease mortality.⁵⁹

Today's Dirty Diesels

- **“On-road” or highway diesels** include many types of vehicles, such as municipal and commercial trucks and buses. Heavy duty highway diesels range from 8,500 lbs to those exceeding 60,000 lbs, such as 18-wheelers. Of the seven million diesels on the road today, 400,000 are school buses and 70,000 are transit buses. Highway diesels released 100,000 tons of directly-emitted fine particles in 2002, about one third of the total from diesels. Highway diesels also released 3.4 million tons of nitrogen oxides (NO_x) in 2002, which accounted for 16 percent of all NO_x emissions and half of all diesel NO_x emissions in the U.S.⁶⁰

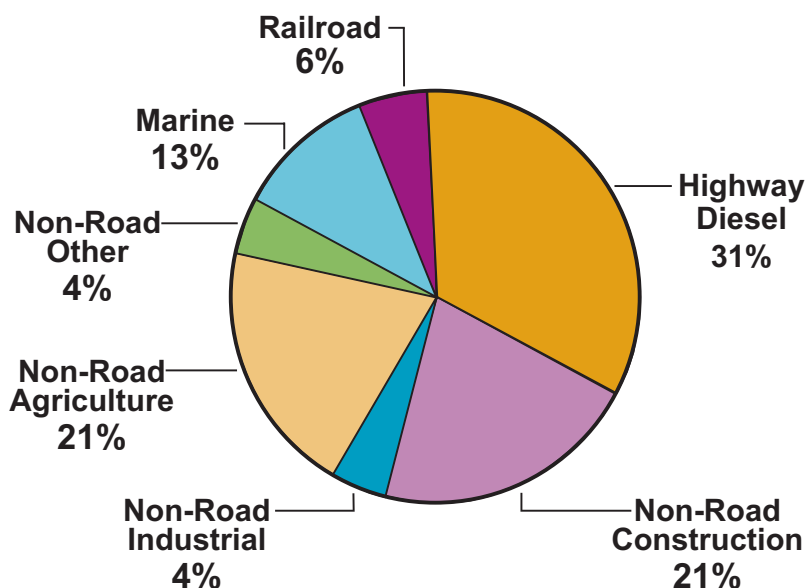


- **“Non-road” diesel engines and equipment** do not typically travel on roads or highways. There were approximately six million non-road diesel engines in service in 2003. Examples of these non-road diesels include construction equipment such as excavators, mining equipment and agricultural machinery. In 2002, 155,000 tons or half of all the fine particles directly emitted from diesels came from non-road engines. Non-road diesels also released 1.6 million tons of NO_x, 8 percent of all NO_x emissions and one quarter of all diesel NO_x emissions in the U.S. in 2002.⁶¹

- **Marine and river diesel** emissions are dominated by large commercial ships polluting our largest ocean and river port cities. Efforts to control pollution from shipping have focused on NO_x, although these engines also emit substantial quantities of fine particles. In 2002 marine diesel released 40,000 tons of directly-emitted fine particles, 13 percent of all diesel fine particles in the U.S. Marine diesels in the U.S. produced one million tons of diesel NO_x in 2002, 5 percent of all U.S. NO_x emissions and 14 percent of all diesel NO_x emissions.⁶²



- **Locomotive diesels** account for a significant fraction of mobile source emissions in the U.S. today. In many areas, diesel trains travel through and pollute core urban and industrial areas. Diesel locomotives released 20,000 tons of directly-emitted diesel fine particles (six percent of all diesel fine particles) and 900,000 tons NO_x (13 percent of diesel NO_x). Diesel locomotives typically have a useful life of 40 years and are commonly rebuilt 5-10 times during their long service lives. For this reason, cleaning up today's locomotives is an important priority.⁶³



Sources of Directly-Emitted Mobile Diesel Fine Particles

Source: EPA (2004)

Diesel “Hotspots”

Diesel Exhaust is Concentrated Near Roadways and Intersections.

Unlike industrial smokestack emissions, diesel typically is emitted at ground-level in places of concentrated population in our communities along busy streets and at our places of work. We often breathe diesel exhaust where it is fresh and most toxic. While air quality modeling, such as reported in our study, estimates average exposures in a community, your individual exposure may be much greater or smaller depending on a variety of factors. For example, the distance from where you live to major roadways and the nature of your commute to work may play a role.

Exposure to diesel exhaust is highest for those who:

- **Operate or work around diesel engines** – Occupational exposures to diesel are among the highest and have been associated with increased incidence of cancer. Furthermore, a study of diesel mechanics, train crewmen, and electricians working in a closed space near diesel generators suggests that diesel exposure may have caused both airway obstruction and serious impairment to the central nervous system. The report concludes that “impaired crews may be unable to operate trains safely.”⁶⁴
- **Live or work near areas where diesel emissions are concentrated** – Ambient diesel levels are highest near highways, busy roadways, bus depots, construction sites, railroad yards, ports and inland waterways with diesel boat traffic, major bridges, tunnels, or freight warehouses. People who live or work near these



facilities face the greatest risk. Numerous recent medical studies have linked roadway proximity and traffic pollution to disease, asthma hospitalizations, and shortened life expectancy.⁶⁵ For example, a 2004 study in Ontario, Canada found increased risk of mortality from heart and lung disease in people living within 100 meters of a roadway.⁶⁶ New York City studies demonstrate that diesel trucks create air toxics hot spots at crossings, bus stops, and bus depots.⁶⁷ Rail yards can be diesel hotspots as well. For example, one study found elevated risk levels – up to 500 in a million – adjacent to a California rail yard.⁶⁸ Another study found elevated cancer risk for persons living near a ferry port.⁶⁹

- **Regularly ride on school or transit buses, or commuter trains** – Children are exposed to elevated levels of diesel as a result of the buildup of diesel exhaust inside school buses – especially with windows closed.⁷⁰ Diesel exhaust levels on commuter trains and

People living and working near concentrated diesel emissions such as busy roadways have the greatest exposure to diesel exhaust.

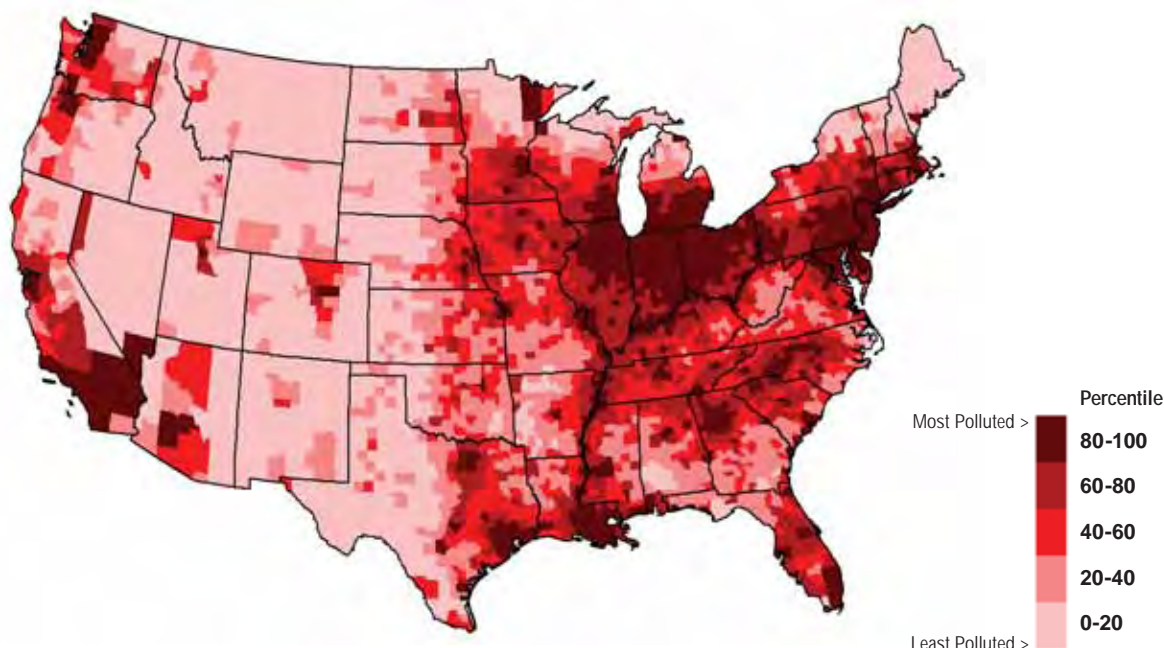
station platforms may also be high.⁷¹

- Commuter daily in heavy traffic** – Commuters are exposed to some of the highest diesel emissions in their cars due to pollutants released from trucks and buses on the road with them. Car occupants riding behind a diesel bus, for example, can experience extremely high levels of dangerous fine particles. Researchers in Los Angeles measured high fine particle levels (130 ug/m³) behind an urban transit bus making numerous stops.⁷² Exposures to drivers can have serious effects: a 2004 study suggests that young male state troopers experienced cardiac inflammation and heart rhythm changes from in-vehicle exposure to fine particles.⁷³



Diesel exhaust from trucks and buses can be found in places we don't expect. For example it can be trapped in "urban canyons" and penetrate buildings through HVAC systems.

Exposure to diesel exhaust is also an Environmental Justice issue. Concentration of minority and low-income populations are more likely to be found in cities near diesel sources. Because these neighborhoods are exposed to some of the highest diesel exhaust levels, residents are certain to experience disproportionate health impacts.



Directly-Emitted Diesel Fine Particle Concentrations by County in the U.S. (1999)

A Solution Within Our Reach

Diesel Fine Particles Can Be Virtually Eliminated by Emission Controls Available Today.

Virtually all of the health risk posed by diesel exhaust can be eliminated through the application of emissions control strategies available today. For example, an aggressive but feasible program to reduce diesel particle emissions nationwide 50 percent by 2010, 75 percent by 2015, and 85 percent by 2020 would save about 100,000 lives between now and 2030 – beyond those lives that will be saved under EPA’s new engine regulations.⁷⁴ Adopting this

“Retrofit, Rebuild, Replace”

A variety of practical strategies exist to reduce diesel particle levels in America: tailpipe retrofits, clean fuels, closed crankcase filtration systems, engine rebuild and replacement requirements, emission specifications for vehicles used in public works contracts, anti-idling ordinances and legislation, truck stop electrification programs, aggressive fleet turnover policies, and more.

The most cost-effective approach to reducing diesel exhaust is likely in many cases to be the direct application of retrofit technology. Although the purchase of new, much cleaner vehicles will remain an important remedial strategy, the replacement of the entire diesel fleet is an expensive proposition that will have to be phased in over time. What’s more, we can meet the challenge of reducing fine particles and related air toxics without replacing all vehicles right now. Current technology can easily remove particles from diesel exhaust. Retrofits that eliminate over 90 percent of fine particles from a heavy duty diesel bus engine typically cost \$3,000-\$7,500. This is a small expenditure when compared to the typical \$60,000-75,000 price tag for a new school bus or \$300,000 for a transit bus.⁷⁷

Retrofits are available from many engine manufacturers. They generally are easy to install especially on highway vehicles. Nonetheless, it is important to point out that retrofits are not a “one size fits all” proposition. Retrofitting a fleet calls for careful planning and, often, a mix of strategies that will depend on the make and model year of the engines being retrofitted and funds available. For example, some heavy-duty engines lack modern electronic engine controls and are therefore too old for some retrofit devices. Other diesel equipment simply does not have space for retrofit installation. Duty cycle is an important consideration too. Some engines do not run constantly which means that catalytic retrofit devices requiring consistent high engine temperatures do not operate as efficiently. Furthermore, some engines release

as a national goal would help states and municipalities set milestones for improvement and would be consistent with EPA’s recently announced goal of retrofitting the entire U.S. fleet of diesel vehicles by 2015.⁷⁵ Indeed, California has already set a Diesel Risk Reduction goal of 75 percent 2010 and 85 percent by 2020. Over the last few years the California Air Resources Board has begun to issue regulations to achieve these goals.⁷⁶



Installing a diesel particulate filter (DPF) in this Atlanta school bus simply required removal and replacement of the muffler and tailpipe.



pollution from crankcase ventilation in addition to the tailpipe. This calls for additional strategies. For some vehicles and model years, replacement may be the best option. As a result, fleets will need to develop individualized strategies that optimize emission reduction from their vehicles and equipment. Fortunately, this is not hard to do.

Catalyzed diesel particulate matter filters (DPF) can reduce emissions of fine particles and adsorbed air toxics by over 90 percent. DPFs have been used in thousands of on- and non-road diesel applications. Diesel oxidation catalysts (DOCs) represent a less expensive albeit less effective option. They are smaller and therefore easier to install. EPA has verified that they can reduce total particulate matter emissions by 10-30 percent. Like the DPF, the DOC is also attached to the exhaust system. Installing one on a diesel truck or bus costs about \$1,000. DOCs may be appropriate for vehicles built before 1995 that lack electronic controls and for construction equipment where there is inadequate space for a DPF to be installed. DOCs have been installed in more than 1.5 million trucks in the U.S.⁷⁸

Low Sulfur Diesel Fuels Are Requisite for Effective Retrofit Controls.

Diesel particulate filters require low sulfur fuels because sulfur in the fuel can foul the emission control device. Unfortunately, low sulfur fuels are not available everywhere in the U.S. today (see <http://www.epa.gov/otaq/retrofit/fuelsmap.htm> for the current fuel availability map). Where ULSD is available, decision makers should consider requiring installation of filters where possible. Federal regulations have established diesel fuel and additive formulation requirements for on-road vehicles, limiting fuel sulfur content to 15 ppm nationwide beginning in 2006 for use with 2007 highway vehicles. Starting in 2010, non-road equipment will be required to use ULSD.

Biodiesel is another potential low-sulfur fuel choice that



Ultra low sulfur diesel fuel will be available nationwide mid-2006.

can achieve modest reductions in emissions when used as a blend, or higher reductions when used at 100 percent. Biodiesel is an alternative diesel fuel made from either animal fats or plants such as soybeans.

Cleaning up All School Buses Within a Decade

With today's emissions controls, students need not be exposed to diesel exhaust while riding to school. EPA in the summer of 2004 announced the goal of retrofitting all existing school buses with pollution controls within a decade.⁷⁹ Funding retrofits and cleaner fuel presents the greatest obstacle facing school districts. To achieve this goal, adequate funds must be appropriated by states and the federal government.



Recommendations

Cities and States Must Act to Reduce Diesel.

The fine particle pollution problem is so widespread in the U.S. about one quarter of the U.S. population resides in areas that violate the standard. EPA recently formally designated over 200 counties in "nonattainment" with the annual fine particle standard.⁸⁰ Countless additional commuters may also spend significant time in areas exceeding the standard where they work. But the rest of the country is not safe from the risk posed by diesel particles – science tells us that particle-related health impacts don't stop once the standard is achieved. Health research has shown that there are adverse health impacts from particles even at very low concentrations.⁸¹

Cities and states that have been designated as "nonattainment" must act now to achieve meaningful reductions in fine particles. For those areas, state implementation plans must be developed and presented to EPA

for approval within three years. Controls must then be implemented and air quality standards achieved by 2010. For this reason, states and cities must start now to determine how to achieve substantial emissions reductions. With rules to reduce particles from power plants pending at EPA and expected to be finalized in the near future, diesel emissions will become the largest remaining share of the problem and the most cost-effective solution, one that largely is within the control of states and municipalities.



Cities should adopt and enforce anti-idling ordinances.

MA TURNPIKE AUTHORITY

Cities and states should:

- Establish ambitious goals for reducing risk to their citizens by cleaning up existing diesels;
- Identify priority geographic areas and diesel “hotspots” for immediate attention;
- Adopt a package of options for reducing diesel exhaust including:
 - Retrofits accomplished by replacing mufflers with an optimal mix of filters or oxidation catalysts depending on vehicle age and type;
 - Requiring Ultra Low Sulfur Diesel and cleaner alternative fuels;
 - Closed crankcase ventilation systems to eliminate engine exhaust from penetrating the cabins of school and transit buses;
 - Engine rebuild and replacement requirements;
 - Truck stop electrification programs to give long-haul truckers a way to power their rigs overnight without running their engines;
 - Contract specifications requiring cleanup of trucks and construction equipment used in public works projects.
- Adopt diesel cleanup measures as federally-enforceable requirements in State Implementation Plans (SIPs) for the attainment of the fine particle and ozone air quality standards;
- Create and fund programs to provide money for diesel equipment owners to replace or rebuild high-polluting diesel engines;
- Adopt and enforce anti-idling ordinances and legislation.

To meet this challenge, several states and cities have begun to take action. California continues to lead the way in reducing diesel emissions: adopting stricter fine particle air quality standards, developing a statewide diesel risk reduction plan, and establishing a state program to clean up on- and non-road diesel engines ranging from garbage trucks to stationary generators.⁸² When completed, the California program will regulate emissions from all existing diesels within its jurisdiction.

Washington Must Support States

States and cities cannot meet the challenge of diesel pollution alone. U.S. EPA has recognized the dangers and societal costs of diesel exhaust and set tighter emission standards for new highway and non-road diesel engines and mandated the availability beginning in 2006 of Ultra Low Sulfur Diesel (ULSD) fuel nationwide. These requirements must be retained with no backsliding. In addition, EPA has set a national goal of cleaning up all of America’s



Trucks parked at New York Thruway rest area shut off their engines and plug into IdleAire facility for heat and electricity.

In New York, over 120,000 kids now ride a school bus that has had a retrofit kit installed to reduce diesel emissions. Under city and state law all New York City-sponsored construction projects are required to use ULSD and all heavy equipment engines at the sites must be retrofitted. Likewise, Seattle, King County, and the State of Washington have made a solid start on diesel cleanup from on- and non-road vehicles, and ships including a commitment to retrofit up to 8,000 school buses using local, state, federal, and SEP monies and buy up to 250 new diesel/electric hybrid buses. Other cities also have made a start.⁸³

California and Texas have created funds – the “Carl Moyer” program in California and the Texas Emission Reduction Program (TERP) – to provide funding for diesel equipment owners to replace or rebuild high-polluting diesel engines.



Some cities are choosing Diesel Electric Hybrid buses as an alternative to conventional diesel buses.

existing diesels by 2015 and has established a voluntary retrofit program to begin to meet it.⁸⁴ However, this challenge will only be met with an aggressive set of policies and adequate funding to ensure the goal can be accomplished.

Many states do not have the resources to clean up state and municipally-owned vehicles. They will need the support of the federal government to achieve EPA’s goal.

Federal action may also be needed to clean up transient diesel vehicles, including long-haul trucks, marine diesel shipping in U.S. ports, and locomotives that typically travel from city to city dispersing their emissions along travel corridors. Because the Clean Air Act contains limited authority for EPA to establish national diesel retrofit rules, federal legislation will ultimately be needed to establish federal requirements and funding for a national retrofit program for all diesel engines as well as these interstate diesels.

The Federal government should:

- Pass legislation providing funding for the cleanup of municipal and state fleet vehicles;
- Explore regulatory options for reducing emissions from existing interstate fleets such as long-haul trucks, shipping, and locomotives;
- Retain and enforce the tighter new engine and cleaner fuel standards for highway and non-road diesels.

Endnotes

- 1 Wilson, Richard and Spengler, John, eds. *Particles in Our Air: Concentrations and Health Effects* (1999) p. 212.
- 2 Schwartz, J., "Air Pollution Deadlier than Previously Thought," Harvard School of Public Health, Press Release, March 2, 2000.
- 3 Laden, F., Neas, L., Dockery, D. and Schwartz, J., *Association of Fine Particulate Matter from Different Sources with Daily Mortality in Six U.S. Cities*, Environmental Health Perspectives, Vol. 108, No. 10, (2000) p. 941-947.
- 4 Nemmar, A. et al., *Passage of Inhaled Particles Into the Blood Circulation in Humans*. Circulation, Vol. 105, (2002), 411-414 ; Donaldson, Ken, et al., *Ambient Particle Inhalation and the Cardiovascular System: Potential Mechanisms*, Envir. Health Perspectives, Vol. 109, Supp. 4, Aug. 2001, p. 525.1
- 5 National Center for Environmental Assessment, Office of Research and Development, U.S. EPA. EPA/600/8-90/057F. May 2002. International Agency on Cancer, Monograph 46. See at: <http://www.cie.iarc.fr/htdocs/monographs/vol46/46-01.htm>; California Air Resources Board (1998) Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant; See also, California Environmental Protection Agency, Air Resources Board, Office of Environmental Health Hazard Assessment, April 22, 1998; CalEPA (2002). Health Assessment for Diesel Engine Exhaust;
- 6 American Academy of Pediatrics, Committee on Environmental Health, *Ambient Air Pollution: Health Hazards to Children*, Pediatrics, Vol 114, No. 6, (December 2004) pp. 1699-1707. Available at www.pediatrics.org. For a complete summary of studies of particulate matter and health see: EPA Air Quality Criteria for Particulate Matter, October 2004 available at: <http://cfpub.epa.gov/ncea/cfm/partmatt.cfm>
- 7 Modeled health impacts of less severe acute health impacts (e.g. other than mortality, heart attacks) likely understate the full magnitude of the impacts because many cases go unreported (e.g. asthma, bronchitis self-treatment, or treatment in small clinics or private offices.) Furthermore, the U.S. does not manage a central database of national health records.
- 8 U.S. EPA, OAR, "Final Report to Congress on Benefits and Costs of the Clean Air Act, 1970-1990," EPA 410-R-97-002, (1997) page I-23 at http://www.epa.gov/air/sect812/appen_i.pdf.
- 9 Mothers Against Drunk Driving online at: <http://www.madd.org/stats/0,1056,1112,00.html>
- 10 Arias, E. et al., "Deaths: Final Data for 2001," Centers for Disease Control, 52 National Vital Statistics Reports No. 3 (September 18, 2003). Available online at: http://www.cdc.gov/nchs/data/nvsr/nvsr52/nvsr52_03.pdf
- 11 U.S. Department of Transportation, National Highway Traffic Safety Administration *Traffic Safety Facts 2000: Occupant Protection* (Washington, D.C. 2001). Available online at: http://www.bts.gov/publications/transportation_statistics_annual_report/2001/html/chapter_06_figure_01_152_table_.html
- 12 This analysis is based on methodology approved by U.S. EPA's Science Advisory Board and used by EPA in the Regulatory Impact Analysis (RIA) of the non-road rule. EPA Final Regulatory Impact Analysis, "Control of Emissions from Nonroad Diesel Engines," EPA420-R-04-007. (May 2004) http://www.epa.gov/nonroad-diesel/2004fr/420r_04007.pdf. It begins with EPA emissions inventory data, models the dispersion of those emissions using the Regional Emissions Modeling System for Acid Deposition (REMSAD) air quality model, and then applies a damage function model using concentration-response relationships to estimate adverse health endpoints from modeled changes in air quality. This analysis estimates the adverse health endpoints attributable to diesel PM_{2.5} in the year 2010. For a summary of CATF's methodology and FAQs please go to www.catf.us/goto/dieselhealth/ and click on "learn more." For Abt Associates' ASPEN and REMSAD reports please see: www.catf.us/goto/AbtASPEN/ and www.catf.us/goto/AbtREMSAD/.
- 13 Estimate is based on EPA methodology described in EPA Memorandum, Bryan Hubbell to Sam Napolitano, July 2, 2001. Estimated NO_x, SO₂ and PM emissions health damages for heavy duty vehicle emissions.
- 14 Through only those diesel regulations promulgated to date, California will reduce diesel fine particles by 30 percent from year 2000 levels. California has announced plans to promulgate additional critical regulations in the next few years to address significant sources such as construction, agriculture, and inland shipping. California Air Resources Board (CARB) 2004a. Air Quality Almanac Emission Projections. Online at <http://www.arb.ca.gov/emisinv/emsmain/emsmain.htm>; California Air Resources Board (CARB). 2003a. Staff Report: Initial Statement of Reasons: Proposed Diesel Particulate Matter Control Measure for On Road Heavy-Duty Residential and Commercial Solid Waste Collection Vehicles. Sacramento, CA: California Environmental Protection Agency. California Air Resources Board (CARB) 2003b Staff Report: Initial Statement of Reasons for Proposed Rulemaking: Airborne Toxic Control Measure for Stationary Compression Ignition Engines. Sacramento, CA: California Environmental Protection Agency, Stationary Source Division Emissions Assessment Branch;. California Air Resources Board (CARB) 2003c. REVISED – Staff Report: Initial Statement of Reasons for Proposed Rulemaking: Airborne Toxic Control Measure for In-use Diesel Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, and Facilities Where TRUs Operate. Sacramento, CA: California Environmental Protection Agency, Stationary Source Division Emissions Assessment Branch. The Union of Concerned Scientists recently estimated the costs and benefits of achieving the CARB Diesel Risk Reduction goal. See Union of Concerned Scientists, *Sick of Soot: Reducing the Health Impacts of Diesel Pollution in California* (June 2004) available online at: http://www.ucsusa.org/clean_vehicles/trucks_and_buses/page.cfm?pageID=1429
- 15 This analysis was performed by multiplying modeled ASPEN (Assessment System for Population Exposure Nationwide) 1999 county-level ambient diesel PM_{2.5} concentration data times: (1) the upper and lower bounds of EPA's possible diesel particulate matter cancer risk range; and (2) the California Air Resources Board diesel cancer unit risk factor. See: California Diesel Risk Reduction Plan: <http://www.arb.ca.gov/diesel/documents/rrpapp.htm>; EPA, Health Assessment Document for Diesel Exhaust, Office of Research and Development, EPA/600/8-90/057F (May 2002). The United States Public Interest Research Group previously used

- a similar methodology i.e., multiplying the CARB unit risk factor by 1996 National Air Toxics Assessment fine particle concentration data to derive national, state, and local additional cancer risk (cancers per million people) from diesel fine particles. U.S. PIRG Education Fund, *Dangers of Diesel: How Diesel Soot and Other Air Toxics Increase Americans' Risk of Cancer* (October 2002).
- 16 "The estimated possible risk ranges (10^{-5} to 10^{-3} as well as lower and zero risk) provide a perspective of the potential significance of the lung cancer hazard." EPA, Health Assessment Document for Diesel Exhaust, Office of Research and Development, EPA/600/8-90/057F (May 2002) at p. 8-15. For CARB unit risk value, see: Findings of the Scientific Review Panel on *The Report on Diesel Exhaust* as adopted at the Panel's April 22, 1998, meeting. <http://www.arb.ca.gov/toxics/dieseltac/defnds.pdf>. See also, <http://www.arb.ca.gov/regact/diesltac/diesltac.htm>. The findings in this report based on the CARB unit risk factor are consistent with EPA's possible diesel risk range e.g., 3×10^{-4} is within EPA's range of 10^{-3} to 10^{-5} .
 - 17 The number per million is the chance in a population of a million people who might be expected to get cancer over a 70-year lifetime. A potential cancer risk of 10 in a million means if one million people were exposed to a certain level of a pollutant or chemical there is a chance that 10 of them may develop cancer over their 70-year lifetime. This would be 10 new cases of cancer above the expected rate of cancer in the population. According to CARB the expected rate of cancer for all causes, including smoking, is about 200,000 to 250,000 chances in a million (one in four to five people).
 - 18 For 1999 NATA national excess cancer risk from air toxics other than diesel see: Inside EPA, Inside Washington Publishers, (December 15, 2004) <http://www.insideepa.com/>
 - 19 This finding is based on inhalation as the only exposure path and is limited to the thirty-three air toxics included in EPA's National Air Toxics Assessment (NATA). The relative cancer risk of diesel particulate matter is calculated as a ratio of the cancer risk of all air toxics tracked by EPA in the NATA divided by the risk of diesel particulate. We calculated the cancer risk for diesel PM in the U.S. based by applying the CARB cancer unit risk factor for diesel particulate matter to 1999 ASPEN model average national ambient concentration results for diesel PM. (Source for national toxic risk: Inside EPA, Inside Washington Publishers, December 15, 2004.)
 - 20 According to the EPA's categorization of counties as urban or rural, the average ASPEN 1999 ambient diesel fine particle concentration is 1.3822 ug/m^3 for urban counties and 0.4730 ug/m^3 for rural counties. The overall national average is 1.2096 ug/m^3 . These averages are population weighted. These averages convert (using the 0.0003 factor) to cancer risks of 415 per million urban, 142 per million rural, and 363 per million average.
 - 21 U.S. Centers for Disease Control and Prevention, "National Hospital Discharge Summary 1998," Advance Data #316 (June 30, 2000). Available online at: <http://www.cdc.gov/nchs>.
 - 22 This analysis was performed using 1999 county-level ambient diesel PM_{2.5} concentration data modeled using the Assessment System for Population Exposure Nationwide (ASPEN) air quality model, and then by applying a damage function model using concentration-response relationships to estimate adverse health endpoints from modeled changes in air quality. For a full discussion of the methodology used, please see: www.catf.us/goto/AbtASPEN/. For health impacts in your city and state see: <http://www.catf.us/goto/dieselhealth>.
 - 23 The new health findings provided in this report by Abt Associates are derived from average modeled estimates of ambient concentrations of diesel particulate matter for entire counties. Many people experience higher diesel exposure situations depending upon where they live and work, for example, such as working near diesel engines, living near diesel sources or commuting regularly on roadways with diesel traffic. The quantitative estimates of death and disease we provide in this report are based on average exposures only and do not represent the risks associated with high diesel exposures. Furthermore, these health findings do not include the impacts from all toxic constituents in diesel exhaust, only directly-emitted particulate matter.
 - 24 The state and metropolitan area health effects reported here exclude those associated with secondarily-formed fine particles, i.e., particles formed from gaseous emissions through post-emission atmospheric chemical reactions. Typically, these include nitrate from nitrogen oxide emissions and sulfate from sulfur dioxide emissions. Secondarily-formed fine particles may make up as much as one-third of diesel-related particles. See Lloyd, A. C., and Cackette, T.A. (2001). Diesel engines: Environmental Impact and Control. *Journal of Air and Waste Management Association*, v. 51, p. 809-847, June 2001.
 - 25 Environmental Protection Agency fact sheet: Diesel Exhaust in the United States. EPA 420-F-02-048, September, 2002. Available at: <http://www.epa.gov/otaq/retrofit/documents/420f03022.pdf>. The unit of measure used by EPA for diesel emissions, g/bhp-hr = grams of pollutant released per brake horsepower hour.
 - 26 1990 Truck Survival Rate, U.S. DOE, (2003) Available at: http://www-cta.ornl.gov/data/tebd23/Spreadsheets/Table3_11.xls
 - 27 EPA Fact Sheet, "Proposal for Cleaner Heavy-duty Trucks and Buses and Cleaner Diesel Fuel," (May 17, 2000).
 - 28 1990 Truck Survival Rate, U.S. DOE, (2003) Available at: http://www-cta.ornl.gov/data/tebd23/Spreadsheets/Table3_11.xls
 - 29 California Air Resources Board, "Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles," CARB Mobile Source Control Division, (October 2000).
 - 30 For a more thorough discussion of the full panoply of diesel-related health effects please see CATF white paper at www.catf.us/goto/dieselwhitepaper/. For the two most comprehensive U.S. risk assessments for diesel exhaust, see the EPA health assessment document at: http://cfpub.epa.gov/ncea/cfm/recor_display.cfm?deid=29060 and the California health assessment at: <http://www.arb.ca.gov/toxics/dieseltac/staffrpt.pdf>.
 - 31 Pope, C.A., Thun, M.J., Namboordiri, M.M. and Dockery, D.W., et al.; *Particulate Air Pollution as a Predictor of Mortality in a Prospective Study of U.S. Adults*, 151 *American Journal of Respiratory and Critical Care Medicine* (1995). Available online at <http://ajrcm.atsjournals.org/search.shtml>; Krewski, D., Burnett, R.T., Goldberg, M.S., Hoover, K., Siemiatycki, J., Jerrett, M., Abrahamowicz, A. and White, W.H., *Reanalysis of the Harvard Six Cities Study and the American Cancer Society Study of Particulate Matter and Mortality*; Special Report to the Health Effects Institute, Cambridge, MA (July 2000); Samet, J.M., Dominici, F., Zeger, S.L., Schwartz, J. and Dockery, D.W. *National Morbidity, Mortality and Air Pollution Study, Part II: Morbidity, Mortality and Air Pollution in the United States*; Health Effects Institute Research Report No. 94, Cambridge MA (June 2000); Dockery, D.W., Pope, C.A., Xu, S. and Spengler, J.D., et al; *An Association Between Air Pollution and Mortality in Six U.S. Cities*, 329 *New England J. Medicine* 1753-59 (1993). Available online at <http://nejm.org/content/1993/0329/0024/1753.asp>; Woodruff, T., Grillo, J. and Schoendorf, K. 1997. *The relationship between selected causes of postneonatal infant mortality and particulate air pollution in the United States*. *Environmental Health Perspectives*, vol. 105, p. 608-612.
 - 32 New York University, Press Release, "Most Definitive Study Yet Shows Tiny Particles in Air Are Linked to Lung Cancer," March 5, 2002; Pope, C.A., Burnett, R.T., Thun, M.J., Calle, E.E., Krewski, D., Ito, Kaz, and Thurston, G.D., *Lung Cancer, Cardiopulmonary Mortality, and Long Term Exposure to Fine Particulate Air Pollution*, *Journal of the American Medical Association*, Vol. 287, (2002), p. 1132-1141.
 - 33 Peters, A., *Increased Particulate Air Pollution and the Triggering of Myocardial Infarction*, *Circulation*, Vol. 109, (June 12, 2001); Donaldson, K., et al. *Ambient Particle Inhalation and the Cardiovascular System: Potential Mechanisms*, *Environmental Health Perspectives*, Vol. 109, Supp. 4; Ghio, A.J., and Devlin, R.B., (2001). *Inflammatory Lung Injury After Bronchial Instillation of Air Pollution Particles*, *American Journal of Respiratory Critical Care Medicine*, Vol. 164, (2001) p. 704-708; Nemmar, A., Hoet, P., Dinsdale, D., Vermynen, J., Hoylaerts, M., and Nemery, B., *Diesel Exhaust Particles in Lung Acutely Enhance Experimental Peripheral Thrombosis*, *Circulation*, Vol. 107, (2003), pp.1202-1208.
 - 34 National Ambient Air Quality Standards for Particulate Matter, Final Rule. 40 CFR Part 50. EPA Federal Register, vol. 162, no. 138, Friday July 17, 1997 at page 38651. See at: http://www.epa.gov/ttn/oarpg/t1/fr_notices/pmnaaqs.pdf
 - 35 Peters, A., and Pope, A.C., *Cardiopulmonary Mortality and Air Pollution*,

- The Lancet, Vol. 360, (October 19, 2002), p.1184, <http://cfpub.epa.gov/ncea/cfm/recorddisplay.cfm?deid=29060>; Brook, R.D., Brook, J.R., Urch, B., Rajagopalan, S., Silverman, P., *Inhalation of Fine Particulate Air Pollution and Ozone Causes Acute Arterial Vasoconstriction in Healthy Adults*, *Circulation*, Vol.105, (2002), pp. 1534-1536, <http://cfpub.epa.gov/ncea/cfm/recorddisplay.cfm?deid=29060>; Peters, A., Dockery, D.W., Muller, J.E., Mittleman, M.A., *Increased Particulate Air Pollution and the Triggering of Myocardial Infarction*, *Circulation*, Vol. 103, (2001), pp. 2810-2815; Peters, A., Liu, E., Verier, R.I. et al., *Air Pollution and Incidence of Cardiac Arrhythmia*, *Epidemiology*, Vol. 11, (2000), pp.11-17.
- 36 Hong, Y., Lee, J., Kim, H., Kwon, H., *Air Pollution. A New Risk Factor in Ischemic Stroke Mortality*, *Stroke*, Vol. 33, (2002), pp.2165-2169; Hong, Y., Lee, J., Kim, H., Ha, E., Schwartz, J. and Christiani, D.C., *Effects of Air Pollutants on Acute Stroke Mortality*, *Environmental Health Perspectives*, Vol. 110, No. 2, (February 2002).
- 37 Chung, A., Brauer, M., Avila-Casado, M., Fortoul, T.I., and Wright, J.L., *Chronic Exposure to High Levels of Particulate Air Pollution and Small Airway Remodeling*, *Environmental Health Perspectives*, Vol.111, No. 5, (2003), pp. 714-718.
- 38 American Academy of Pediatrics, Committee on Environmental Health, *Ambient Air Pollution: Health Hazards to Children*, *Pediatrics*, Vol. 114, No. 6, (December 2004).
- 39 California Air Resources Board (1998) Resolution 98-35. Identification of diesel exhaust as a toxic air contaminant.
- 40 EPA, Health Assessment Document for Diesel Exhaust, Office of Research and Development, EPA/600/8-90/057F (May 2002) at: <http://cfpub.epa.gov/ncea/cfm/recorddisplay.cfm?deid=29060>
- 41 Findings of the California Air Resources Board's Scientific Review Panel on *The Report on Diesel Exhaust* as adopted at the Panel's April 22, 1998, meeting. <http://www.arb.ca.gov/toxics/dieseltac/de-fnds.pdf>.
- 42 The national average ambient diesel particulate matter concentration from 1999 ASPEN modeling (1.21 ug/m³) was multiplied times the CARB diesel particulate matter unit risk of 3 in 10,000 per 1.0 ug/m³ and distributed over the 2005 U.S. population to get total of 107,000 lifetime cancers assuming a 70-year lifetime of exposure to the national average ambient concentration. The annual estimated impact is calculated by dividing the 107,000 lifetime cancers by 70 years, arriving at 1,530 annual cancers attributable to diesels per year. This estimate is likely very conservative (low) because urban areas where larger populations dwell, are characterized by concentrations that are much higher than the national average.
- 43 Pope, C.A., Burnett, R.T., Thun, M.J., Calle, E.E., Krewski, D., Ito, Kaz, Thurston, G.D., *Lung Cancer, Cardiopulmonary Mortality, and Long Term Exposure to Fine Particulate Air Pollution*, *Journal of the American Medical Association*, Vol. 287, (2002), pp. 1132-1141.
- 44 Diaz-Sanchez, D., et al., *Diesel Exhaust Particles Induce Local IgE Production in Vivo and Alter the Pattern of IgE Messenger RNA Isoforms*, *J. Clin. Invest.*, 94:1417-1425 (1994); Diaz-Sanchez, D., *The Role of Diesel Exhaust Particles and Their Associated Polyaromatic Hydrocarbons in the Induction of Allergic Airway Disease*, *Allergy* 52 (Suppl. 38), 52-56, (1997); Castranova, Vincent, et al., *Effect of Exposure to Diesel Exhaust Particles on the Susceptibility of the Lung to Infection*, *EHP*, Vol. 109, Suppl. 4, (August 2001), 609-612.
- 45 Watanabe and Oonuki, *Inhalation of Diesel Engine Exhaust Affects Spermatogenesis in Growing Male Rats*, *Environmental Health Perspectives*, Vol. 107, No. 7, (July 1999), 539-544.
- 46 Watanabe, N., and Kurita, M., *The Masculinization of the Fetus During Pregnancy Due to Inhalation of Diesel Exhaust*, *Environmental Health Perspectives*, Vol. 109, No.2, (Feb. 2001).
- 47 Id.
- 48 Callahan, J.F., et al. *The Subchronic Inhalation Toxicity of DF2 (diesel fuel) used in Vehicle Engine Exhaust Smoke Systems*, Maryland: Chemical Research and Development Center, (1986) pp. 1-152.
- 49 Laurie, R.D., and Boyes, W.K., *Neurophysiological Alterations Due to Diesel Exhaust During the Neonatal Life of the Rat*, *Environ Int.*, (1981) b:5:363-8; Laurie, R.D., Boyes, W.K., and Wessendarp, T., *Behavioral Alterations Due to Diesel Exhaust Exposure*, *Environ Int.*, (1981). a:5:357-61; Pepelko, W.E. and Peirano, W.B., *Health Effects of Exposure to Diesel Engine Emissions: a Summary of Animal Studies Conducted by the US EPA's Health Effects Research Laboratories at Cincinnati, Ohio*, *J. Am. Coll. Toxicol.* 1983;2(4):253-306.
- 50 Watanabe (1999); Watanabe (2001).
- 51 Kilburn, K.H., *Effects of Diesel Exhaust on Neurobehavioral and Pulmonary Functions*, *Archives of Environmental Health*, Vol. 55, No. 1, (2000), pp. 11-17.
- 52 Environmental Protection Agency, "The Projection of Mobile Source Air Toxics from 1996 to 2007: Emissions and Concentrations," August, 2001. (Totals do not reflect marine, rail, aircraft contributions)
- 53 EPA Health Assessment for Diesel Exhaust (2002) deemed diesel particulate matter a "likely" carcinogen, using yet-to-be-approved terminology. "Likely" under EPA's proposed terminology is equivalent to "probable" under EPA's approved terminology.
- 54 EPA Health Assessment for Diesel Exhaust (2002). EPA declined to assign a unit risk for diesel particulate matter in the diesel Health Assessment, however EPA has indicated a probable range of 10-3 to 10-5 which translates to 12 to 1210 cancers per million. Source for CARB Unit Risk: California Air Resources Board (1998): Staff Report for Rulemaking. Identification of diesel exhaust as a toxic air contaminant <http://www.arb.ca.gov/regact/diesltac/diesltac.htm>;
- 55 Wiley, J.A., Robinson, J.P., Cheng, Y.T, Piazza, T., Stork, L., and Pladsen, K., *Study of Children's Activity Patterns*, Final Report Contract No. A733-149, Survey Research Center, University of California, Berkeley, (September 1991); Snodgrass, W.R., *Physiological and Biochemical Differences Between Children and Adults and Determinants of Toxic Response to Environmental Pollutants*, in Guzman, et al., *Similarities and Differences Between Children and Adults: Implications for Risk Assessment*, 1151 Press, Washington, DC. (year unknown); Thurston, G. D., "Particulate Matter and Sulfate: Evaluation of Current California Air Quality Standards with Respect to Protection of Children," California Air Resources Board, Office of Environmental Health Hazard Assessment, (September 1, 2000), <http://www.arb.ca.gov/ch/ceh/airstandards.htm>
- 56 Pope, C.A., and Dockery, D.W., *Acute Health Effects of PM10 Pollution Symptomatic and Asymptomatic Children*, *American Review of Respiratory Disease*, Vol. 145, (1992), pp. 1123-1128; Tolbert, P., et al. *Air Quality and Pediatric Emergency Room Visits for Asthma in Atlanta, Georgia*, *American Journal of Epidemiology*, Vol. 151, No. 8, (2000), pp. 798-810; Norris, G., Young Pong, N., Koenig, J., Larson, T., Sheppard, L. and Stout, J., *An Association Between Fine Particles and Asthma Emergency Department Visits for Children in Seattle*, *Environmental Health Perspectives*, Vol. 107, No. 6, (1999), pp. 489-493; Gauderman, W.J., McConnell, R., Gilliland, F., London, S., Thomas, D., Avol, E., Vora, H., Berhane, K., Rappaport, E., Lurmann, F., Margolis, H.G., and Peters, J., *Association Between Air Pollution and Lung Function Growth in Southern California Children*, *American Journal of Respiratory and Critical Care Medicine*, Vol. 162, No. 4, (2000), pp. 1-8; Brauer, M., Hoek, G., Van Vliet, P., et al., *Air Pollution from Traffic and the Development of Respiratory Infections and Asthmatic and Allergic Symptoms in Children*, *American Journal of Respiratory and Critical Care Medicine*, Vol.166, (2002), pp. 1092-1098; Lin, S., Munsie, J., Hwang, S., Fitzgerald, E., and Cayo, M., *Childhood Asthma Hospitalization and Residential Exposure to State Route Traffic*, *Environmental Research Section A* 88, (2002), pp. 73-81; Kim, J., Smorodinsky, S., Lipsett, M., Singer, B., Hodgson, A., and Ostro, B., *Traffic-related Air Pollution near Busy Roads The East Bay Children's Respiratory Health Study*, *American Journal of Respiratory and Critical Care Medicine*, Vol. 170, (2004), pp. 520-526; Woodruff, T., Grillo, J. and Schoendorf, K., *The Relationship Between Selected Causes of Postneonatal Infant Mortality and Particulate Air Pollution in the United States*, *Environmental Health Perspectives*, Vol. 105, (1997). pp. 608-612.
- 57 Latest statistics from the U.S. Department of Transportation tell the story: school buses have the best safety record of any form of transportation. Last year, just six youngsters were killed as school bus occupants. Yet, 800 youngsters are killed every year getting to and from school by some other means than a school bus. Source: School Bus Information Council: <http://www.schoolbusinfo.org/report.htm>
- 58 See: <http://www.epa.gov/cleanschoolbus/>
- 59 Gold, D., Litonjua, A., Schwartz, J., Lovett, E., Larson, A., Nearing, B., Allen, G., Verrier, M., Cherry, R., and Verrier, R. *Ambient Pollution and Heart Rate Variability*, Vol. 101, No. 11, (21 March 2000), pp. 1267-

- 1273; Liao, D., Creason, J., Shy, C., Williams, R., Watts, R., and Zweidinger, R., *Daily Variation of Particulate Air Pollution and Poor Cardiac Autonomic Control in the Elderly*, Environmental Health Perspectives, Vol. 107, No. 7. (July 1999); Mar, T., Norris, G., Koenig, J. and Larson, T., *Associations Between Air Pollution and Mortality in Phoenix, 1995–1997*, Environmental Health Perspectives, Vol. 108, No. 4, (April 2000).
- 60 For engine population data: EPA Diesel Engine Census, EPA Office of Transportation and Air Quality, 2004. For most recent highway diesel emissions see EPA Emissions Trends Report for 2002 at: <http://www.epa.gov/ttn/chieftrends/trends02/trendsreportallpollutants111504.xls>
- 61 For descriptions of non-road engines see: EPA non-road rule: <http://www.epa.gov/air/off-road/>. For most recent non-road diesel emissions see: EPA Air Quality Trends for 2002 at: <http://www.epa.gov/ttn/chieftrends/trends02/trendsreportallpollutants111504.xls>
- 62 For most recent marine diesel emissions see: EPA 2002 Emissions Trends Report at: <http://www.epa.gov/ttn/chieftrends/trends02/trendsreportallpollutants111504.xls>
- 63 For most recent locomotive diesel emissions, see: EPA 2002 Emissions Trends Report at: <http://www.epa.gov/ttn/chieftrends/trends02/trendsreportallpollutants111504.xls>
- 64 For summary of occupational studies: Cohen, A.J., and Higgins, M.W.P., *Health Effects of Diesel Exhaust: Epidemiology*, Diesel Exhaust: A Critical Analysis of emissions, Exposure and Health Effects, pp. 251-292, Health Effects Institute, Cambridge MA., (April 1995). For most comprehensive and recent U.S. study: Garshick, E., Laden, F., Hart, J., Rosner, B., Smith, T., Dockery, D. and Speizer, F., *Lung Cancer in Railroad Workers Exposed to Diesel Exhaust*, Environmental Health Perspectives, Vol. 122, No. 15, (November 2004), pp. 1539-1543. For nervous system effects: Kilburn, K.H., *Effects of Diesel Exhaust on Neurobehavioral and Pulmonary Functions*, Archives of Environmental Health, Vol. 55, No. 1, (2000), pp. 11-17.
- 65 Finkelstein, M., Jerrett, M., and Sears, M., *Traffic, Air Pollution and Mortality Rate Advancement Periods*, American Journal of Epidemiology, Vol. 160, (2004), pp. 173-177; Peters, A., Von Klot, S., Heier, A., Trentinaglia, I., Hormann, A., Wichmann, E., Lowel, H., *Exposure to Traffic and the Onset of Myocardial Infarction*, NEJM, Vol. 351, No 17, (October 15, 2004); Hoek, G., Brunekreef, B., Goldbohm, S., Fischer, P. and van den Brandt, P., *Association Between Mortality and Indicators of Traffic-Related Air Pollution in the Netherlands: a Cohort Study*, The Lancet, Vol. 360, December 19, 2002, pp.1203-1209; Brauer, M., Hoek, G., Van Vliet, P., et al., *Air Pollution from Traffic and the Development of Respiratory Infections and Asthmatic and Allergic Symptoms in Children*, American Journal of Respiratory and Critical Care Medicine, Vol. 166, (2002), pp. 1092-1098; Lin, S., Munsie, J., Hwang, S., Fitzgerald, E., and Cayo, M., *Childhood Asthma Hospitalization and Residential Exposure to State Route Traffic*, Environmental Research Section A 88, (2002), pp. 73-81.
- 66 Finkelstein, M., et al. (2004).
- 67 Kinney, P., Aggarwal, M., Northridge, M., Janssen, N., and Shepard, P., *Airborne Concentrations of PM_{2.5} and Diesel Exhaust Particles on Harlem Sidewalks: A Community-Based Pilot Study*, Environmental Health Perspectives, Vol. 108, No.3, (2000); Lena, S., Ochieng, V., Carter, M., Holguin-Veras, J., and Kinney, P., *Elemental Carbon and PM_{2.5} Levels in an Urban Community Heavily Impacted by Truck Traffic*, Environmental Health Perspectives, Vol. 110, No.10 (2002).
- 68 California EPA (2004). Roseville Rail Yard Study. Available at: <http://www.arb.ca.gov/diesel/documents/rstudy/rstudy101404.pdf>
- 69 California Air Resources Board, staff report: initial statement of reasons for proposed rulemaking. "Proposed Regulatory Amendments Extending the California Standards for Motor Vehicle Diesel Fuel to Diesel Fuel Used in Harborcraft and Intrastate Locomotives," October 2004. Available at: <http://www.arb.ca.gov/regact/carblohc/isor.pdf>
- 70 Hill, L.B., Zimmerman, N.J., and Gooch, J., *A Multi-City Investigation of the Effectiveness of Retrofit Emissions Controls in Reducing Exposures to Particulate Matter in School Buses*, Clean Air Task Force Report, (2005). Available at: http://www.catf.us/publications/reports/CATF-Purdue_Multi_City_Bus_Study.php; Wargo, J., and Brown, D., *Children's Exposure to Diesel Exhaust on School Buses*. Environment and Human Health Inc., (February 2002), p. 76. http://www.ehhi.org/pubs/children_diesel.html; Natural Resources Defense Council, *No Breathing in the Aisles. Diesel Exhaust Inside School Buses* (2001). Available at: <http://www.nrdc.org/air/transportation/schoolbus/sbusinx.asp>; California Air Resources Board, "Characterizing the Range of Children's Pollutant Exposure During School Bus Commutes," (2003). Available at: <http://www.arb.ca.gov/research/schoolbus/schoolbus.htm>
- 71 Northeast States for Coordinated Air Use Management: Unpublished data, 2004.
- 72 Fruin, et al., *Fine Particle and Black Carbon Concentrations Inside Vehicles*, 10th Annual Conference of the International Society of Exposure Analysis, Oct. 2000.
- 73 Riediker, M., Cascio, W., Griggs, T., Herbst, M., Bromberg, P., Neas, L., Williams, R., and Devlin, R., *Particulate Matter Exposure in Cars Is Associated with Cardiovascular Effects in Healthy Young Men*, American Journal of Respiratory and Critical Care Medicine, Vol. 169, (2004), pp. 934-940; See also, Weinhold, B., *Pollutants Lurk Inside Vehicles: Don't Breathe and Drive?* Environmental Health Perspectives, Vol. 109, No. 9, (September 2001); Marr, L.C., Grogan, L.A., Wohnschimmel, H., Molina, L., Molina, M., Smith, T., Garshick, E., *Vehicle Traffic as a Source of Particulate Polycyclic Aromatic Hydrocarbon Exposure in the Mexico City Metropolitan Area*, Environmental Science and Technology, Vol. 38, No. 9, (2004), pp. 2584-2592; Fruin et al., "Fine particle and black carbon concentrations inside vehicles," 10th Annual Conference of the International Society of Exposure Analysis, Oct., 2000.
- 74 Estimate is based on EPA methodology described in EPA Memorandum, Bryan Hubbell to Sam Napolitano, July 2, 2001. Estimated NO_x, SO₂ and PM emissions health damages for heavy duty vehicle emissions.
- 75 Motor Age, "EPA to Retrofit 11 Million Diesels," Advanstar Communications (August 2004). Available online at: <http://www.motorage.com/motorage/article/articleDetail.jsp?id=141102>
- 76 California Air Resources Board (CARB) 2004a. Air Quality Almanac Emission Projections. Online at <http://www.arb.ca.gov/emisinv/emsmain/emsmain.htm>; California Air Resources Board (CARB). 2003a. Staff Report: "Initial Statement of Reasons: Proposed Diesel Particulate Matter Control Measure for On-Road Heavy-Duty Residential and Commercial Solid Waste Collection Vehicles," California Environmental Protection Agency, Sacramento, CA; California Air Resources Board (CARB) 2003b Staff Report: "Initial Statement of Reasons for Proposed Rulemaking: Airborne Toxic Control Measure for Stationary Compression Ignition Engines," Sacramento, CA; California Environmental Protection Agency, Stationary Source Division Emissions Assessment Branch; California Air Resources Board (CARB) 2003c. REVISED – Staff Report: Initial Statement of Reasons for Proposed Rulemaking: Airborne Toxic Control Measure for In-use Diesel Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, and Facilities Where TRUs Operate, Sacramento, CA; California Environmental Protection Agency, Stationary Source Division Emissions Assessment Branch.
- 77 MECA: <http://www.epa.gov/otaq/retrofit/documents/meca1.pdf>; CARB cost-effectiveness analysis: <http://www.arb.ca.gov/regact/bus02/appf.pdf>
- 78 MECA: <http://www.meca.org/jahia/Jahia/engineName/filemanager/pid/229/dieselfact.PDF?actionreq=actionFileDownload&fileItem=213>. A newly verified Diesel Oxidation Catalyst technology, called "a torturous path filter" achieves a 50 percent reduction in diesel particulate at about half the cost of a diesel particulate filter.
- 79 Motor Age, "EPA to Retrofit 11 Million Diesels," Advanstar Communications (August 2004). Available online at: <http://www.motorage.com/motorage/article/articleDetail.jsp?id=141102>. See also, <http://www.epa.gov/cleanschoolbus/>
- 80 See: <http://www.epa.gov/air/oaqps/particles/designations/index.htm>
- 81 Vedal, S., Brauer, M., White, R., and Petkau, R., (2003). Air Pollution and Daily Mortality in a City With Low Levels of Air Pollution, Environmental Health Perspectives Vol. 111, No.1, (2003), pp. 45-51.
- 82 See: California Risk Reduction Plan at: <http://www.arb.ca.gov/diesel/documents/rpfinal.pdf>
- 83 For more information about retrofit programs in your area see: <http://www.epa.gov/otaq/retrofit/projectmap.htm>
- 84 For more information on EPA's Voluntary Retrofit Program see: <http://www.epa.gov/otaq/retrofit>



CLEAN AIR TASK FORCE

18 Tremont Street, Suite 530
Boston, MA 02108
Tel: 617-624-0234 / Fax: 617-624-0230

www.catf.us

The Children's Health Study

The Children's Health Study, which began in 1992, was a large, long-term, study of the health effects of children's chronic exposures to southern California air pollution. About 5500 children in twelve communities were enrolled in the study; two-thirds of them were enrolled as fourth-graders. Data on the children's health, their exposures to air pollution, and many factors that affected their responses to air pollution were gathered annually until they graduated from high school.

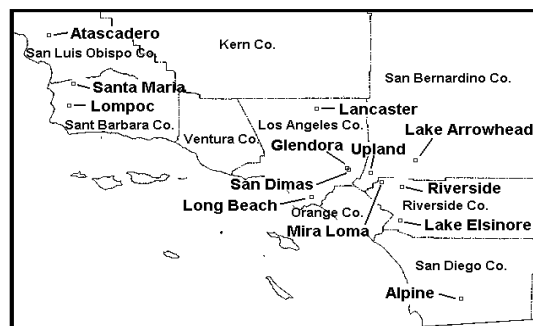
Importance of the Children's Health Study

The information provided by the study will help the Air Resources Board (ARB) protect public health. The ARB sets California's ambient air quality standards to protect people who are the most sensitive to air pollution. Children may be more strongly affected by air pollution because their lungs and their bodies are still developing. Children are also more exposed to air pollution than adults since they breathe faster and spend more time outdoors in strenuous activities.

The Communities and Pollutants Studied

The twelve communities in the study were chosen because they have different patterns of high and low levels of these four pollutants:

- Ozone
- Nitrogen dioxide
- Acid vapor
- Particulate matter that is breathed deep into the lungs



The Information Gathered by the Study

Concentrations of the four pollutants were continuously measured in each community throughout the study and for brief periods in schools and some homes. In addition, each child's lung function was tested every spring. Annual questionnaires asked about the children's respiratory symptoms and diseases, such as chronic cough and asthma; level of physical activity; time spent outdoors; and many other factors known to influence children's responses to air pollution, such as parental smoking and mold and pets in the household.

Major Results of the Study

- One of the most consistent results has been a reduction of lung development with exposure to higher concentrations of particulate matter, nitrogen dioxide, acid vapor, and elemental carbon. Children living in communities with higher concentrations of these pollutants had lungs that developed and grew more slowly and were less able to move air through them.
- Children who moved away from study communities had increased lung development if the new communities had lower particulate pollution, and had decreased lung development if the new communities had higher particulate pollution.
- Decreases in lung development were seen at age 18 in the polluted communities. By age 18 the lungs are nearly mature and the decreases in lung development are unlikely to be reversed. Therefore, the children may have permanent adverse respiratory health effects in later life.
- Children living in high ozone communities, who actively participated in several sports, were more likely to develop asthma than children in these communities not participating in sports.
- Days with higher ozone concentrations resulted in significantly higher school absences due to respiratory illness.
- Children with asthma who were exposed to higher concentrations of particles were much more likely to develop bronchitis.

For More Information

Please contact the ARB's Public Information Office at (916) 322-2990, or visit our web site at <http://www.arb.ca.gov/research/chs/chs.htm>. You may obtain this document in an alternative format by contacting our ADA coordinator at (916) 322-4505 (voice); (916) 324-9531 (TDD, Sacramento area only); or (800) 700-8326 (TDD, outside Sacramento).

**Technical Support Document for Cancer Potency Factors:
Methodologies for derivation, listing of available values, and adjustments to allow for early
life stage exposures.**

April 2009

**California Environmental Protection Agency
Office of Environmental Health Hazard Assessment
Air Toxicology and Epidemiology Branch**

Prepared by:

John D. Budroe, Ph.D.

James F. Collins, Ph.D.

Melanie A. Marty, Ph.D.

Andrew G. Salmon, M.A., D. Phil.

Joseph P. Brown, Ph.D.

Air Toxicology and Epidemiology Branch

and

Martha S. Sandy, Ph.D., M.P.H.

Claire D. Sherman, Ph.D.

Rajpal S. Tomar, Ph.D.

Lauren Zeise, Ph.D.

Reproductive and Cancer Hazard Assessment Branch,

Office of Environmental Health Hazard Assessment

Reviewed By

George V. Alexeeff, Ph.D., Deputy Director

Melanie A. Marty, Ph.D., Chief, Air Toxicology and Epidemiology Branch

Lauren Zeise, Ph.D., Chief, Reproductive and Cancer Hazard Assessment Branch

EXECUTIVE SUMMARY

The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly) was enacted in September 1987. Under this Act, stationary sources of air pollution are required to report the types and quantities of certain substances their facilities routinely release into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, identify facilities having localized impacts, ascertain health risks posed by those facilities, notify nearby residents of significant risks and reduce emissions from significant sources.

The Technical Support Document for Cancer Potency Factors (TSD) contains cancer unit risks and potency factors for 107 of the 201 carcinogenic substances or groups of substances for which emissions must be quantified in the Air Toxics Hot Spots program. These unit risks are used in the cancer risk assessment of facility emissions.

The purposes of this revision to the TSD is to provide updated calculation procedures used to derive the estimated unit risk and cancer potency factors, and to describe the procedures used to consider the increased susceptibility of infants and children compared to adults to carcinogens. This updates cancer risk assessment methods originally laid out in the California Department of Health Services' Guidelines for Chemical Carcinogen Risk Assessment (CDHS, 1985), and more recently summarized in the previous Hot Spots technical support document Part II (OEHHA, 2005a). Summaries of cancer potency factors and the underlying data are provided in Appendix A and B. [these did not undergo revision and are not included in this review package.]

The procedures used to consider the increased susceptibility to carcinogens of infants and children as compared to adults include the use of age-specific weighting factors in calculating cancer risks from exposures of infants, children and adolescents, to reflect their anticipated special sensitivity to carcinogens

This document is one part of the Air Toxics Hot Spots Program Risk Assessment Guidelines. The other documents originally included in the Guidelines are Part I: Technical Support Document for the Determination of Acute Toxicity Reference Exposure Levels for Airborne Toxicants; Part III: Technical Support Document for Determination of Noncancer Chronic Reference Exposure Levels; Part IV: Technical Support Document for Exposure Assessment and Stochastic Analysis; Part V: Air Toxic Hot Spots Program Risk Assessment Guidelines. As a part of the same revision process which led to production of this revised TSD on cancer potencies, the original TSDs for Acute and Chronic Reference Exposure Levels have been replaced with a new unified TSD for Acute, 8-hour and Chronic Reference Exposure Levels.

The major changes to the TSD include the following:

- Based on the OEHHA analysis of the potency by lifestage at exposure, OEHHA proposes weighting cancer risk by a factor of 10 for exposures that occur from birth to 2 years of age, and by a factor of 3 for exposures that occur from 2 years through 15 years of age. We propose to apply this weighting factor to all carcinogens, regardless of purported mechanism of action, unless chemical-specific data exist to the contrary. In cases where

there are adequate data for a specific carcinogen of potency by age, we would use the data to make any adjustments to risk.

- OEHHA proposes to use the Benchmark Dose method to compute potency factors rather than the more traditional linearized multistage model (LMS), although the LMS will still be used in some instances. The BMDL model essentially uses an empirical fit to the data (usually best with the multistage model), and then extrapolates with a straight line from the 95 % lower confidence limit of the BMD (BMDL) to zero. This method is simpler and does not assume any underlying theoretical mechanisms at the low dose range. The BMDL method results in very similar estimates of potency as the LMS method.
- OEHHA will use scaling based on body weight to the $\frac{3}{4}$ power, rather than to the $\frac{2}{3}$ power.
- OEHHA's evaluations of the carcinogenicity of chemicals generally follow the guidelines laid out by IARC for identification and classification of potential human carcinogens, which are described in detail in the most recent revision of the *Preamble* to the IARC monographs series (IARC, 2006).

PREFACE

The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly) was enacted in September 1987. Under this Act, stationary sources are required to report the types and quantities of certain substances their facilities routinely release into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, identify facilities having localized impacts, ascertain health risks posed by those facilities, notify nearby residents of significant risks and reduce emissions from significant sources.

The Technical Support Document for Cancer Potency Factors (TSD) contains cancer unit risks and potency factors for 107 of the 201 carcinogenic substances or groups of substances for which emissions must be quantified in the Air Toxics Hot Spots program. These unit risks are used in risk assessment of facility emissions. The TSD provides updated calculation procedures used to derive the estimated unit risk and cancer potency factors, and procedures to consider early-life susceptibility to carcinogens. Summaries of cancer potency factors and the underlying data are provided in Appendix A and B. [these did not undergo revision and are not included in this review package.]

In this document, OEHHA is responding to the requirements of the 1999 Children's Environmental Health Protection Act, (SB25, Escutia) by revising the procedures for derivation and application of cancer potency factors to take account of general or chemical-specific information which suggests that children may be especially susceptible to certain carcinogens (OEHHA, 2001a). The revised cancer potency derivation procedures described will not be used to impose any overall revisions of the existing cancer potencies, although they do reflect updated methods of derivation. However, individual cancer potency values will be reviewed as part of the ongoing re-evaluation of health values mandated by SB 25, and revised values will be listed in updated versions of the appendices to this document as necessary. The revisions also include the use of weighting factors in calculating cancer risks from exposures of infants, children and adolescents, to reflect their anticipated special sensitivity to carcinogens. Similar legal mandates to update risk assessment methodology and cancer potencies apply to the OEHHA program for development of Public Health Goals (PHGs) for chemicals in drinking water, and Proposition 65 No Significant Risk Levels (NSRLs). The NSRLs may also be revised to reflect concerns for children's health. Revising these numbers will require the originating program to reconsider the value in an open public process. For example, OEHHA would need to release any revised potency factors for public comment and review by the Scientific Review Panel on Toxic Air Contaminants (SRP) prior to adoption under the TAC program. The procedures for outside parties to request reevaluation of cancer potency values by the programs which originated those values are listed in Appendix G.

Appendices A and B provide previously adopted Cal/EPA values which were included in the previous version of the TSD for Cancer Potency Factors (OEHHA, 2005a). Cal/EPA values were developed under the Toxic Air Contaminant (TAC) program, the PHG program, the Proposition 65 program, or in some cases specifically for the Air Toxics Hot Spots program. All the Cal/EPA values are submitted for public comments and external peer review prior to adoption by the program of origin. In the future, new values developed by the Toxic Air

Contaminants or Hot Spots programs or other suitable sources will be added as these are approved.

Some U.S. EPA IRIS cancer unit risk values were adopted under the previous versions of these guidelines, and these values will continue to be used unless and until revised by Cal/EPA. U.S. EPA has recently revised its cancer risk assessment guidelines (U.S. EPA, 2005a). Some of the recommended changes in methodology could result in slightly different potency values compared to those calculated by the previous methodology, although in practice a number of the recommendations (for example, the use of $3/4$ power of the body weight ratio rather than $2/3$ power for interspecies scaling) have been available in draft versions of the revised policy for some time and appear in many more recent assessments. U.S. EPA has stated that cancer potency values listed in IRIS will not be revisited solely for the purpose of incorporating changes in cancer potency value calculation methods contained in the revised cancer risk assessment guidelines. U.S. EPA has also issued supplementary guidelines on assessing cancer risk from early-life exposure (U.S. EPA, 2005b).

OEHHA uses a toxic equivalency factor procedure for dioxin-like compounds, including polychlorinated dibenzo-*p*-dioxins, dibenzofurans and polychlorinated biphenyls (PCBs). The Toxicity Equivalency Factor scheme (TEF_{WHO-97}) developed by the World Health Organization/European Center for Environmental Health (WHO-ECEH) is used for determining cancer unit risk and potency values for these chemicals where individual congener emissions are available (Appendix C).

This document is one part of the Air Toxics Hot Spots Program Risk Assessment Guidelines. The other documents originally included in the Guidelines are Part I: Technical Support Document for the Determination of Acute Toxicity Reference Exposure Levels for Airborne Toxicants; Part III: Technical Support Document for Determination of Noncancer Chronic Reference Exposure Levels; Part IV: Technical Support Document for Exposure Assessment and Stochastic Analysis; Part V: Air Toxic Hot Spots Program Risk Assessment Guidelines. As a part of the same revision process which led to production of this revised TSD on cancer potencies, the original TSDs for Acute and Chronic Reference Exposure Levels have been replaced with a new unified TSD for Acute, 8-hour and Chronic Reference Exposure Levels.

TABLE OF CONTENTS

PREFACE	5
TABLE OF CONTENTS	7
INTRODUCTION	9
SELECTION OF CANCER POTENCY VALUES	10
CANCER RISK ASSESSMENT METHODOLOGIES	11
Hazard Identification	12
Evaluation of Weight of Evidence	12
Criteria for Causality	12
Data sources	15
Carcinogen Identification schemes	18
Dose Response Assessment	23
Interspecies Extrapolation	242423
Intraspecies Extrapolation and Inter-individual Variability	252524
Toxicokinetic Models	25
Toxicodynamic Models	262625
Selection of Site and Tumor Type	30
Carcinogens inducing tumors at multiple sites	313130
Early-Lifestage Cancer Potency Adjustments	333332
OEHHA Analysis of the Effect of Age at Exposure on Cancer Potency	353533
U.S.EPA Analysis of the Effect of Age at Exposure on Cancer Potency	656552
Other Source Documents for Cancer Risk Assessment Guidance	717158
United States Environmental Protection Agency (U.S. EPA)	717158
Office of Environmental Health Hazard Assessment (OEHHA)	757562
Chemical-specific Descriptions of Cancer Potency Value Derivations	818168
REFERENCES	828269

APPENDICES

Appendix A. A lookup table containing unit risk and cancer potency values.

Appendix B. Chemical-specific summaries of the information used to derive unit risk and cancer potency values.

Appendix C. A description of the use of toxicity equivalency factors for determining unit risk and cancer potency factors for polychlorinated dibenzo-*p*-dioxins, dibenzofurans and dioxin-like polychlorinated biphenyls.

Appendix D. A listing of Toxic Air Contaminants identified by the California Air Resources Board.

Appendix E. Descriptions of the International Agency for Research on Cancer (IARC) and U.S. Environmental Protection Agency (U.S. EPA) carcinogen classifications.

Appendix F. An asbestos quantity conversion factor for calculating asbestos concentrations expressed as 100 fibers/m³ from asbestos concentrations expressed as µg/m³.

Appendix G. Procedures for revisiting or delisting cancer potency factors by the program of origin.

Appendix H. Exposure routes and studies used to derive cancer unit risks and slope factors.

Appendix I. “Assessing susceptibility from early-life exposure to carcinogens”: Barton *et al.*, 2005 (from *Environmental Health Perspectives*).

Appendix J. “In Utero and Early Life Susceptibility to Carcinogens: The Derivation of Age-at-Exposure Sensitivity Measures” – conducted by OEHHA’s Reproductive and Cancer Hazard Assessment Branch.

Appendix K. Additions and corrections from prior document versions.

INTRODUCTION

The Technical Support Document (TSD) for Describing Available Cancer Potency Factors provides technical information support for the Air Toxics Hot Spots Program Risk Assessment Guidelines. The TSD consists of 12 sections:

1. The TSD introduction.
2. A description of the methodologies used to derive the unit risk and cancer potency values listed in the lookup table.
3. A lookup table containing unit risk and cancer potency values. (Appendix A)
4. Chemical-specific summaries of the information used to derive unit risk and cancer potency values. (Appendix B).
5. A description of the use of toxicity equivalency factors for determining unit risk and cancer potency factors for polychlorinated dibenzo-*p*-dioxins, dibenzofurans and dioxin-like polychlorinated biphenyls (Appendix C).
6. A listing of Toxic Air Contaminants identified by the California Air Resources Board (Appendix D).
7. Descriptions of the International Agency for Research on Cancer (IARC) and U.S. Environmental Protection Agency (U.S. EPA) carcinogen classifications (Appendix E).
8. An asbestos quantity conversion factor for calculating asbestos concentrations expressed as 100 fibers/m³ from asbestos concentrations expressed as µg/m³ (Appendix F).
9. Procedures for revisiting or delisting cancer potency factors by the program of origin (Appendix G).
10. Exposure routes and studies used to derive cancer unit risks and slope factors (Appendix H).
11. “Assessing susceptibility from early-life exposure to carcinogens”: Barton *et al.*, 2005 (from *Environmental Health Perspectives*) (Appendix I).
12. “In Utero and Early Life Susceptibility to Carcinogens: The Derivation of Age-at-Exposure Sensitivity Measures” – conducted by OEHHA’s Reproductive and Cancer Hazard Assessment Branch (Appendix J)

SELECTION OF CANCER POTENCY VALUES

The Office of Environmental Health Hazard Assessment (OEHHA) has developed a number of cancer potencies for use in the Toxic Air Contaminants and Air Toxics Hot Spots programs. This document also provides summaries of cancer potency factors which were originally developed for other California Environmental Protection Agency (Cal/EPA) programs, or by the U.S. EPA. These were reviewed for accuracy, reliance on up-to-date data and methodology, and applicability in the context of the Air Toxics Hot Spots program. Values found appropriate were adopted after public and peer review rather than devoting the resources necessary for a full *de novo* assessment. Thus, cancer potency values (CPF) included in the Technical Support Document (TSD) for Cancer Potency Factors were from the following sources:

1. Toxic Air Contaminant documents
2. Standard Proposition 65 documents
3. U.S.EPA Integrated Risk Information Systems (Office of Health and Environmental Assessment, U.S.EPA)
4. Expedited Proposition 65 documents
5. Other OEHHA assessments , for example for the drinking water program.

All the cancer potency value sources used generally follow the recommendations of the National Research Council on cancer risk assessment (NRC, 1983, 1994). All Cal/EPA program documents undergo a process of public comment and scientific peer review prior to adoption, although the procedures used vary according to the program. The publication procedure for Toxic Air Contaminant documents includes a public comment period and review by the Scientific Review Panel on Toxic Air Contaminants (SRP) before identification of a Toxic Air Contaminant by the Air Resources Board of the California Environmental Protection Agency (Cal/EPA). Furthermore, a petition procedure is available to initiate TAC document review and revision if appropriate because of new toxicity data. Documents developed for the Air Toxics Hot Spots program similarly undergo public comment and peer review by the SRP before adoption by the Director of OEHHA. The standard Proposition 65 document adoption procedure includes a public comment and external peer review by the Proposition 65 Carcinogen Identification Committee. The expedited Proposition 65 document adoption procedure included a public comment period. Risk assessments prepared for development of Public Health Goals (PHGs) for chemicals in drinking water are subject to two public comment periods before the final versions and responses to comments are published on the OEHHA Web site. PHG documents may also receive external peer review. Documents from U.S. EPA's Integrated Risk Information System (IRIS) receive external peer review and are posted on the Internet for public viewing during the external peer review period, and any public comments submitted are considered by the originating office. Additionally, public comment may be solicited during the document posting period. Future preference for use of developed cancer potency factors/unit risks will be done on a case by case basis. Preference will be given to those assessments most relevant to inhalation exposures of the California population, to the most recent derivations using the latest data sets and scientific methodology, and to those having undergone the most open and extensive peer review process.

CANCER RISK ASSESSMENT METHODOLOGIES

This section describes in general the methodologies used to derive the cancer unit risk and potency factors listed in this document. As noted in the Preface to this document, no new cancer unit risks or potency factors were developed for this document. All of the values contained here were previously developed in documents by Cal/EPA or U.S. EPA. Following the recommendations of the National Academy of Sciences (NRC, 1983), Cal/EPA and U.S. EPA have both used formalized cancer risk assessment guidelines, the original versions of which (California Department of Health Services, 1985; U.S. EPA, 1986) were published some time ago. Both these guidelines followed similar methodologies.

In the twenty years since these original guidelines were published there have been a number of advances in the methodology of cancer risk assessment. There have additionally been considerable advances in the quantity of data available not only from animal carcinogenesis bioassays and epidemiological studies, but also from mechanistic studies of carcinogenesis and related phenomena. Some of these advances have been incorporated into newer risk assessments by both agencies on a more or less *ad hoc* basis. There has also been an ongoing effort to provide updated risk assessment guidance documents. In 1995, U.S. EPA released for public comment the "Proposed and Interim Guidelines for Carcinogen Risk Assessment", which was the first of several drafts released for public comment. Many risk assessments appearing since then have used elements of the recommendations contained in that document, in spite of its draft status. A final version of the U.S. EPA's revised cancer risk assessment guidelines has now been released (U.S. EPA, 2005a). Although these new guidelines incorporate a number of substantial changes from their predecessors (U.S. EPA, 1986; 1995), U.S. EPA has stated that cancer potency values listed in IRIS will not be revisited solely for the purpose of incorporating changes in cancer potency value calculation methods.

Cal/EPA has not produced a revised cancer risk assessment guideline document to replace the original version (DHS, 1985). Rather, Cal/EPA has relied on incorporating new data and methodologies as these became available, and described the methods used on a case by case basis in the individual risk assessment documents where these went beyond the original guidance. However, this revision of the TSD for cancer potencies provides a convenient opportunity to summarize the current status of the methodology used by OEHHA for the air toxics programs, and also to highlight points of similarity to, and difference from, the recommendations of U.S. EPA (2005a).

In this document, OEHHA intends to follow the recommendations of the NRC (1994) in describing a set of clear and consistent principles for choosing and departing from default cancer risk assessment options. NRC identified a number of objectives that should be taken into account when considering principles for choosing and departing from default options. These include, "protecting the public health, ensuring scientific validity, minimizing serious errors in estimating risks, maximizing incentives for research, creating an orderly and predictable process, and fostering openness and trustworthiness". The OEHHA cancer risk methodologies discussed in this document are intended to generally meet those objectives cited above.

Hazard Identification

This section will describe: 1) how weight of evidence evaluations are used in hazard evaluation; 2) guidelines for inferring causality of effect; 3) the use of human and animal carcinogenicity data, as well as supporting evidence (e.g. genetic toxicity and mechanistic data); 4) examples of carcinogen identification schemes.

Evaluation of Weight of Evidence

In evaluating the range of evidence on the toxicity and carcinogenicity of a compound, mixture or other agent, a “weight-of-evidence” approach is generally used to describe the body of evidence on whether or not exposure to the agent causes a particular effect. Under this approach, the number and quality of toxicological and epidemiological studies, as well as the consistency of study results and other sources of data on biological plausibility, are considered. Diverse and sometimes conflicting data need to be evaluated with respect to possible explanations of differing results. Consideration of methodological issues in the review of the toxicological and epidemiological literature is important in evaluating associations between exposure to an agent and animal or human health effects. This aspect of the evaluation process has received particular emphasis with respect to epidemiological data, where concerns as to the statistical and biological significance and reliability of the data and the impacts of confounding and misclassification are pressing. Such concerns are also relevant to some extent in the interpretation of animal bioassay data and mechanistic studies. Although the test animals, laboratory environment and characterization of the test agent are usually much better controlled than the equivalent parameters in an epidemiological study, the small sample size can be problematic. In addition, there are uncertainties associated with extrapolation of biological responses from test animal species to humans.

Criteria for Causality

There has been extensive discussion over the last two centuries on causal inference. This has been particularly with regard to epidemiological data, but is also relevant to interpretation of animal studies. Most epidemiologists utilize causal inference guidelines based on those proposed by Bradford Hill (1971). OEHHA has relied on these and on recommendations by IARC (2006), the Institute of Medicine (2004), the Surgeon General’s Reports on Smoking (U.S. DHHS, 2004) and standard epidemiologic texts (e.g. Lilienfeld and Lilienfeld, 1980; Rothman and Greenland, 1998). The criteria for determination of causality used by OEHHA have been laid out in various risk assessment documents. The summary below is adapted from the Health Effects section of the document prepared to support the identification of environmental tobacco smoke (ETS) as a Toxic Air Contaminant (OEHHA, 2005b).

1. *Strength of Association.* A statistically significant strong association, which is easier to detect if there is a high relative risk, between a factor and a disease is often viewed as an important criterion for inferring causality because, all other things being equal, a strong and statistically significant association makes alternative explanations for the disease less likely. However, as discussed in Rothman and Greenland (1998), the fact that a relative risk is small in magnitude does not exclude a casual association between the risk factor

and the outcome in question. Since it is more difficult to detect (i.e., reach statistical significance) a small magnitude risk, ~~they are it is~~ just as likely to ~~be causal~~ indicate causality as a larger magnitude risks.

When assessing all evidence, it is important to consider the strength of the study design (particularly controlling for confounding variables, obtaining an unbiased sample, measurement error) and the level of statistical significance (i.e., the ability to exclude a Type I [false positive] error). The power of the study to detect biologically meaningful effects (i.e., the risk of a Type II [false negative] error) is important in considering studies that do not reach traditional (i.e., $P < .05$) statistical significance, particularly if the biological endpoint is serious. If the outcome is serious and the study small (i.e., low power), a larger P value (e.g., $P < .10$) may be adequate evidence for identifying an effect.

There are a number of examples of statistically significant, small magnitude associations that are widely accepted as causal, such as causal links between air pollution and cardiovascular/pulmonary mortality and between second-hand smoke exposure and various cancers and heart disease. From a public health perspective, even a small magnitude increase in risk for a common disease can mean large numbers of people affected by the health outcome when exposure is frequent and widespread, as measured by the population attributable risk or attributable fraction. Small magnitude of association must not be confused with statistical significance, which is much more important.

2. *Consistency of Association.* If several investigations find an association between a factor and a disease across a range of populations, geographic locations, times, and under different circumstances, then the factor is more likely to be causal. Consistency argues against hypotheses that the association is caused by some other factor(s) that varies across studies. Unmeasured confounding is an unlikely explanation when the effect is observed consistently across a number of studies in different populations.

Associations that are replicated in several studies of the same design or using different epidemiological approaches or considering different sources of exposure and in a number of geographical regions are more likely to represent a causal relationship than isolated observations from single studies (IARC, 2006). If there are inconsistent results among investigations, possible reasons are sought, such as adequacy of sample size or control group, methods used to assess exposure, or range in levels of exposure. The results of studies judged to be rigorous are emphasized over those of studies judged to be methodologically less rigorous. For example, studies with the best exposure assessment are more informative for assessing the association between ETS and breast cancer than studies with limited exposure assessment, all else being equal.

3. *Temporality.* Temporality means that the factor associated with causing the disease occurs in time prior to development of the disease. The adverse health effect should occur at a time following exposure that is consistent with the nature of the effect. For example, respiratory irritation immediately following exposure to an irritant vapor is temporally consistent, whereas ~~effects-irritation~~ noted only years later may not be. On the other hand, tumors, noted immediately following exposure, might be temporally

inconsistent with a causal relationship, but tumors arising after a latency period of months (in rodents) or years (in rodents or humans) would be temporally consistent.

4. *Coherence and Biological Plausibility.* A causal interpretation cannot conflict with what is known about the biology of the disease. The availability of experimental data or mechanistic theories consistent with epidemiological observations strengthens conclusions of causation. For example, the presence of known carcinogens in tobacco smoke supports the concept that exposure to tobacco smoke could cause increased cancer risk. Similarly, if the mechanism of action for a toxicant is consistent with development of a specific disease, then coherence and biological plausibility can be invoked. It should be noted that our understanding of the biology of disease, and therefore biological plausibility, changes in light of new information which is constantly emerging from molecular biology (including epigenetics), and from new clinical and epidemiological investigations revealing effects influenced by genetic polymorphisms, pre-existing disease, and so forth.
5. *Dose-Response.* A basic tenet of toxicology is that increasing exposure or dose generally increases the response to the toxicant. While dose-response curves vary in shape and are not necessarily always monotonic, an increased gradient of response with increased exposure makes it difficult to argue that the factor is not associated with the disease. To argue otherwise necessitates that an unknown factor varies consistently with the dose of the substance and the response under question. While increased risk with increasing levels of exposure is considered to be a strong indication of causality, absence of a graded response does not exclude a causal relationship (IARC, 2006).

The dose-response curves for specific toxic effects may be non-monotonic. Under appropriate circumstances, where the dose response shows saturation, the effect of exposures could be nearly maximal, with any additional exposure having little or no effect. In some instances, a response is seen strongly in susceptible subpopulations, and the dose-response is masked by mixing susceptible and non-susceptible individuals in a sample. Further, there are examples of U-shaped or inverted U-shaped dose-response curves, (e.g., for endocrine disrupters) (Almstrup et al., 2002; Lehmann et al., 2004). Finally, timing of exposure during development may mask an overall increase in risk with increasing dose.

6. *Specificity.* Specificity is generally interpreted to mean that a single cause is associated with a single effect. It may be useful for determining which microorganism is responsible for a particular disease, or associating a single carcinogenic chemical with a rare and characteristic tumor (e.g., liver angiosarcoma and vinyl chloride, or mesothelioma and asbestos). However, the concept of specificity is not helpful when studying diseases that are multifactorial, or toxic substances that contain a number of individual constituents, each of which may have several effects and/or target sites.
7. *Experimental evidence.* While experiments are often conducted over a short period of time or under artificial conditions (compared to real-life exposures), experiments offer the opportunity to collect data under highly controlled conditions that allow strong causal conclusions to be drawn. Experimental data that are consistent with epidemiological

results strongly support conclusions of causality. There are also “natural experiments” that can be studied with epidemiological methods, such as when exposure of a human population to a substance declines or ceases; if the effect attributed to that exposure decreases, then there is evidence of causality. One example of this is the drop in heart disease death and lung cancer risk after smoking cessation.

It should be noted that the causal criteria are guidelines for judging whether a causal association exists between a factor and a disease, rather than hard-and-fast rules. Lilienfeld and Lilienfeld (1980) note that “*In medicine and public health, it would appear reasonable to adopt a pragmatic concept of causality. A causal relationship would be recognized to exist whenever evidence indicates that the factors form part of the complex of circumstances that increases the probability of the occurrence of disease and that a diminution of one or more of these factors decreases the frequency of that disease. After all, the reason for determining the etiological factors of a disease is to apply this knowledge to prevent the disease.*” [Rothman and Greenland \(2005\) discuss the complexities of causation and the use of rules and deductive methods in causal inference. They also concur with Bradford Hill and others that a determination of causality is a pragmatic conclusion rather than an absolute verdict, and advocate that these criteria should be seen as “deductive tests of causal hypotheses”.](#)

Data sources

Human studies: epidemiology, ecological studies and case reports

The aim of a risk assessment for the California Air Toxics programs is to determine potential impact on human health. Ideally therefore, the hazard identification would rely on studies in humans to demonstrate the nature and extent of the hazard. However, apart from clinical trials of drugs, experimental studies of toxic effects in human subjects are rarely undertaken or justifiable. Pharmacokinetic studies using doses below the threshold for any toxic effect have been undertaken for various environmental and occupational agents, but are not usually regarded as appropriate for suspected carcinogens.

The human data on carcinogens available to the risk assessor therefore mostly consist of epidemiological studies of existing occupational or environmental exposures. It is easier to draw reliable inferences in situations where both the exposures and the population are substantial and well-defined, and accessible to direct measurement rather than recall. Thus, many important findings of carcinogenicity to humans are based on analysis of occupational exposures. Problems in interpretation of occupational epidemiological data include simultaneous exposure to several different known or suspected carcinogens, imprecise quantification of exposures and confounding exposures such as active or passive tobacco smoking. The historical database of occupational data has a bias towards healthy white adult males. Thus, the hazard analysis of these studies may not accurately characterize effects on women, infants, children or the elderly, or on members of minority ethnic groups. Nevertheless, the analysis of occupational epidemiological studies, [including meta-analyses](#), has proved an important source for unequivocal identification of human carcinogens.

Epidemiological evidence may also be obtained where a substantial segment of a general population is exposed to the material of interest in air, drinking water or food sources. Rigorous

cohort and case-control studies may sometimes be possible, in which exposed individuals are identified, their exposure and morbidity or mortality evaluated, and compared to less exposed but otherwise similar controls. More often at least the initial investigation is a cross-sectional study, where prevalence of exposures and outcomes is compared in relatively unexposed and exposed populations. Such studies are hypothesis-generating, but are important sources of information nevertheless, and can often also justify more costly and labor-intensive follow-up cohort and/or case-control studies.

The clinical medical literature contains many case reports where a particular health outcome is reported along with unusual exposures that might have contributed to its occurrence. These reports typically describe a single patient or a small group, and have no statistical significance. They are nevertheless useful as indications of possible associations that deserve follow-up using epidemiological methods, and as supporting evidence, addressing the plausibility of associations measured in larger studies.

Animal studies

Although the observation of human disease in an exposed population can provide definitive hazard identification, adequate data of this type are not always available. More often, risk estimates have to be based on studies in experimental animals, and extrapolation of these results to predict human toxicity. The animals used are mostly rodents, typically the common laboratory strains of rat and mouse.

Rats and mice have many similarities to humans. Physiology and biochemistry are similar for all mammals, especially at the fundamental levels of xenobiotic metabolism, DNA replication and DNA repair that are of concern in identifying carcinogens. However, there are also several important differences between rodents and humans. Rodents, with a short life span, have differences in cell growth regulation compared to longer-lived species such as the human. For instance, whereas laboratory investigations have suggested that mutations in two regulatory genes (*e.g.* H-ras and p-53) are sometimes sufficient to convert a rodent cell to a tumorigenic state, many human cancers observed clinically have seven or eight such mutations. In addition, cultured normal human cells have a very stable karyotype, whereas cultured rodent cells readily undergo tetraploidization and then aneuploidization in cell culture. Further, cultured human cells senesce and rarely undergo spontaneous immortalization (frequency is 10^{-7} or less), whereas cultured rodent cells readily undergo immortalization at frequencies on the order of 10^{-3} . The use of genomics to study chemical carcinogenesis is relatively new, but the differences at present appear to be a matter of degree rather than kind.

Differences in regulation of cell division are another likely reason for variation between species in the site of action of a carcinogen, or its potency at a particular site. A finding of carcinogenesis in the mouse liver, for instance, is a reasonably good indicator of potential for carcinogenesis at some site in the human, but not usually in human liver (Huff, 1999). The mouse liver (and to a lesser extent that of the rat) is a common site of spontaneous tumors. It is also relatively sensitive to chemical carcinogenesis. The human liver is apparently more resistant to carcinogenesis; human liver tumors are unusual except when associated with additional predisposing disease, such as hepatitis B or alcoholic cirrhosis, or exposure to aflatoxin B1, or simultaneous exposure to hepatitis B virus and aflatoxin B1. Conversely, other

tumor sites are more sensitive in the human than in experimental animals. Interspecies variation in site and sensitivity to carcinogenesis may also arise from differences in pharmacokinetics and metabolism, especially for carcinogens where metabolic activation or detoxification is important. This variability may cause important differences in sensitivity between individuals in a diverse population such as humans. Variability between individuals in both susceptibility and pharmacokinetics or metabolism is probably less in experimental animal strains that are bred for genetic homogeneity.

Animal carcinogenesis studies are often designed to maximize the chances of detecting a positive effect, and do not necessarily mimic realistic human exposure scenarios. Thus extrapolation from an experimentally accessible route to that of interest for a risk assessment may be necessary. Even for studies by realistic routes such as oral or inhalation, doses may be large compared to those commonly encountered in the environment, in order to counter the limitation in statistical power caused by the relatively small size of an animal experiment. Whereas the exposed population of an epidemiological study might number in the thousands, a typical animal study might have fifty individuals per exposure group. With this group size any phenomenon with an incidence of less than about 5% is likely to be undetectable. Statistically significant results may be obtained even with groups as small as ten animals per dose group, when incidence of a tumor that is rare in the controls approached 100% in a treated group. The consensus experimental design for animal carcinogenesis studies, which has evolved over the last 50 years of investigation, is represented by the protocol used by the U.S. National Toxicology Program (NTP) for studies using oral routes (diet, gavage or drinking water) or inhalation. These carcinogenesis bioassays usually involve both sexes of an experimental species, and most often two species. NTP has standardized the use of the C57BlxC3H F₁ hybrid mouse, and the Fischer 344 rat as the standard test species, although NTP has announced plans to substitute use of the Wistar Han rat for the Fisher 344 rat. There is now an extensive database of background tumor incidences, normal physiology, biochemistry, histology and anatomy for these strains, which aids in the interpretation of pathological changes observed in experiments. Nevertheless, there is enough variation in background rates of common tumors that the use of concurrent controls is essential for hazard identification or dose-response assessment. "Historical control" data are mainly used to reveal anomalous outcomes in the concurrent controls. The fact that a significantly elevated incidence of a tumor relative to the concurrent control group is within the range of historical controls at that site for the test sex and strain is not necessarily grounds for dismissing the biological significance of the finding.

Groups of fifty animals of each sex and species are used, with control groups, and several dose groups, the highest receiving the maximum tolerated dose (MTD). Recent study designs have emphasized the desirability of at least three dose levels covering a decade with "logarithmic" spacing (*i.e.* MTD, 1/2 MTD or 1/3 MTD, and 1/10 MTD). This extended design is aimed at providing better dose-response information, and may contribute important additional information, such as mechanistic insights, for the hazard identification phase.

Supporting evidence: genetic toxicity, mechanistic studies

Investigators have developed additional data sources that can support or modify the conclusions of animal carcinogenesis bioassays, and provide information on mechanisms of action of agents suspected of being carcinogenic based on epidemiological studies or animal bioassays.

Genetic damage in exposed organisms includes both gene mutations (point or frameshift), and larger scale effects such as deletions, gene amplification, sister-chromatid exchanges, translocations and loss or duplication of segments or whole chromosomes. These genetic effects of chemical exposures are deleterious in their own right. In addition, since carcinogenesis results from somatic mutations and similar genetic alterations, agents that cause genetic damage generally have carcinogenic potential. Conversely, many known carcinogens are also known to be genotoxic, although there is also a significant class of carcinogens that are not directly genotoxic according to the usual tests. These latter agents presumably work by some other mechanism, such as methylation of tumor suppressor genes or demethylation of cellular proto-oncogenes, although recent genetic studies have shown that even tumors induced by these agents may show mutations, deletions or amplification of growth regulatory genes.

Experimental procedures to demonstrate and measure genetic toxicity may involve exposure of intact animals, and examination of genetic changes in, for example, bone marrow cells (or cells descended from these e.g. the micronucleus test, which detects remnants of chromosomal fragments in immature erythrocytes), mutations in flies (*Drosophila*), or appearance of color spots in the coat of mice. However, many tests have employed single celled organisms or mammalian cells in culture. The best known of these tests is the *Salmonella* reverse mutation assay, popularly known as the Ames test after its inventor. This is representative of a larger class of tests for mutagenic activity in prokaryotic organisms (bacteria), which necessarily only look at gene-level mutations. Similar tests in eukaryotic microorganisms (yeasts, *Aspergillus*) and cultured mammalian cells also detect chromosomal effects. Many tests using microorganisms *in vitro* involve addition of activating enzymes (e.g. liver postmitochondrial supernatant – “S9”) to mimic the metabolism of promutagenic chemicals *in vivo*. Another type of test examines the induction in mammalian cells of morphological transformation or anchorage-independent growth. These two chemically induced, *in vitro* changes are considered two of the many changes that fibroblastic cells must undergo on their route to neoplastic transformation (tumorigenicity). These various genetic tests contribute different information, which may be used to amplify and confirm conclusions drawn from human studies or animal bioassays, or to draw conclusions in the absence of epidemiological or bioassay data. In the latter case they have also been used in prioritizing agents for further evaluation by means of bioassays.

Carcinogen Identification schemes

Some regulatory programs, such as California’s Safe Drinking Water and Toxics Enforcement Act (“Proposition 65”) and various activities of the U.S. EPA, require that explicit lists of substances having the potential to act as human carcinogens be maintained. Other such lists are developed by non-regulatory research organizations, such as the U.S. National Toxicology Program and the International Agency for Research on Cancer (IARC), an international program of the World Health Organization. The California air toxics programs do not have any statutory requirement to “identify” carcinogens. The requirement instead is to identify hazardous substances as Toxic Air Contaminants, and to determine whether or not a threshold concentration, below which no adverse effects are expected, is likely to exist:

HEALTH AND SAFETY CODE, Division 26 (Air Resources), § 39660.

(2) *The evaluation shall also contain an estimate of the levels of exposure that may cause or contribute to adverse health effects. If it can be established that a threshold of adverse health effects exists, the estimate shall include both of the following factors:*

(A) *The exposure level below which no adverse health effects are anticipated.*

(B) *An ample margin of safety that accounts for the variable effects that heterogeneous human populations exposed to the substance under evaluation may experience, the uncertainties associated with the applicability of the data to human beings, and the completeness and quality of the information available on potential human exposure to the substance. In cases in which there is no threshold of significant adverse health effects, the office shall determine the range of risk to humans resulting from current or anticipated exposure to the substance.*

In practice however this requirement amounts to the need to establish whether or not a substance is carcinogenic. Any such effects are clearly harmful. Whereas the great majority of non-cancer health effects of chemicals are regarded as having a threshold, the default assumption for carcinogens is that there is no threshold (as described below). OEHHA follows the guidelines laid out by IARC for identification and classification of potential human carcinogens, which are described in detail in the most recent revision of the *Preamble* to the IARC monographs series (IARC, 2006). The IARC Monograph series provides evaluations of the carcinogenicity of individual substances or commonly occurring mixtures. The evaluation guidelines used are similar to those used by other scientific or regulatory authorities, including U.S.EPA.

The data inputs to hazard identification for carcinogens are human epidemiological studies, animal bioassays, along with supporting evidence such as mechanistic and genotoxicity data and structure-activity comparisons. IARC also assembles data on the structure and identity of the agent. The list of agents considered includes specific chemicals and also complex mixtures, occupational and lifestyle factors, physical and biological agents, and other potentially carcinogenic exposures.

IARC evaluations determine the quality of evidence for both animal and human evidence as falling into one of four categories: sufficient evidence of carcinogenicity, limited evidence of carcinogenicity, inadequate evidence of carcinogenicity and evidence suggesting lack of carcinogenicity. Stringent requirements for data quality are imposed. In view of their crucial importance, these definitions are quoted directly from the *Preamble* (IARC 2006):

“(a) Carcinogenicity in humans

Sufficient evidence of carcinogenicity: The Working Group considers that a causal relationship has been established between exposure to the agent and human cancer. That is, a positive relationship has been observed between the exposure and cancer in studies in which chance, bias and confounding could be ruled out with reasonable confidence. A statement that there is *sufficient evidence* is followed by a separate sentence that identifies the target organ(s) or tissue(s) where an increased risk of cancer was observed in humans. Identification of a specific target organ or tissue does not preclude the possibility that the agent may cause cancer at other sites.

Limited evidence of carcinogenicity: A positive association has been observed between exposure to the agent and cancer for which a causal interpretation is considered by the Working Group to be credible, but chance, bias or confounding could not be ruled out with reasonable confidence.

Inadequate evidence of carcinogenicity: The available studies are of insufficient quality, consistency or statistical power to permit a conclusion regarding the presence or absence of a causal association between exposure and cancer, or no data on cancer in humans are available.

Evidence suggesting lack of carcinogenicity: There are several adequate studies covering the full range of levels of exposure that humans are known to encounter, which are mutually consistent in not showing a positive association between exposure to the agent and any studied cancer at any observed level of exposure. The results from these studies alone or combined should have narrow confidence intervals with an upper limit close to the null value (e.g. a relative risk of 1.0). Bias and confounding should be ruled out with reasonable confidence, and the studies should have an adequate length of follow-up. A conclusion of *evidence suggesting lack of carcinogenicity* is inevitably limited to the cancer sites, conditions and levels of exposure, and length of observation covered by the available studies. In addition, the possibility of a very small risk at the levels of exposure studied can never be excluded.

(b) Carcinogenicity in experimental animals

Carcinogenicity in experimental animals can be evaluated using conventional bioassays, bioassays that employ genetically modified animals, and other in-vivo bioassays that focus on one or more of the critical stages of carcinogenesis. In the absence of data from conventional long-term bioassays or from assays with neoplasia as the end-point, consistently positive results in several models that address several stages in the multistage process of carcinogenesis should be considered in evaluating the degree of evidence of carcinogenicity in experimental animals.

The evidence relevant to carcinogenicity in experimental animals is classified into one of the following categories:

Sufficient evidence of carcinogenicity: The Working Group considers that a causal relationship has been established between the agent and an increased incidence of malignant neoplasms or of an appropriate combination of benign and malignant neoplasms in (a) two or more species of animals or (b) two or more independent studies in one species carried out at different times or in different laboratories or under different protocols. An increased incidence of tumours in both sexes of a single species in a well-conducted study, ideally conducted under Good Laboratory Practices, can also provide *sufficient evidence*.

A single study in one species and sex might be considered to provide *sufficient evidence of carcinogenicity* when malignant neoplasms occur to an unusual degree with regard to incidence, site, type of tumour or age at onset, or when there are strong findings of tumours at multiple sites.

Limited evidence of carcinogenicity: The data suggest a carcinogenic effect but are limited for making a definitive evaluation because, e.g. (a) the evidence of carcinogenicity is

restricted to a single experiment; (b) there are unresolved questions regarding the adequacy of the design, conduct or interpretation of the studies; (c) the agent increases the incidence only of benign neoplasms or lesions of uncertain neoplastic potential; or (d) the evidence of carcinogenicity is restricted to studies that demonstrate only promoting activity in a narrow range of tissues or organs.

Inadequate evidence of carcinogenicity: The studies cannot be interpreted as showing either the presence or absence of a carcinogenic effect because of major qualitative or quantitative limitations, or no data on cancer in experimental animals are available.

Evidence suggesting lack of carcinogenicity: Adequate studies involving at least two species are available which show that, within the limits of the tests used, the agent is not carcinogenic. A conclusion of *evidence suggesting lack of carcinogenicity* is inevitably limited to the species, tumour sites, age at exposure, and conditions and levels of exposure studied.”

IARC utilizes the evaluations of animal and human data, along with supporting evidence including genotoxicity, structure-activity relationships, and identified mechanisms, to reach an overall evaluation of the potential for carcinogenicity in humans. The revised *Preamble* (IARC, 2006) includes a description of the data evaluation criteria for this supporting evidence, and indications as to the situations where the availability of supporting evidence may be used to modify the overall conclusion from that which would be reached on the basis of bioassay and/or epidemiological evidence alone. The overall evaluation is expressed as a numerical grouping, the categories of which are described below, as before by directly quoting IARC (2006):

“Group 1: The agent is *carcinogenic to humans*.

This category is used when there is *sufficient evidence of carcinogenicity* in humans. Exceptionally, an agent may be placed in this category when evidence of carcinogenicity in humans is less than *sufficient* but there is *sufficient evidence of carcinogenicity* in experimental animals and strong evidence in exposed humans that the agent acts through a relevant mechanism of carcinogenicity.

Group 2.

This category includes agents for which, at one extreme, the degree of evidence of carcinogenicity in humans is almost *sufficient*, as well as those for which, at the other extreme, there are no human data but for which there is evidence of carcinogenicity in experimental animals. Agents are assigned to either Group 2A (*probably carcinogenic to humans*) or Group 2B (*possibly carcinogenic to humans*) on the basis of epidemiological and experimental evidence of carcinogenicity and mechanistic and other relevant data. The terms *probably carcinogenic* and *possibly carcinogenic* have no quantitative significance and are used simply as descriptors of different levels of evidence of human carcinogenicity, with *probably carcinogenic* signifying a higher level of evidence than *possibly carcinogenic*.

Group 2A: The agent is *probably carcinogenic to humans*.

This category is used when there is *limited evidence of carcinogenicity* in humans and *sufficient evidence of carcinogenicity* in experimental animals. In some cases, an agent may be classified in this category when there is *inadequate evidence of carcinogenicity* in humans and *sufficient evidence of carcinogenicity* in experimental animals and strong evidence that the carcinogenesis is mediated by a mechanism that also operates in humans. Exceptionally, an agent may be classified in this category solely on the basis of *limited evidence of carcinogenicity* in humans. An agent may be assigned to this category if it clearly belongs, based on mechanistic considerations, to a class of agents for which one or more members have been classified in Group 1 or Group 2A.

Group 2B: The agent is *possibly carcinogenic to humans*.

This category is used for agents for which there is *limited evidence of carcinogenicity* in humans and less than *sufficient evidence of carcinogenicity* in experimental animals. It may also be used when there is *inadequate evidence of carcinogenicity* in humans but there is *sufficient evidence of carcinogenicity* in experimental animals. In some instances, an agent for which there is *inadequate evidence of carcinogenicity* in humans and less than *sufficient evidence of carcinogenicity* in experimental animals together with supporting evidence from mechanistic and other relevant data may be placed in this group. An agent may be classified in this category solely on the basis of strong evidence from mechanistic and other relevant data.

Group 3: The agent is *not classifiable as to its carcinogenicity to humans*.

This category is used most commonly for agents for which the evidence of carcinogenicity is *inadequate* in humans and *inadequate* or *limited* in experimental animals.

Exceptionally, agents for which the evidence of carcinogenicity is *inadequate* in humans but *sufficient* in experimental animals may be placed in this category when there is strong evidence that the mechanism of carcinogenicity in experimental animals does not operate in humans.

Agents that do not fall into any other group are also placed in this category.

An evaluation in Group 3 is not a determination of non-carcinogenicity or overall safety. It often means that further research is needed, especially when exposures are widespread or the cancer data are consistent with differing interpretations.

Group 4: The agent is *probably not carcinogenic to humans*.

This category is used for agents for which there is *evidence suggesting lack of carcinogenicity* in humans and in experimental animals. In some instances, agents for which there is *inadequate evidence of carcinogenicity* in humans but *evidence suggesting lack of carcinogenicity* in experimental animals, consistently and strongly supported by a broad range of mechanistic and other relevant data, may be classified in this group.”

The IARC hazard evaluation system provides a detailed and generally accepted scheme to classify the strength of evidence as to the possible human carcinogenicity of chemicals and other agents. This includes careful consideration of mechanistic data and other supporting evidence, the evaluation of which is also important to inform selection of models or defaults used in dose response assessment, as is described below. The extended consideration of supporting evidence is in fact the primary difference between more recent versions of the guidance from IARC, and also by other organizations including U.S. EPA, and the original versions of that guidance. In fact, the basic criteria for hazard identification based on bioassay and epidemiological data have not changed substantially in other respects from earlier guidance documents, including that originally published by California (DHS, 1985). Although as noted earlier the California Air Toxics programs do not categorize identified carcinogens, it has generally been the practice to regard any agent with an IARC overall classification in Group 1 or Group 2 as a known or potential human carcinogen. This implies the selection of various policy-based default options, including absence of a threshold in the dose-response curve, unless specific data are available to indicate otherwise. The same basic identification criteria are used by OEHHA scientific staff to determine the appropriate treatment of agents not evaluated by IARC, or for which newer data or revised interpretations suggest that an earlier IARC determination is no longer appropriate.

U.S. EPA has also proposed a scheme for carcinogen hazard identification and strength of evidence classification in their recently finalized Guidelines for Carcinogen Risk Assessment (U.S. EPA, 2005). These principally differ from the IARC guidance in recommending a more extensive narrative description rather than simply a numerical identifier for the identified level of evidence, and also to some degree in the weight accorded to various types of supporting evidence. However, for most purposes they may be regarded as broadly equivalent to the scheme used by IARC, and OEHHA has chosen to cite the IARC (2006) *Preamble* as representing the most up-to-date and generally accepted guidance on this issue.

Dose Response Assessment

The dose-response phase of a cancer risk assessment aims to characterize the relationship between an applied dose of a carcinogen and the risk of tumor appearance in a human. This is usually expressed as a cancer slope factor [“potency” – in units of reciprocal dose - usually $(\text{mg}/\text{kg}\text{-body weight}\cdot\text{day})^{-1}$ or “unit risk” – reciprocal air concentration – usually $(\mu\text{g}/\text{m}^3)^{-1}$] for the lifetime tumor risk associated with lifetime continuous exposure to the carcinogen at low doses. Cancer potency factors may also be referred to as “cancer slope factors”. (As will be described later, additional algorithms may need to be applied to determine risk for specific age groups, or at higher doses where toxicokinetic factors have significant effect.) The basic methodologies recommended in this document are similar to those described by U.S. EPA (2005a) in their Carcinogen Risk Assessment Guidelines. This document therefore refers to U.S. EPA (2005a) for explanation of detailed procedures, and will provide only a brief summary except in cases where OEHHA recommendations are different from or more explicit than those of U.S. EPA.

The following descriptions of methods for dose response assessment, and considerations in their application, apply in principle to the analysis of both animal and human (epidemiological) cancer incidence data. Indeed, the original formulation of the multistage model (Armitage and Doll, 1954) described below was developed based on human cancer incidence. Nevertheless, the

number and quality of human cancer incidence datasets is limited. The more complex analyses have usually only been possible for animal experimental data, where the interindividual variability and the exposure conditions can be both measured and controlled. Most commonly, epidemiological studies have necessarily used a form of multivariate analysis to separate the effects of several different variables relating to exposure, demographics and behaviors (e.g. smoking). In these analyses it is usually assumed that the effect measure(s) vary linearly with the exposure: any more complex variance assumptions might exceed the power of the data to determine the required model parameters. However, there are exceptions, especially for occupational studies where the critical exposure is measured as a continuous variable (rather than just categorical) and where the effect of this exposure is substantial relative to other confounding factors. For example, OEHHA (1998) used a multistage model dealing with both exposure intensity and duration in the analysis of cancer incidence in railroad workers exposure to diesel exhaust (Garshick et al., 1988)

Interspecies Extrapolation

The procedures used to extrapolate low-dose human cancer risk from epidemiological or animal carcinogenicity data are generally health-protective in that they determine an upper confidence bound on the risk experienced by an exposed population. As statistical estimates they cannot be regarded as definite predictions of the risk faced by any one specific individual, who might for a variety of reasons, including individual exposure and susceptibility, experience a risk different from the estimate. The risk assessment procedures used aim to include the majority of variability in the general human population within the confidence bound of the estimate, although the possibility that some individuals might experience either lower or even no risk, or a considerably higher risk, cannot be excluded. Additionally, differences may exist between the characteristics of the general public and those of studied populations. For example, healthy workers, the subject of most epidemiological studies, are often found to have lower rates of morbidity and mortality than the general population (Wen et al., 1983; Monson, 1986; Rothman and Greenland, 1998). Most human data are derived from studies of largely male adult workers and risk estimates cannot take into account specific physiological factors of women, children, and older populations that may affect the potency of a carcinogen, including early age-at-exposure.

Dose-response assessment based on environmental epidemiological studies may involve evaluation of health impacts at exposure levels within the range of those measured in the study population. However, more usually the source data are studies of occupationally exposed humans or of animals, in which case the exposures in the study are likely to be much higher than those of concern for risk assessments relating to community or ambient exposures. Further, even when extrapolation from animal species to humans is not required, the general population to which the URF is applied may differ in characteristics relative to the occupational population studied. It is therefore necessary to extrapolate from the available data to the population and exposure range of concern, which is done by using a dose-response model derived from the source data. The models used fall into three main classes; mechanistically based models, empirical models and (where data are lacking to support a true data-based model) default assumptions. The factors affecting the dose-response relationships for carcinogenesis may also be divided into those relating to absorption, distribution, metabolism and excretion on the one hand (*i.e.* toxicokinetics), and those relating to the underlying dose-response characteristics of carcinogenesis at the tissue or cellular level (*i.e.* toxicodynamics). In this sense the problem of

dose response assessment for carcinogens is similar to that for non-cancer toxic effects. The toxicokinetic models used may in fact be similar for both situations, but the toxicodynamic models are generally different.

Intraspecies Extrapolation and Inter-individual Variability

In estimating the impact of a particular level of exposure to a carcinogen on a target human population, it is necessary to consider the range of susceptibility in the target population. In the present case this is typically defined as the general population of the State of California, including of course women (some of whom are pregnant), infants and children, the elderly, the sick, and those with genetic polymorphisms or acquired differences which affect their susceptibility to carcinogens. In general it has been assumed that the upper-bound risk estimates obtained from the standard toxicodynamic models described below are sufficiently health-protective to cover the intrinsic variability of the adult human target population, in spite of the fact that these models do not explicitly address this type of variability, except in the few cases where an estimate is based on epidemiological data from a large and unselected study group (U.S. EPA, 2005a). However, various analyses (Drew et al., 1983; Barton et al., 2005; Appendix J) have suggested that this assumption is inadequate to cover the expected variability within a human population that includes infants and children. Accordingly both U.S. EPA (2005b) and this document (~~page 30 et seq.~~) now offer guidance on the use of age-specific adjustment factors to allow for the potentially greater sensitivity of infants and children to chemical carcinogenesis.

The ability to accommodate human variability with regard to the toxicokinetic factors affecting susceptibility to carcinogens varies with the level of detail used in the particular assessment. If the generic interspecies extrapolation approach based on body weight is used without any explicit toxicokinetic model then the assumption is made, as in the case of toxicodynamic variability, that the overall health-protective assumptions made are sufficient to cover the toxicokinetic variability. On the other hand if explicit models such as those referenced in the following paragraph are used, this variability may be more explicitly accommodated by using parameter values which are taken as point estimates from measured distributions of population values, or by using Monte Carlo techniques to include those distributions in the model (Bois et al., 1996; OEHHA, 1992; 2001b).

Toxicokinetic Models

Considerable literature exists showing the importance of understanding the toxicokinetics of carcinogens in understanding their mechanism of action, sites of impact and dose-response relationships. U.S. EPA (2005) in Section 3.1 refers to the importance of identifying an appropriate dose metric for the dose-response analysis. Early cancer risk assessments typically used applied dose as the dose metric, which is adequate in simple cases provided appropriate correction factors are applied for interspecies extrapolation. However, it is often observed that the uptake, metabolism and elimination of the carcinogenic substance (and/or a procarcinogen and metabolites) is non-linear, especially at the higher doses employed in experimental animal studies (Hoel *et al.*, 1983, Gaylor *et al.*, 1994). Extrapolation to lower doses where such relationships tend to linearity (Hattis, 1990) is aided by the use of toxicokinetic models. These may be relatively simple compartment models, or sophisticated “physiologically based pharmacokinetic (PBPK) models” which to a greater or lesser degree model the actual

biochemical and physiological events of toxicokinetic importance. Applications of both types of model may be found in various risk assessment documents prepared for the Toxic Air Contaminants program (and other OEHHA risk assessments). Since the details vary widely according to the nature of the chemical and the availability of appropriate kinetic data these general guidelines will defer to those examples rather than attempt a fuller exposition here. Further analysis of the use of toxicokinetic modeling in extrapolation from animals to humans, and in accounting for interindividual variability among adult humans, infants and children is presented in the Air Toxics Hot Spots *Technical Support Document for the Derivation of Noncancer Reference Exposure Levels* (OEHHA, ~~2007: Public Review Draft~~2008). Although this refers to the use of toxicokinetic modeling in non-cancer risk assessment, the primary considerations are similar for cancer risk assessment.

Toxicodynamic Models

An early use of mechanistic analysis to support risk assessment was the development of the Armitage-Doll multistage model of dose-response for carcinogenesis. The multistage model was initially developed on theoretical grounds, and by examination of epidemiological and animal data on time to tumor incidence. Subsequent discovery of the molecular biology of proto-oncogenes has provided a basis for explaining the model in terms of actual biological events and systems (Barrett and Wiseman, 1987). This model was developed by Crump and others into the “linearized multistage model”, which has been extensively used for carcinogen risk assessment. It leads to a number of partially verifiable predictions, including linearity of the dose-response relationship at low doses, which is observed for many genotoxic carcinogens. It also predicts the form of the dose-response relationship at higher doses, which generally follow a polynomial form (subject to sampling and background corrections) except where other identifiable factors such as pharmacokinetics intervene.

It has been argued that the simple linearized form of the multistage model has limitations as a description of carcinogenic mechanisms, which detract from its usefulness and generality. Cell proliferation is known to be important in the progression of cancer. It may actually be the primary mechanism of action for a few carcinogens, as opposed to the direct modification of DNA by the carcinogen or a metabolite which is assumed to cause the mutational event at each stage in the original multistage description. A cell proliferation model has been developed (Moolgavkar and Knudson, 1981), which retains the concept of an initiating mutational event (in most cases caused by interaction of the chemical with DNA, although it could also be a spontaneous mutation) as in the original multistage model, but also considers proliferation, death or terminal differentiation of both normal and initiated cells. This model is thought to better describe the biological events in carcinogenesis. However, it has not been used extensively in risk assessment because it requires many parameters that are difficult to define and measure (such as proliferation and death rates for various classes of cell). If these cannot be accurately determined, the model has too many free parameters and is not helpful in defining extrapolated values for risk assessment purposes. This highlights a general problem in using mechanistic models in carcinogen risk assessment, which is that the carcinogenesis data themselves are generally insufficient to define fully the dose response curve shape at low doses or provide much mechanistic information. The analysis is therefore supplemented with policy-based assumptions (such as the expectation of linearity at low doses) and, wherever possible, additional

experimental measurements relating to the mechanism of action, in order to make meaningful prediction of risk from environmental exposures to humans.

Because of the difficulties in validating simplified mechanistic models such as the basic multistage model, and the additional difficulty of parameter estimation with more complex mechanistic models, the new U.S. EPA guidelines (U.S. EPA, 2005a) and some recent California risk assessments have chosen instead to use a less overtly mechanistic approach. This approach combines benchmark dose methodology (described below) with an explicit choice of the method for low-dose extrapolation, either assuming low-dose linearity or, for certain carcinogens where data indicate that this is appropriate, a “margin of exposure” or safety/uncertainty factor based approach. This benchmark method is now normally recommended for carcinogen dose response analysis, and the results generally differ little from those derived by the linearized multistage model. Although the linearized multistage method is no longer recommended as the default approach for cancer potency estimation it remains a plausible alternative in many cases, and still has useful applications, such as for time-to-tumor analyses for which benchmark methods are not yet widely available. Additionally, a considerable number of existing cancer potencies in Appendices A and B, and used in the Air Toxics Hot Spots program were derived by this method. Many of these would not be significantly different if calculated by the benchmark approach, and are unlikely to be replaced soon by newly calculated values. The linearized multistage method will therefore also be briefly described here.

Benchmark dose methodologies

The use of benchmark dose methodology has been explored by various investigators [including Gaylor et al. (1998); van Landingham et al. (2001) and Crump (1984, 1995, 2002)] as a tool for dose response extrapolation. This has been recommended in regulatory guidelines for both carcinogenic (U.S. EPA, 2005a) and non-carcinogenic (U.S. EPA, 1995) endpoints. The basic approach is to fit an arbitrary function to the observed incidence data, and to select a “point of departure” (POD) (benchmark dose) *within the range of the observed data*. From this a low dose risk estimate or assumed safe level may be obtained by extrapolation, using an assumed function (usually linear) or by application of uncertainty factors. The critical issue here is that no assumptions are made about the nature of the underlying process in fitting the data. The assumptions about the shape of the dose response curve (linear, threshold, etc.) are explicitly confined to the second step of the estimation process, and are chosen on the basis of policy, mechanistic evidence or other supporting considerations. The benchmark chosen is a point at the low end of the observable dose-response curve. Usually a dose at which the incidence of the tumor is 10% is chosen for animal studies, although lower effect levels may be appropriate for large epidemiological data sets. Because real experimental data include variability in the response of individual subjects, and measurement errors, likelihood methodology is applied in fitting the data. A lower confidence bound (usually 95%) of the effective dose (LED₁₀), rather than its maximum likelihood estimate (MLE), is used as the point of departure. This properly reflects the uncertainty in the estimate, taking a cautious interpretation of highly variable or error-prone data. It also reflects the instability of MLE values from complex curve-fitting routines, which has been recognized as a problem also with the linearized multistage model.

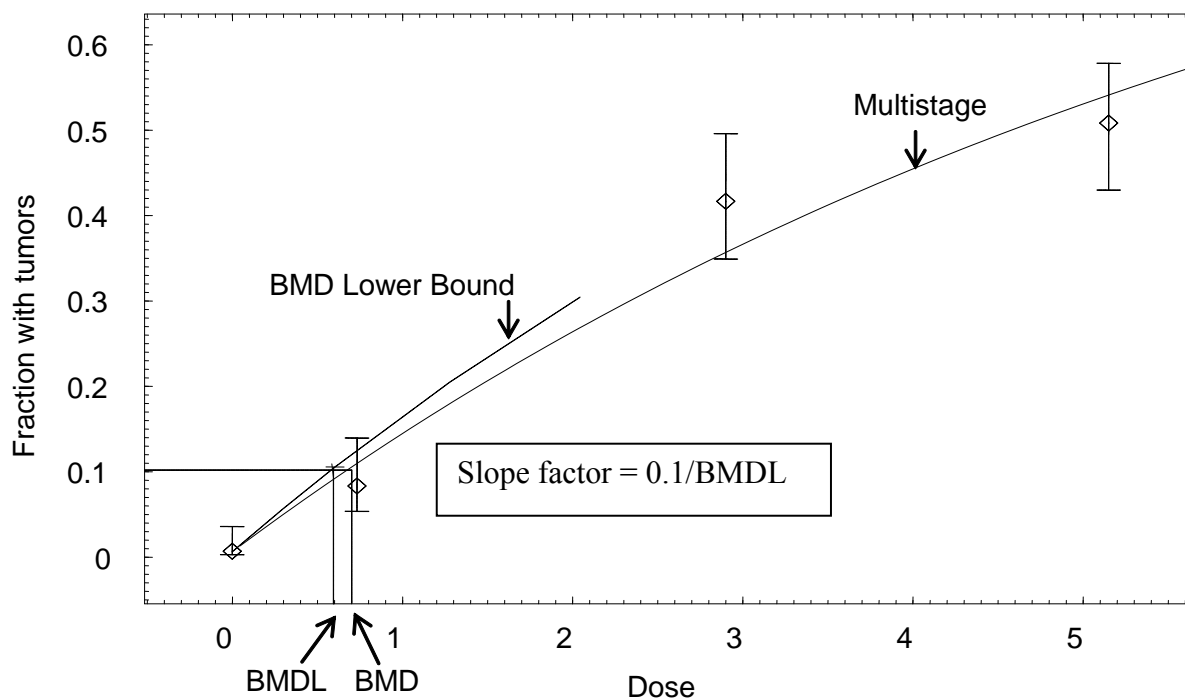
For cancer dose-response estimation using the benchmark dose method, either animal bioassay data or epidemiological data provide a suitable basis. In the absence of a pharmacokinetic model

(which could provide tissue-specific dose metrics), the potency would ordinarily be based on the time-weighted average exposure during the exposure or dosing period. The model used to fit the data can be chosen from a range of available alternative quantal models, depending on which provides the best fit to the data in the observable range. In practice, the multistage polynomial fit developed for the linearized multistage model works well for most tumor data sets. Here it is being used merely as a mathematical curve-fitting tool, where the model well fits the data set, without making assumptions about its validity as a biological model of carcinogenesis.

Suitable polynomial fits and estimates of the benchmark may be obtained using U.S. EPA's BMDS software. The benchmark often used is the 95% lower confidence bound on the dose producing 10% tumor incidence. However, if data are available which include a significant dose-response at less than 10% tumor incidence, then that lower benchmark should be used (e.g. LED₀₅ or LED₀₁). Other software such as Tox_Risk, which was used for the linearized multistage model, has been used successfully, although the earlier GLOBAL program and its relatives are less suitable as curve-fitting tools for benchmark dose analysis.

Since it is usually assumed in cancer risk estimation that the low-dose response relationship is linear, risk estimates and a potency value (slope factor) may be obtained by linear extrapolation from an appropriate benchmark dose. The potency is the slope of that line ($0.1/\text{LED}_{10}$). The low dose linearity assumption is a general default for any carcinogen, and it is unlikely to be altered for genotoxic carcinogens.

A calculation using the benchmark dose approach (using a polynomial model with exponents restricted to zero or positive values), and linear extrapolation from the LED₁₀ to obtain a potency estimate is shown in Figure 1 (the figure was generated by the U.S. EPA's BMDS program). This is based on tumor incidence data from an actual experiment with vinyl bromide in rats (Benya *et al.*, 1982), with metabolized dose calculated by means of a pharmacokinetic model (Salmon *et al.*, 1992). The value of q_1^* obtained by this calculation would then be corrected for the duration of the experiment if it had lasted for less than the standard rat lifetime, and for bodyweight and route-specific pharmacokinetic factors as described below. This is in addition to the correction for exposure duration that would be necessary if the study had not lasted for 105 weeks, and the interspecies correction, both of which are described below.

Figure 1. Benchmark dose calculation for tumor data in rats exposed to vinyl bromide

From Salmon *et al.* (1992), based on data from Benya *et al.* (1982)

Linearized Multistage Model

Quantal analyses

A "multistage" polynomial (U.S. EPA, 1986, 2005a; Anderson *et al.*, 1983), based on the mechanistic insights of the original Armitage and Doll model of cancer induction and progression, has been used extensively by U.S. EPA, OEHHA and other risk assessors to model the dose response for lifetime risk of cancer. It usually is used for analysis of animal bioassay data, although related approaches have occasionally been used with epidemiological data. In mathematical terms, the probability of dying with a tumor (P) induced by an average daily dose (d) is:

$$P(d) = 1 - \exp[-(q_0 + q_1d + q_2d^2 + \dots + q_jd^j)]$$

with constraints

$$q_i \geq 0 \text{ for all } i.$$

Equivalently,
$$A(d) = 1 - \exp [- (q_1d + q_2d^2 + \dots + q_kd^k)],$$
 where
$$A(d) = \frac{P(d) - P(0)}{1 - P(0)}$$
 is the extra risk over background at dose d .

The q_i model parameters are constants that can be estimated by fitting the polynomial to the data from the bioassay, *i.e.* the number of tumor bearing animals (as a fraction of the total at risk) at each dose level, including the controls. The fit is optimized using likelihood methodology, assuming that the deviations from expected values follow a χ^2 distribution, with the number of degrees of freedom (and hence the maximum number of terms allowed in the polynomial) determined by the number of points in the data set. All the coefficients of the terms are constrained to be zero or positive, so the curve is required to be straight or upward curving, with no maxima, minima or other points of inflection. In addition to the maximum likelihood estimates of the parameters, the upper 95% confidence ~~bounds~~ limits on these parameters are calculated.

The parameter q_0 represents the background lifetime incidence of the tumor. The 95% upper confidence limit of the slope factor q_1 , ~~or more usually its upper bound~~ (q_1^*), is termed the cancer potency. The maximum likelihood estimate (MLE) of q_1 is not usually regarded as a reliable estimate for several reasons. First, it fails to reflect the uncertainty and variability in the data which affect the value of the estimate. This is an important issue for protection of public health, which is emphasized by current regulatory guidelines. Secondly, due to the variable order of the polynomial and the effect of some terms being zero as opposed to having a small but finite value, the MLE is unstable, and may show large and unpredictable changes in response to very slight changes in the input data. It may also erratically have a zero value, even when the data imply a significant positive dose-response relationship. The MLE is not a measure of central tendency for this estimate distribution (which is always asymmetrical and often multi-peaked). For small doses, the cancer potency is the ratio of excess lifetime cancer risk to the average daily dose received. Details of the estimation procedure are given in Crump (1981) and Crump, Guess, and Deal (1977). Several software programs are available to perform the necessary calculations, including U.S. EPA's BMDS, Tox_Risk and the earlier GLOBAL programs by Crump and colleagues, and Mstage, written by Crouch (1987).

When dose is expressed in units of mg/kg-d, the potency is given in units of (mg/kg-d)⁻¹. Likewise, when the model input is in units of concentration ($\mu\text{g}/\text{m}^3$, ppb), the potency is given in units of ($\mu\text{g}/\text{m}^3$)⁻¹ or (ppb)⁻¹. As in the case of potencies obtained by the benchmark approach, the experiment-based potency value needs to be corrected for less-than lifetime or intermittent exposure, and extrapolated from the test species to humans. Risk calculations using potency value estimated using the linearized multistage model predict the cancer risk at low doses only, with the higher order terms of the fitted polynomial being ignored since their contribution is negligible at low doses.

Selection of Site and Tumor Type

In developing cancer potency estimates from animal data, standard practice has been to use dose-response data for the most sensitive tumor site as the basis of the estimate (CDHS, 1985). Where tumors of more than one histological type (e.g. adenomas and carcinomas) are observed at a single site, the combined incidence, *i.e.* proportion of animals affected with at least one tumor of

any of the relevant types, is used for dose-response assessment. The same rules for combining tumor types are generally applied in determining statistical significance for carcinogen identification (IARC, 2006). Tumor types considered to represent different stages of progression following initiation of a common original normal cell type are combined, whereas tumor types having different cellular origins are generally not combined by this procedure. Other considerations that may influence choice of site for dose response estimation include the quality of the data (especially, the statistical impact of a high or variable rate of a particular tumor type and site in control animals), and biological relevance to humans. However, it is an important principle that, just as for the hazard identification phase, concordance of site or tumor type between animal models and human health effects may occur but is not assumed or required.

Carcinogens inducing tumors at multiple sites

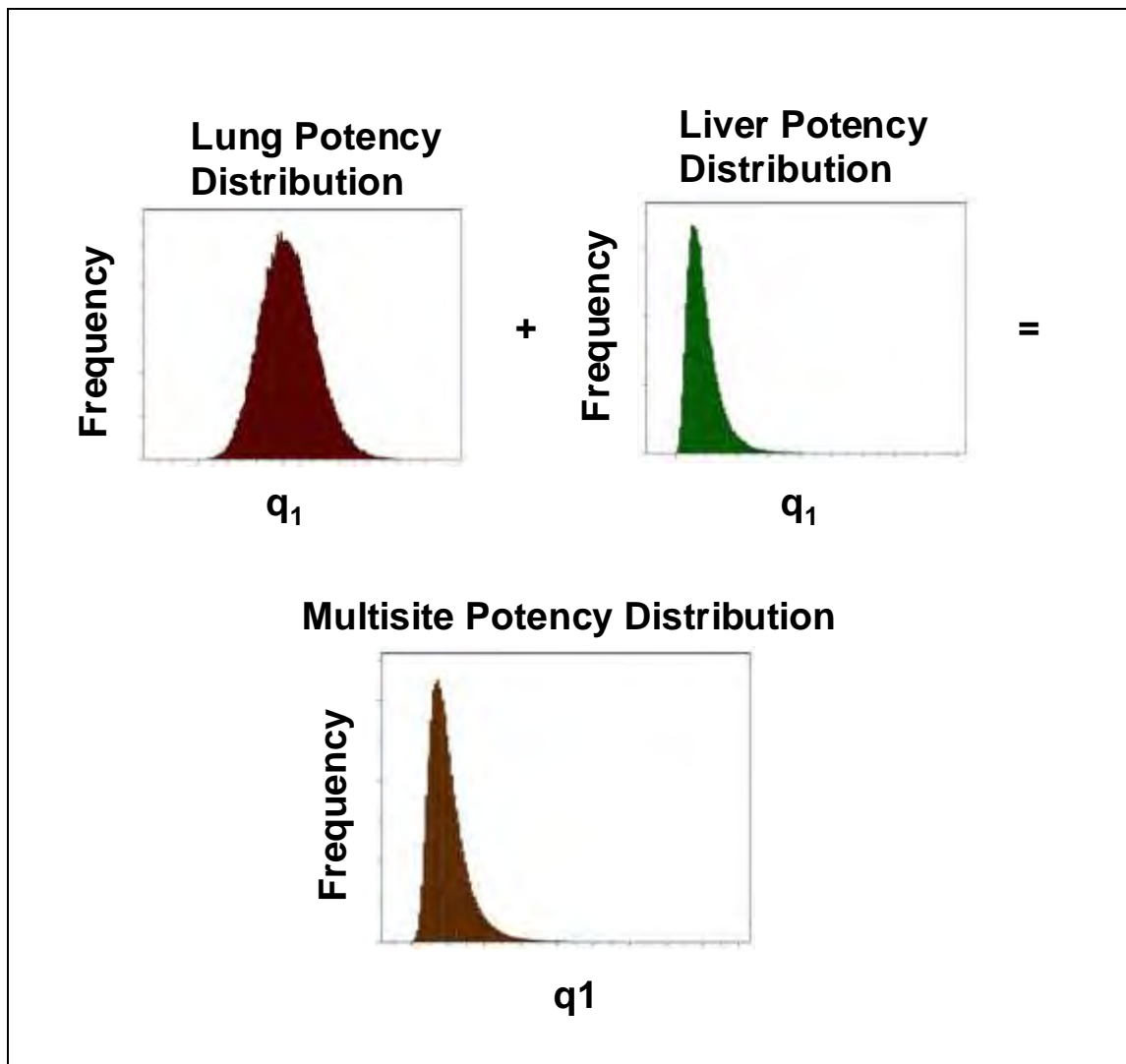
For most carcinogens, the selection of the most sensitive site in the animal studies is recognized as providing a risk estimate which is appropriate to protect human health. However, for chemicals that induce tumors at multiple sites, the single-site approach may underestimate the true carcinogenic potential. For example, the overall assessment of cancer risk from cigarette smoking (U.S. DHHS, 1982) or ionizing radiation (NRC, 1990) is not based on risk at one site, such as lung cancer. Instead, total cancer risk is estimated from all the sites at which agent-induced tumors are observed (lung, bladder, leukemia, etc), combined.

For carcinogens that induce tumors at multiple sites and/or with different cell types in a particular species and sex, OEHHA derives the animal cancer potency by probabilistically summing the potencies from the different sites and/or cell types. Using the combined potency distribution takes into account the multisite tumorigenicity and provides a basis for estimating the cumulative risk of all treatment-related tumors.

The linear term (q_1) of either the multistage model or the multistage-in-dose, Weibull-in-time model is first estimated based on the dose-response data for each of the treatment-related tumor sites. Statistical distributions, rather than point estimates, are generated at each site by tracing the profile likelihood of the linear term (q_1) (Zeise et al., 1991). The distributions of q_1 for each of the treatment-related sites are then statistically summed using a Monte Carlo approach and assuming independence (Figure 2). The sum is created by adding the linear term for each tumor site, according to its distribution, through random sampling. The upper 95 percent confidence limit on the summed distribution is taken as the multisite animal cancer potency estimate (McDonald et al., 2003, McDonald and Komulainen, 2005).

OEHHA has applied this approach in several recent dose-response analyses, including that for naphthalene presented in Appendix B of this document.

Figure 2. Addition of potency distributions for multi-site cancer potency derivations.



Early-Lifestage Cancer Potency Adjustments

In recent years, there have been growing concerns regarding the exposure of children to environmental chemicals, including the possibility that they may be more susceptible than adults to injury caused by those chemicals. The California Legislature passed the Children's Environmental Health Protection Act (Senate Bill 25, Escutia; Chapter 731, Statutes of 1999; "SB 25") to help address these concerns. Under SB25, OEHHA is mandated to consider infants and children specifically, where data permit, in evaluating the health effects of Toxic Air Contaminants (TACs).

The development of cancer is one of the adverse health effects that may occur in children as a result of exposure to environmental chemicals. The document "Prioritization of Toxic Air Contaminants under the Children's Environmental Health Protection Act" (OEHHA, 2001a) noted that risks of cancer from exposures to carcinogens occurring from conception through puberty can be different than those from exposures occurring in adulthood. Exposure to a carcinogen early in life may result in a greater lifetime risk of cancer for several reasons:

1. Cancer is a multistage process and the occurrence of the first stages in childhood increases the chance that the entire process will be completed, and a cancer produced, within an individual's lifetime.
2. Tissues undergoing rapid growth and development may be especially vulnerable to carcinogenic agents. During periods of increased cell proliferation there is rapid turnover of DNA, and more opportunity for misrepair of damage (e.g., DNA breaks, crosslinks, adducts) or alterations to result in permanent changes to the DNA (e.g., mutations, altered DNA methylation) that may ultimately lead to cancer.
3. During early development, a greater proportion of the body's cells are relatively undifferentiated stem cells, and as such represent a large target population of somatic cells capable of passing along permanent changes to the DNA during future cell divisions.
4. There may be greater sensitivity to hormonal carcinogens early in life since the development of many organ systems is under hormonal control (e.g., male and female reproductive systems, thyroid control of CNS development).
5. Other factors that may play a role in increased cancer risk from exposures during critical developmental periods include differences in immunological activity, intestinal absorption, biliary and kidney excretion, blood and fat distribution, and expression of enzyme systems that activate or detoxify carcinogens.

Data in humans and animals for a variety of carcinogens suggest that exposures to such carcinogens early in life may result in a greater lifetime risk of cancer compared to exposures later in life. Examples of this effect in humans are carcinogenicity due to ionizing radiation, diethylstilbestrol (DES), chemotherapeutic agents, and tobacco smoke.

Ionizing radiation exposure carries an increased risk of cancer when exposures occur early in life compared to adult exposures for a number of tumor types. Children exposed to ionizing radiation (diagnostic X-rays) *in utero* demonstrate a larger excess of leukemia cases than

children exposed to ionizing radiation postnatally (NRC, 1990). Exposure to radioisotopes (^{131}I , ^{137}Cs , ^{134}Cs , ^{90}Sr) as a consequence of the 1986 Chernobyl nuclear accident resulted in an elevated thyroid cancer incidence in children but not adults (Moysich, 2002). Treatment of children for Hodgkins lymphoma with both chemotherapeutic agents and irradiation has been shown to increase the risk of secondary tumors (Swerdlow et al., 2000; Franklin et al., 2006).

Age at irradiation in Hodgkin's disease patients treated with radiotherapy strongly influenced the risk of developing breast cancer. The relative risk (RR) of developing breast cancer was 136 for women treated before 15 years of age, 19 for women 15-24 years of age, and 7 for those 24-29 years of age. In women above 30 years of age, the risk was not increased (Hancock *et al.*, 1993).

DES was administered to pregnant women in the 1940s-1960s for the purpose of preventing pregnancy loss. In 1970, Herbst and Scully described 7 cases of vaginal adenocarcinoma (6 cases of the clear-cell type) in women aged 15-22 years. This type of cancer is extremely rare in that age range. A follow-up epidemiological study included an additional case, and noted the fact that the mothers of 7 of the 8 patients had been treated with DES during their pregnancy (Herbst *et al.*, 1971). Reports by other investigators confirmed the association between maternal use of DES during pregnancy and the development of vaginal adenocarcinoma in their female offspring (Preston-Martin, 1989). It was observed that *in utero* DES exposure resulted in female genital tract morphological changes which correlated with both dose and duration of exposure, and those changes were not related to the maternal conditions which were the reason for the DES administration. Additionally, the risk of occurrence of those morphological changes declined with increasing gestational age at first exposure (O'Brien *et al.*, 1979; Preston-Martin, 1989). In contrast, vaginal adenocarcinoma incidence did not increase in the exposed mothers themselves, indicating an increased early-life susceptibility to the carcinogenic effects of DES.

There is evidence in the epidemiological literature indicating that exposure to tobacco smoke during puberty may increase risk of breast cancer later in life, particularly among women who are NAT2 slow deacetylators (Marcus *et al.*, 2000; Morabia *et al.*, 2000; Lash and Aschengrau, 1999). Wiencke et al. (1999) report that early age at initiation of smoking is associated with a higher level of DNA adducts in lung tissue of former-smokers with lung cancer.

It has also been observed by Smith *et al.* (2006) that human *in utero* or early childhood exposure to arsenic in drinking water results in significantly increased lung cancer incidences during adult life.

Data from animal studies provide additional examples of increased sensitivity to early life (typically postnatal and juvenile) exposures. These effects span a range of target tissues, including the liver (vinyl chloride, safrole), brain (methylnitrosourea), reproductive tract (DES, tamoxifen), and lung (urethane) (OEHHA, 2001a).

In the following sections we summarize two efforts to evaluate quantitatively the effect of lifestage at exposure on carcinogenic response in experimental animal studies. The first section provides a description of OEHHA's analysis of data on the effect of age at exposure on carcinogenic potency. (Details of this analysis are in Appendix J.) The second section describes U.S. EPA's work in this area. (We also provide the published paper in Appendix I that presents the U.S. EPA analyses.) Both analyses used extant data available in the published literature. U.S. EPA used their analysis to modify the procedures they have used to estimate cancer risk by

weighting risk by specific factors for childhood exposures. The weighting factors are a policy choice supported by U.S. EPA's data analysis. The results of OEHHA's analysis, summarized below and described in detail in Appendix J, support the decision to modify policy to weight risk when exposure occurs during childhood. Thus, OEHHA is also proposing to weight risk when exposure occurs in childhood.

OEHHA Analysis of the Effect of Age at Exposure on Cancer Potency

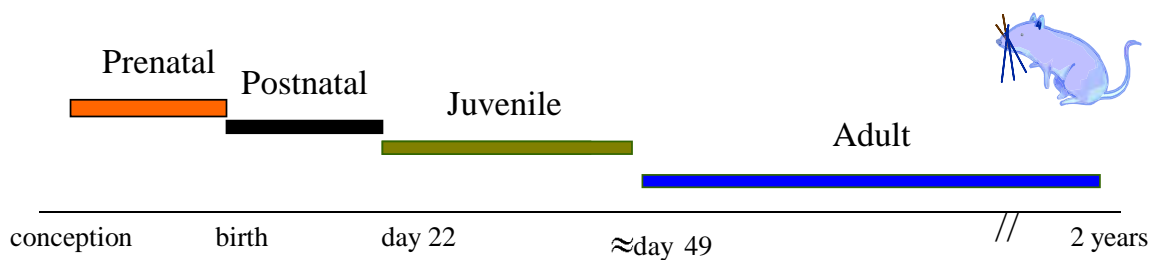
The analysis of animal cancer studies which include early life exposure by the Reproductive and Cancer Hazard Assessment Branch (RCHAB) of OEHHA also supports the application of lifestage-specific cancer potency factor adjustments. This analysis is provided in detail as Appendix J of this document.

Early-in-life susceptibility to carcinogens has long been recognized by the scientific community and clinicians as a public health concern. Numerous scientific publications and symposia have addressed this issue over the years and the scientific literature contains a number of human clinical findings and epidemiological studies of early life cancer susceptibility. While there are many indications of increased human cancer susceptibility in early life, the magnitude of the impact has been difficult to gauge. Until recently risk assessment procedures have not in general addressed the issue. As described in the next section, in 2005 the U.S. EPA adopted an approach to weight carcinogens by age at exposure if they act via a mutagenic mode of action. The California legislature in 2000 directed OEHHA to assess methodologies used in addressing early-in-life risk, compile animal data to evaluate those methods, and develop methods to adequately address carcinogenic exposures to the fetus, infants, and children (Children's Environmental Health Initiative [AB 2872, Shelly]; California Health and Safety Code [HSC] section 901 [a] through [e]).

OEHHA assessed cancer risk assessment methodologies, and found that the existing risk assessment approaches did not adequately address the possibility that risk from early-in-life and adult exposures may differ. OEHHA further concluded that there was a need to address early-in-life cancer risk, and undertook studies to develop methods for doing so. Age-related cancer susceptibility data were identified from published animal cancer bioassays in which these issues were addressed. Two types of studies with early-in-life exposures were compiled. The first type are "multi-lifestage exposure studies." These studies have at least two groups exposed during different lifestages: One dose group is exposed to a chemical only during one of the following lifestages (Figure 3):

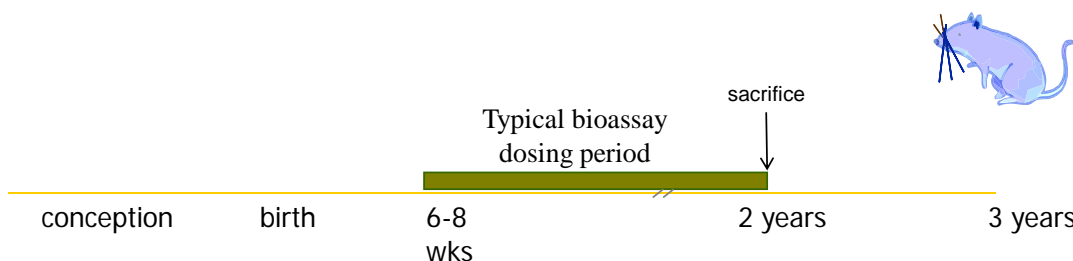
- prenatal (from conception to birth),
- postnatal (from birth to weaning),
- juvenile (from weaning to sexual maturity).

The second dose group is exposed for some period of time at an older age, preferably during the adult lifestage, that is, after sexual maturity. This group served as the reference group. In some cases where there was no adult exposure group, animals exposed as juveniles served as the reference group. Multi-lifestage exposure studies are available for many chemicals, enabling the exploration of patterns in early-life susceptibility across chemicals.

Figure 3. Definition of Rodent Lifestage Adopted in the OEHHA Analyses

OEHHA also conducted “chemical-specific case studies” of early-life sensitivity for two carcinogens, ethyl-N-nitrosoamine (DEN) and N-ethyl-N-nitrosourea (ENU) that combine data from a number of studies. These “chemical-specific case studies” were conducted to explore the feasibility of analyzing chemical-specific data on age susceptibility from single-lifestage exposure experiments. For these chemicals, OEHHA compiled from the literature a second type of study, “single-lifestage exposure experiments.” In these experiments dose groups were exposed only during a particular lifestage and, unlike the “multi-lifestage exposure studies,” there was no requirement that the same study also include groups exposed during a different lifestage. Thus, single-lifestage exposure experiments were identified as being either prenatal, postnatal, juvenile, or adult exposure studies. For each of the two chemicals, there were many prenatal studies conducted that were compiled, analyzed, and grouped together. Postnatal studies from different publications were similarly compiled, analyzed and grouped together, as were juvenile studies. Adult studies were not available for either DEN or ENU, thus for both chemicals juvenile exposure studies served as the referent for prenatal studies, and for postnatal studies.

Typical cancer bioassays such as those conducted in rats and mice by NTP involve exposing animals starting at six to eight weeks of age, which is the time at which these animals reach sexual maturity (late teenagers relative to humans). The experiments are run for two years, ending when the animal is in late middle age. Thus, early and very late life exposures are not included in the typical rodent bioassay (see Figure 4). If the NTP bioassay is used as a basis for estimating cancer potency, the potency and resulting risk estimates may be too low. Thus OEHHA focused on finding studies that evaluated early in life exposures.

Figure 4. Dosing Period for Typical Rodent Bioassays.

Since bioassays examining the effect of age at exposure on carcinogenesis were conducted by various investigators for different purposes, there is a great deal of variation across studies in terms of dose selection, duration of exposure, number of animals, and length of study duration. To be included in the compilation of studies with early life exposure, a study or an experimental group in a study had to meet minimum requirements.

The criteria for study inclusion are as follows:

- Treated groups were exposed to a single chemical carcinogen or a single carcinogenic chemical mixture.
- Study groups were not compromised by severe treatment-related non-cancer toxicity.
- Overall the duration of exposure period plus observation period exceeded 40 weeks, unless animals died of tumor.
- For included dose groups, the study must report age at dosing, age at sacrifice, and site-specific tumor incidence.
- Each lifestage exposure treatment group has an appropriate concurrent control group, or, for rare tumors only, an appropriate historical control.
- The studies were on mammals.
- Each treatment and control group consists of at least ten animals, unless the conduct and design of the study was well done in all other aspects (e.g., the length of the study was sufficiently long to observe treatment-related tumors) and tumor incidence was high in treated groups and very low in controls.
- Site specific tumor data were reported, not only total number of tumor bearing animals.
- The test compound was administered in the diet, water, via gavage, or by intraperitoneal (i.p.), intravenous (i.v.), or subcutaneous (s.c.) injection. For dermal and subcutaneous injection studies, distal tumor findings are utilized (for dermal, other than skin tumors; for injection, non-injection site tumors).

- While studies designed to histopathologically examine tumors at multiple sites were preferred, studies that examined only a select set of organ/tissue sites were not excluded if the sites examined were known with confidence to be the only target tissues for the chemical and lifestage in question in that particular strain of animal.

Different approaches were taken to identify animal cancer studies that included groups of animals exposed during early life stages. First, MEDLINE and TOXLINE (National Library of Medicine) databases were searched using combinations of various key words for cancer (e.g., tumor(s), neoplasm(s), cancer, neoplasia, cancerous, neoplasms-chemically induced) and for early-life exposure (e.g., age, age-at-exposure, development (al), prenatal, *in utero*, gestation (al), postnatal, neonatal, juvenile, weaning, weanling, adolescent, adolescence, young). Second, the extensive compilation of bioassays in the *Survey of Compounds which have been Tested for Carcinogenic Activity*, was reviewed. This survey, formerly maintained by the National Cancer Institute as Public Health Service Publication Number 149, or PHS 149, is now available from a private source electronically as CancerChem, 2000. Third, from bibliographies from relevant published papers additional studies were identified. Finally the Single Dose Database developed by Calabrese and Blain (1999) was obtained and utilized to identify additional publications that appeared to contain potentially useful data. All of these publications were evaluated to determine if the study dosed separate groups of animals early in life and at or near adulthood. A total of 145 publications, providing data on 84 chemicals, were identified as meeting the criteria for study inclusion. A subset of these met the criteria for inclusion in the multi-lifestage exposure analysis.

Finally, for the OEHHA multi-lifestage analyses, we define “experiment” as a study component consisting of a control group as well as a treated group(s) exposed during the same lifestage (i.e., prenatal, postnatal, juvenile or adult), and using the same experimental protocol (e.g., route of exposure, strain, species, laboratory). Thus, by our definition one publication may report multiple experiments.

In the OEHHA analysis, data from studies on 23 unique carcinogens, 20 of which are considered to act via primarily genotoxic modes of action, were analyzed. Of these 20 carcinogens, 15 are thought to require metabolic activation to the ultimate carcinogenic species ([Table 1](#)~~Table 1~~[Table 4](#)). Fourteen carcinogens, including one thought to act via primarily nongenotoxic modes of action, were included in the prenatal multi-lifestage exposure studies. Eighteen carcinogens, including two thought to act via primarily nongenotoxic modes of action, were included in the postnatal multi-lifestage exposure studies. Five carcinogens were included in the juvenile multi-lifestage exposure studies. The case study chemicals, DEN and ENU, are both genotoxic. ENU is a direct acting alkylating agent, while DEN requires metabolic activation.

Table 1. Carcinogens for which studies with multi-lifestage exposures in animal studies are available**Genotoxic carcinogens requiring metabolic activation**

Benzidine
 Benzo[a]pyrene
 Dibutylnitrosamine
 Diethylnitrosamine (DEN)
 7,12-Dimethylbenz[a]anthracene (DMBA)
 Dimethylnitrosamine (DMN)
 Di-n-propylnitrosamine (DPN)
 1-Ethyl-nitrosobiuret
 2-Hydroxypropylnitrosamine
 3-Hydroxyxanthine
 3-Methylcholanthrene (3-MC)
 4-(Methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK)
 Safrole
 Urethane
 Vinyl chloride

Genotoxic carcinogens not requiring metabolic activation

Butylnitrosourea
 1,2-Dimethylhydrazine
 Ethylnitrosourea (ENU)
 Methylnitrosourea (MNU)
 β -Propiolactone

Nongenotoxic carcinogens

1,1-Bis(p-chlorophenol)-2,2,2-trichloroethane (DDT)
 Diethylstilbestrol (DES)
 2,3,7,8-Tetrachlorodibenzodioxin (TCDD)

Cancer Potency Estimation

Statistical methods were developed and used to analyze the data and derive measures of early-life susceptibility. These are described in detail in Appendix J. In brief, a cancer potency (the slope of the dose response curve) was developed for each of the experiments selected using the linearized multistage model. This model was chosen because of widespread use in risk assessment, and its flexibility in being able to fit many different data sets needed to evaluate the effect of lifestage-at-exposure on cancer potency. The dose metric used for the potency analyses is cumulative dose normalized to body weight. The cancer potency is thus expressed as the increase in tumor probability with increasing cumulative dose in units of mg/kg body weight.

To take into account uncertainty in potency estimation, cancer potencies are depicted by a statistical distribution, rather than by a single, fixed value, using methods described in Appendix J. While these methods have typically been used to obtain and report the 95th percentile of the cancer slope parameter for cancer risk assessment purposes, here OEHHA utilized the full distribution of the cancer slope parameter to derive measures of early-life susceptibility to carcinogens. This was done to systematically take into account uncertainty in the analysis.

For experiments where treatment related tumors were observed at multiple sites or at the same site but arising from different cell types, slopes from these sites were statistically combined by summing across the potency distributions (assuming independence across the sites that were observed) to create an overall multisite cancer potency. It is not uncommon that a carcinogen causes more than one type of cancer or causes tumors at different sites depending on lifestage at exposure. For example, in humans tobacco smoke causes cancers of the lung, bladder, and certain other organs. This multi-site carcinogenicity is frequently observed in animal experiments as well. In order to account for this, all treatment-related tumors that were observed in a given lifestage were taken into account in estimating cancer potency from that particular experiment.

Addressing Early-Age Sensitivity in Estimating Cancer Risk: Age Sensitivity Factors

Inherent Sensitivity of Lifestages – Lifestage Potency Ratios

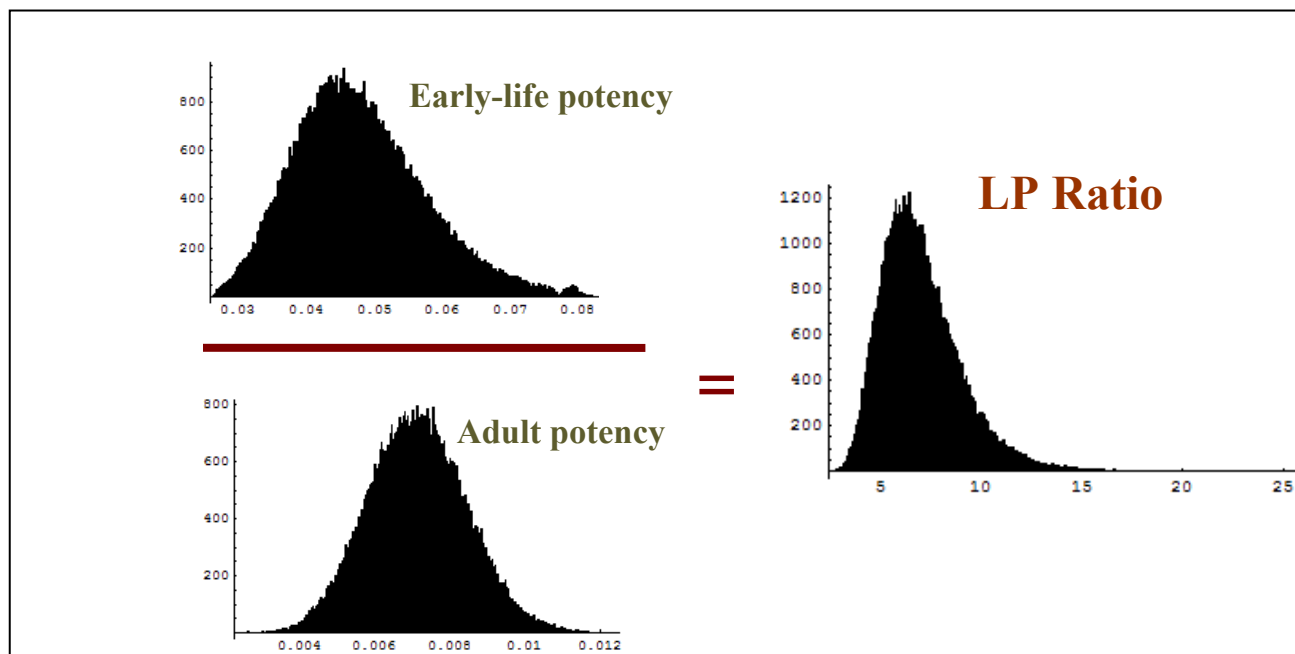
For this analysis, OEHHA calculates the ratio of cancer potency derived from an early lifestage exposure experiment(s) to that derived from an experiment(s) conducted in adult animals. OEHHA used the potency distributions for the individual lifestage exposures, rather than a point estimate, to derive the ratios. The lifestage cancer potency ratio is then described as a distribution and one can select specific percentiles from the distribution to better understand and bound the uncertainty (Figure 5). Of particular importance is the location of the ratio distribution in relation to the reference value of 1.0, which would mean no difference in risk from exposures at early versus adult lifestages. A lifestage cancer potency ratio distribution that primarily lies above the value of 1.0 indicates early life exposures to a carcinogen result in a stronger tumor response relative to adult exposure. Conversely, a lifestage cancer potency ratio distribution that mainly lies below the value of 1.0 indicates early life exposure to a carcinogen results in a weaker tumor response relative to adult exposure.

A lifestage potency (LP) ratio distribution was derived for each multi-lifestage study, resulting in 22 prenatal ratio distributions representing 14 unique carcinogens, 55 postnatal LP ratio distributions representing 18 unique carcinogens, and seven juvenile LP ratio distributions representing five unique carcinogens. The LP ratio distributions for a given early lifestage were combined into a single “LP ratio mixture distribution,” in order to show the range of susceptibilities of that lifestage to the carcinogens studied.

LP ratio mixture distributions for a given early lifestage were developed by (1) obtaining a single LP ratio distribution for each chemical (when a chemical is represented by more than one study) and then (2) equally sampling across all chemicals. When a chemical is represented by more than one study, then the LP ratio distributions from all studies of that chemical were combined by equally sampling from each LP ratio distribution via Monte Carlo methods to obtain a single

LP ratio distribution for that chemical. (Appendix J describes this in more detail, as well as a sensitivity analysis that included two alternative sampling methods.) Once each chemical is represented by a single LP ratio distribution, then the LP ratio mixture distribution for each early lifestage (prenatal, postnatal, and juvenile) is obtained by equally sampling across all of the chemicals via Monte Carlo methods.

Figure 5. Lifestage Potency Ratio (LPR) distribution.



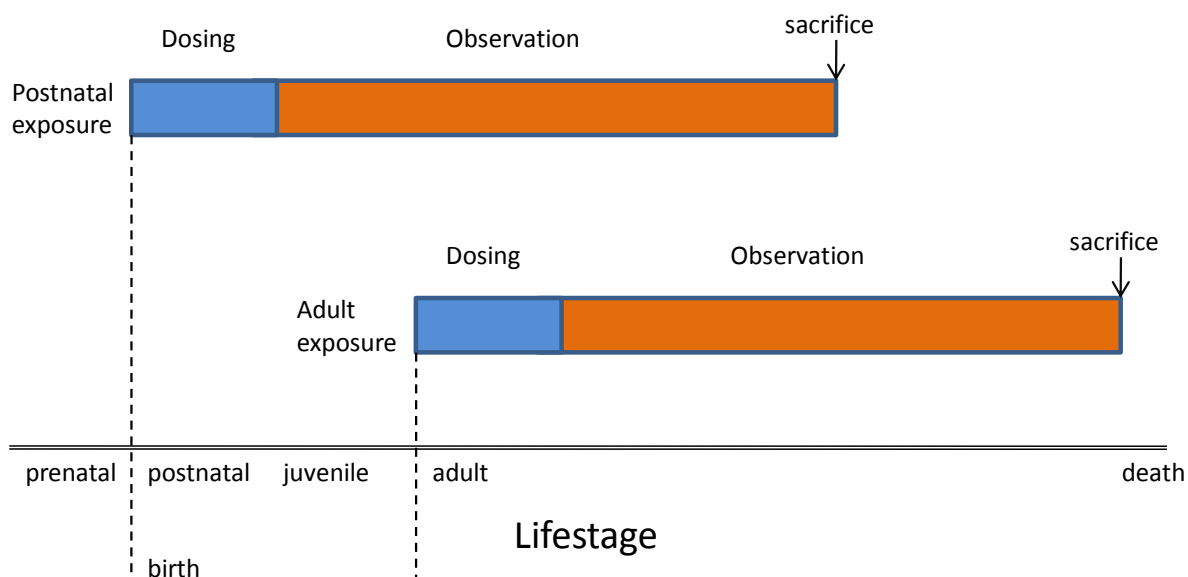
Effect of longer time period for cancer to manifest

The LP ratios described above characterize the inherent susceptibility of early lifestages to carcinogen exposure, by comparing potencies for individuals followed for similar periods of time and similarly exposed, but exposed during different lifestages. Age-specific adjustments to the cancer potency must also take into account the longer period of time that carcinogen exposure to the young has to manifest as cancer. Empirical data from studies of both humans and animals demonstrate that, for many cancers, cancer risk increases with age, or time since first exposure. While some cancers have been seen to increase by as much as the sixth power of age, a general approach taken for example by the National Toxicology Program in analyzing tumor incidences in its chronic bioassays is to assume that cancer risk increases by the third power of age. Thus, consistent with the approach used by the NTP in analyzing rodent cancer bioassay data, the longer period of time that exposed young have to develop tumors is addressed by taking into account time-of-dosing. This was done by multiplying the LP ratio by a time-of-dosing factor, to yield an age sensitivity factor (ASF). Specifically, the prenatal LP ratio is multiplied by a factor of 3.0, the postnatal LP ratio is multiplied by a factor of 2.9, and the juvenile LP ratio is multiplied by 2.7. Thus, ASFs were developed for each experiment, by first calculating the LP ratio to address inherent susceptibility of early lifestages relative to adults, and then accounting for the effect of years available to manifest a tumor following carcinogen exposure. (see Figure

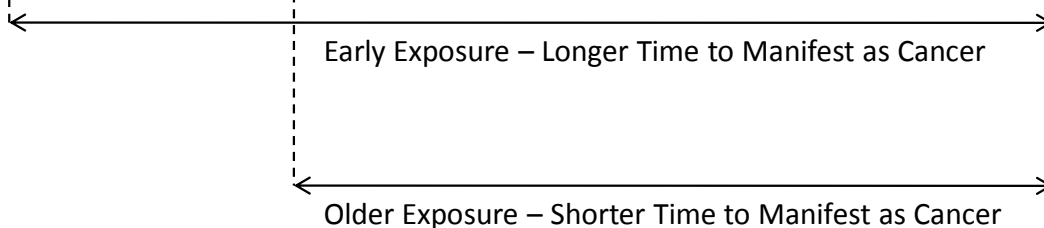
6) Note that we are not using the term “sensitivity” in the immunologic sense (e.g., sensitization), but rather are using the term more generically.

Figure 6. Issues addressed by the Age-Sensitivity Factor (ASF)

Step 1: Inherent Susceptibility of Different Lifestages



Step 2: Time for Cancer to Manifest for Exposures during Different Lifestages



Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Application of this approach for risk associated with lifetime exposures would include an ASF of less than 1 for exposures during the latter part of adult life for carcinogens that act on early stages. Therefore, the addition of this adjustment to the younger lifestages but not to the later part of the adult period could overestimate the risk of whole-life exposures. On the other hand, the 70 year “lifetime” used in estimating lifetime cancer risk does not reflect the longer lifespan of the U.S. population. Further, as noted above, the animal bioassays on which potency was based typically exclude pre-weaning dosing and sacrifice animals during their late middle-age. Use of cancer potencies calculated from standard assays can therefore understate lifetime cancer risk. The ASF calculated for carcinogens includes both inherent sensitivity of developing animals and the available time since exposure to develop cancer.

Results of OEHHA Analysis

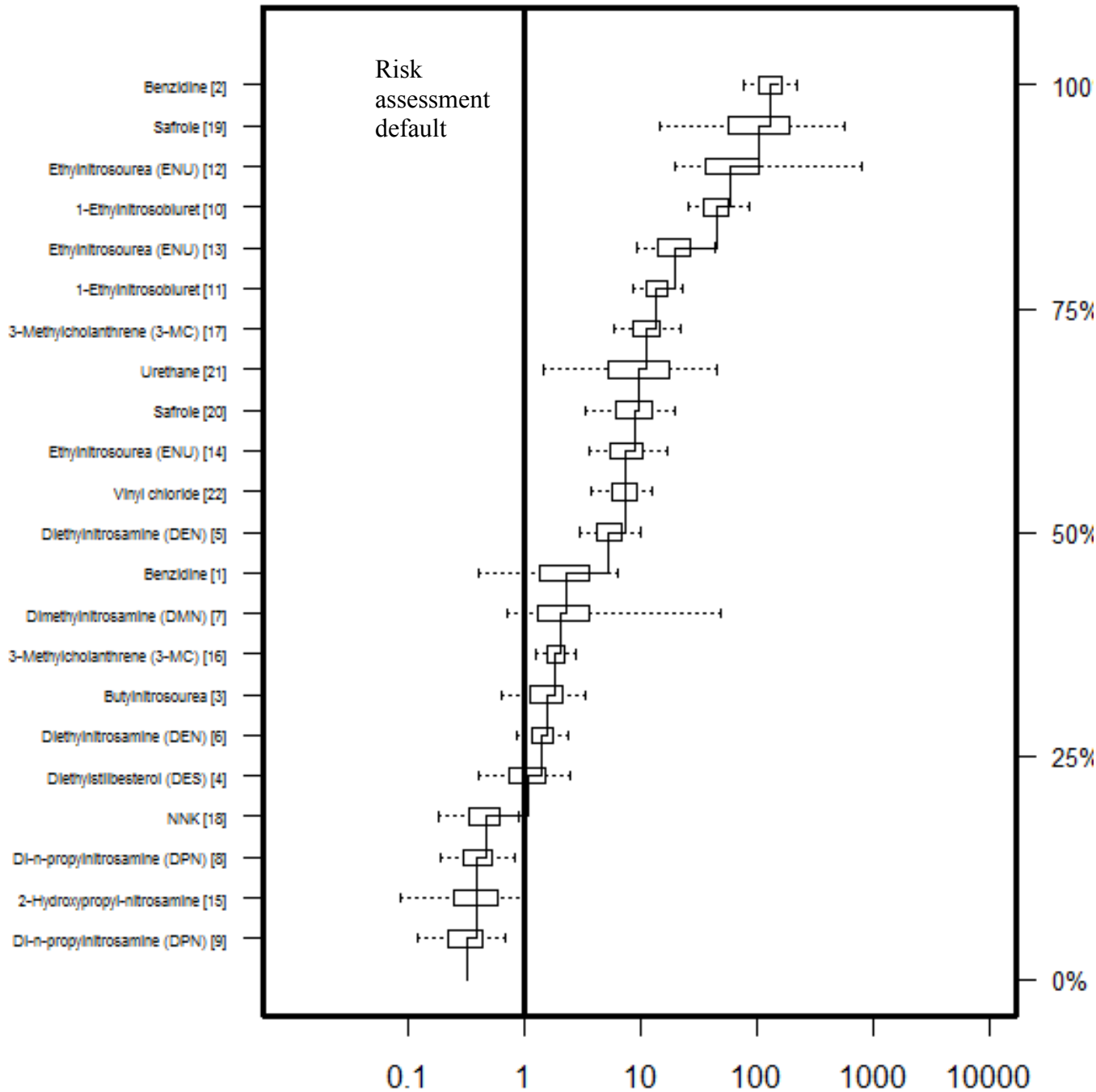
The analyses indicate that both the prenatal and postnatal lifestages can be, but are not always, much more susceptible to developing cancer than the adult lifestage. The analyses also indicated that the ASFs for these age windows vary by chemical, gender and species.

Regarding prenatal lifestage exposure, few cases were indicative of equal inherent adult and prenatal susceptibility, with an LP ratio of unity. The LP ratio distribution was roughly bimodal, with LP ratios for several studies significantly greater than unity and several others significantly less than unity. Figure 7 below shows the ASFs from each of the prenatal multi-lifestage exposure studies, displayed as a cumulative frequency profile. The median of the prenatal ASF mixture distribution was 2.9 (see also Table 6 in Appendix J),

The modality in the prenatal LP ratio distribution was reflected in the DEN and ENU case studies, with results for DEN suggesting inherently less sensitivity than older animals from exposure *in utero*, and for ENU just the opposite. For the DEN and ENU case studies, the referent groups were juvenile rather than adult animals, and the results may have underestimated the LP ratio and ASF, to the extent that some of the apparent sensitivity for DEN and ENU in the prenatal period carries through to the juvenile period. ENU is a direct acting carcinogen that does not require metabolic activation, whereas DEN can not be metabolized to any significant extent by fetal tissues until relatively late in gestation. This may explain the lower fetal susceptibility of DEN. However, prenatal metabolic status is not the sole determinant of prenatal susceptibility; e.g., benzidine and safrole require metabolic activation and exhibit greater susceptibility from prenatal exposure.

The median of the postnatal ASF mixture distribution was 13.5 (see Table 7 in Appendix J). Figure 8 below shows the ASFs from each of the postnatal multi-lifestage exposure studies, displayed as a cumulative frequency profile. Thus, for the chemicals studied, there was generally greater susceptibility to carcinogens during the early postnatal compared to the adult period, particularly when the ASF accounts for the longer period cancer has to manifest when exposure occurs early in life. The DEN and ENU case studies also exhibited substantial extra susceptibility during the postnatal period. To summarize, for most of the carcinogens studied here, animals are inherently more sensitive in the postnatal period, as indicated by Figure 8.

Figure 7. Prenatal ASF Cumulative Frequency Profile



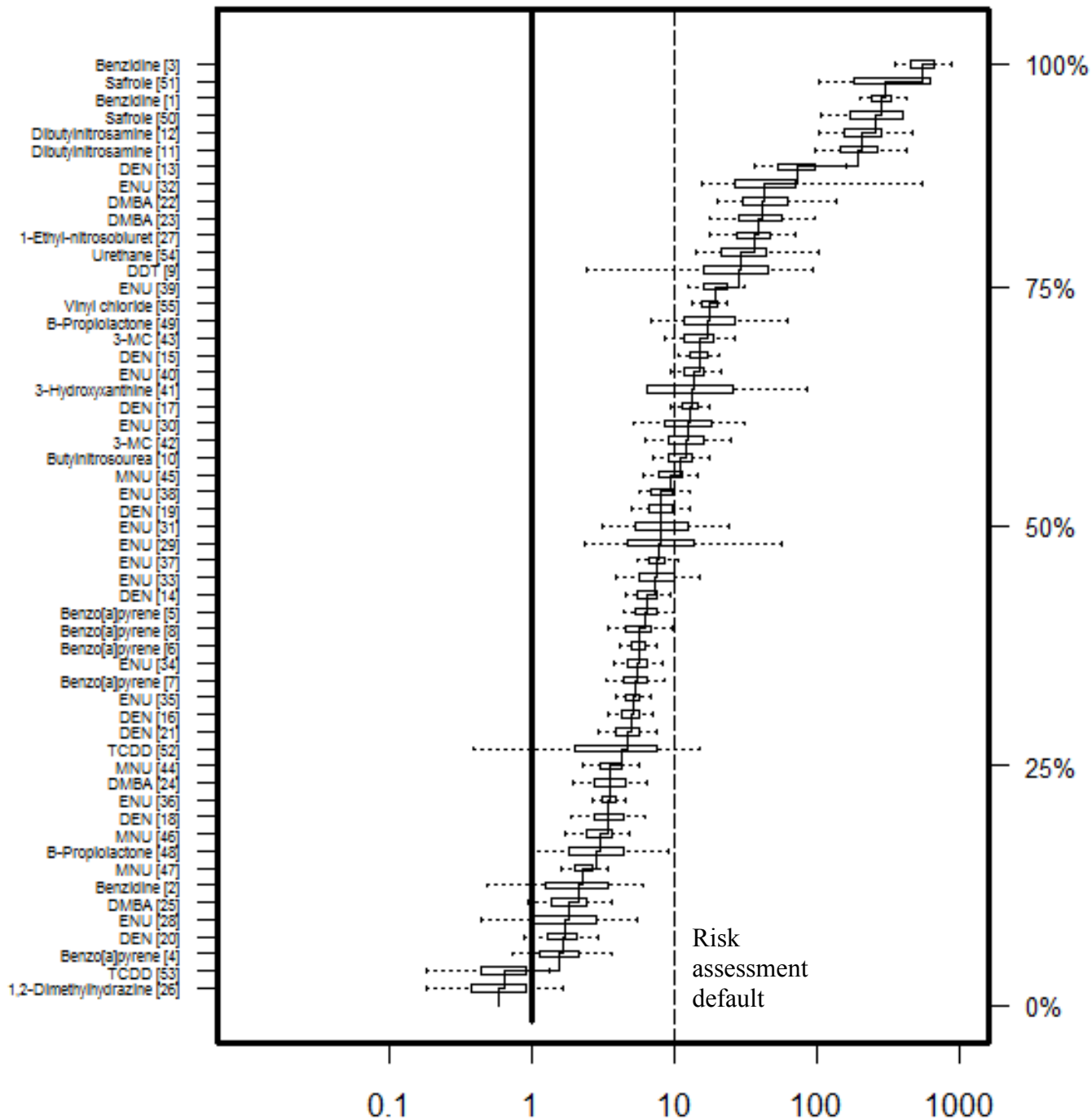
The median of the prenatal ASF mixture distribution was 2.9 (see also Table 6 in Appendix J).
References are given in the legend on the next page

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Figure 7 Legend (References as in Appendix J)

1. Vesselinovitch *et al.* (1979a), mouse, B6C3F₁, F, day -9 to 21
2. Ibid, M, day -9 to 21
3. Zeller *et al.* (1978), rat, Sprague Dawley, M/F day -2
4. Turusov *et al.* (1992), mouse, CBA, F, day -2
5. Mohr *et al.* (1975), hamster, Syrian Golden, day -15 to -1
6. Mohr *et al.* (1995), hamster, Syrian Golden, F, day -3
7. Althoff *et al.* (1977), hamster, Syrian Golden, M/F, day -9 to -3
8. Ibid, day -9 to -3
9. Althoff and Grandjean (1979), hamster, Syrian Golden, F, day -9 to -3
10. Druckrey and Landschutz (1971), rat, BD IX, M/F, day -10
11. Ibid, day -3
12. Naito *et al.* (1981), rat, Wistar, day -9
13. Ibid, day -9
14. Tomatis *et al.* (1977), rat, BDVi, F, day -5
15. Althoff and Grandjean (1979), hamster, Syrian Golden, M/F, day -9 to -3
16. Tomatis *et al.* (1971), mouse, CF-1, F day -4 to -1
17. Turusov *et al.* (1973), mouse, CF-1, F, day -2
18. Anderson *et al.* (1989), mouse, C3H & B6C3 F₁,M/F day -8 to -4
19. Vesselinovitch *et al.* (1979a), mouse, B6C3 F₁, M, day -9 to -3
20. Vesselinovitch *et al.* (1979b), mouse, B6C3 F₁, F day -9 to -3
21. Choudari Kommineni *et al.* (1970), rat, MRC, M/F, day -4
22. Maltoni *et al.* (1981), rat, Sprague Dawley, M/F day -13 to -7

Figure 8. Postnatal ASF Cumulative Frequency Profile



The median of the postnatal ASF mixture distribution is 13.5. The dotted line represents the default ASF for weighting risk for carcinogen exposures between birth and 2 years of age (see next section). References are given in the legend on the next page.

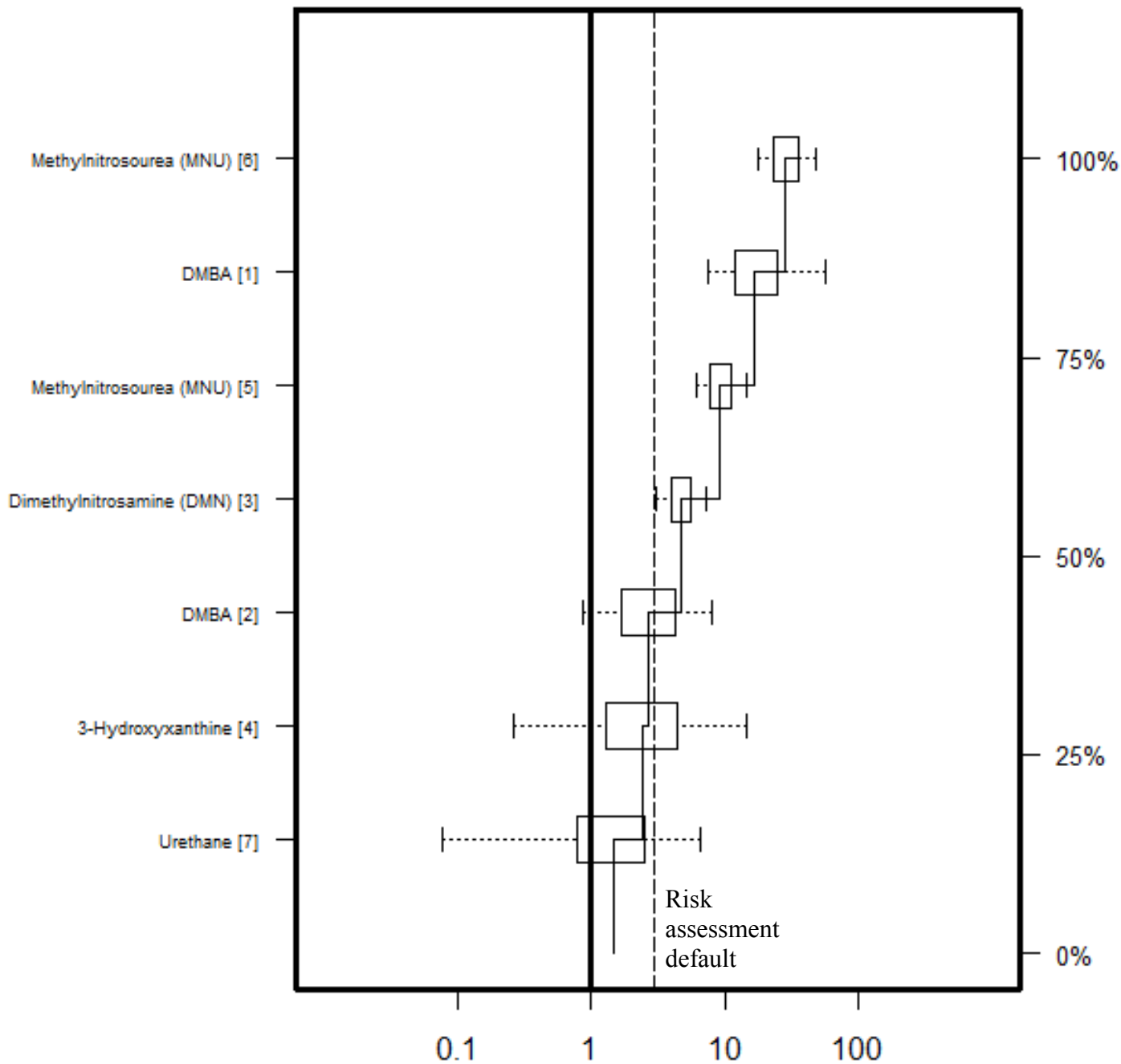
Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Figure 8 ~~Figure 8~~ ~~Figure 8~~ Legend (References as in Appendix J)

- | | |
|---|--|
| 1 Vesselinovitch <i>et al.</i> (1975b), mouse, B6C3F ₁ , M, day 7-27 | 29 Ibid, M, day 1 |
| 2 Vesselinovitch <i>et al.</i> (1979), mouse, B6C3F ₁ , F, day 1-21 | 30 Bosch (1977), rat, WAG, F, day 8 |
| 3 Ibid, M, day 1-21 | 31 Ibid, M, day 8 |
| 4 Truhaut <i>et al.</i> (1966), mouse, swiss, M/F, day 1 | 32 Naito <i>et al.</i> (1981), rat, Wistar, F, day 7 |
| 5 Vesselinovitch <i>et al.</i> (1975a), mouse, B6C3F ₁ , F, day 1 | 33 Ibid, M, day 7 |
| 6 Ibid, M, day 1 | 34 Vesselinovitch <i>et al.</i> (1974), mouse, B6C3F ₁ , F, day 1 |
| 7 Ibid, C3A F ₁ , F, day 1 | 35 Ibid, M, day 1 |
| 8 Ibid, M, day 1 | 36 Ibid, F, day 15 |
| 9 Vesselinovitch <i>et al.</i> (1979a), mouse, B6C3F ₁ , M, day 1-28 | 37 Ibid, M, day 15 |
| 10 Zeller <i>et al.</i> (1978), rat, Sprague Dawley, M/F, day 2 | 38 Ibid, C3A F ₁ , F, day 1 |
| 11 Wood <i>et al.</i> (1970), mouse, IF x C57, F, day 1-15 | 39 Ibid, M, day 1 |
| 12 Ibid, M, day 1-15 | 40 Ibid, M, day 15 |
| 13 Rao and Vesselinovitch (1973), mouse, B6C3F ₁ , M, day 15 | 41 Anderson <i>et al.</i> (1978), rat, Wistar, F, day 9 |
| 14 Vesselinovitch <i>et al.</i> (1984), mouse, B6C3F ₁ , F, day 1 | 42 Klein (1959), mouse, A/He, F, day 8-31 |
| 15 Ibid, M, day 1 | 43 Ibid, M, day 8-31 |
| 16 Ibid, F, day 15 | 44 Terracini and Testa (1970), mouse, B6C3F ₁ , F, day 1 |
| 17 Ibid, F, day 15 | 45 Ibid, M, day 1 |
| 18 Ibid, C3A F ₁ , F, day 1 | 46 Terracini <i>et al.</i> (1976), mouse, C3Hf/Dp, F, day 1 |
| 19 Ibid, M, day 1 | 47 Ibid, M, day 1 |
| 20 Ibid, F, day 15 | 48 Chernozemski and Warwick (1970), mouse, B6A F ₁ , F, day 9 |
| 21 Ibid, M, day 15 | 49 Ibid, M, day 9 |
| 22 Meranze <i>et al.</i> (1969), rat, Fels-Wistar, F, day 10 | 50 Vesselinovitch <i>et al.</i> (1979a), mouse, B6C3F ₁ , M, day 1-21 |
| 23 Ibid, M, day 10 | 51 Vesselinovitch <i>et al.</i> (1979b), mouse, B6C3F ₁ , M, day 1-21 |
| 24 Walters (1966), mouse, BALB/c, F, day 17 | 52 Della Porta <i>et al.</i> (1987), mouse, B6C3F ₁ , F, day 10-45 |
| 25 Ibid, M, day 17 | 53 Ibid, M, day 10-45 |
| 26 Martin <i>et al.</i> (1974), rat, BDIX, M/F, day 10 | 54 Choudari Kommineni <i>et al.</i> (1970), rat, MRC, M/F, day 1-17 |
| 27 Druckrey and Landschutz (1971), rat, BDIX, M/F, day 10 | 55 Maltoni <i>et al.</i> (1981), rat, Sprague Dawley, M/F, day 1-35 |
| 28 Naito <i>et al.</i> (1985), gerbil, mongolian, F, day 1 | |

There were only five chemicals and seven studies, two of which were not independent, available to examine susceptibility in the juvenile period. The juvenile LP ratios indicated significantly greater susceptibility in this period for three independent studies, with the remaining studies consistent with equal inherent susceptibility to adult animals (see Figure 16 in Appendix J).

~~Figure 9~~ ~~Figure 9~~ ~~Figure 9~~ below shows the ASFs from each of the juvenile multi-lifestage exposure studies, displayed as a cumulative frequency profile. The median of the juvenile ASF mixture distribution was 4.5 (see Table 8 in Appendix J) .

Figure 9. Juvenile ASF Cumulative Frequency Profile

The median of the juvenile ASF mixture distribution is 4.5. The dotted line represents the default value for weighting risk from carcinogen when exposures occur between 2 and 15 years of age (see next section).

Figure 9 Legend (References as in Appendix J)

- | | |
|--|--|
| 1. Meranze <i>et al.</i> (1969), rat, Fels-Wistar, F, day 45 | 5. Grubbs <i>et al.</i> (1983), rat, Sprague Dawley, F, day 50-57 |
| 2. <i>Ibid</i> , M, day 451 | 6. <i>Ibid</i> , M, day 50-57 |
| 3. Noronha and Goodall (1984), rat, CRL/CDF, M, day 46 | 7. Choudari Kommineni <i>et al.</i> (1970), rat, MRC, M/F, day 28-43 |
| 4. Anderson <i>et al.</i> (1978), rat, Wistar, F, day 28 | |

The studies that comprise the set of multi-lifestage exposure studies available for these analyses were not homogeneous. That is, they do not represent observations from the same distribution. Sensitivity analyses were conducted to test the robustness of the findings to different procedures for analyzing data and combining results. Of the methods used to combine the LC ratio distributions for underlying studies within each lifestage, the method of equally weighting studies within a chemical appeared to best represent the available data.

In calculating the ASF, to take into account the longer period of time for early carcinogen exposures to result in tumors, the hazard function was assumed to increase with the third power of age. This assumption is standard and has been borne out by a number of observations (Bailer and Portier, 1988) If the true rate of increase with age is greater than that, then the use of these ASFs may result in underestimates of the true sensitivity of these early life stages.

As the multi-lifestage exposure and case studies show, there appears to be considerable variability in age-at-exposure related susceptibility across carcinogens. There is also variability in age-at-exposure related susceptibility among studies of the same carcinogen. The sources of variability evident in the analyzed studies include timing of exposure within a given age window, and gender, strain, and species differences in tumor response. The set of studies identified and analyzed was not sufficiently robust to fully describe the variability quantitatively. This variability raises concerns that selection of the median (the 50th percentile) estimates may considerably underestimate effects for certain agents or population groups. Relatively large variability in humans in response to carcinogens is expected to be common (Finkel, 1995). On the other hand, the numbers of carcinogens represented in the available data are limited and may not be representative of the population of carcinogens to which we are exposed (e.g., greater than 500 on the Proposition 65 list alone). Thus, the size of the weighting factors used to weight risk by age at exposure is a policy decision.

Several of the carcinogens studied induced tumors at multiple sites in the same experiment, and at different sites, depending upon the lifestage during which exposure occurred. For these cases the combined multisite potency distribution referred to above was the basis for the lifestage comparison. This approach differs from other researchers investigating early vs. late in life differences who focused on tumor site-specific measures of carcinogenic activity (e.g., Barton *et al.*, 2005; Hattis *et al.*, 2004, 2005). OEHHA believes that use of combined multisite potency distributions provides a more complete approach for considering age specific differences in carcinogenic activity. However, the observation that early life is generally a period of increased susceptibility was similarly found using the tumor site-specific approach by these other researchers.

One limitation of the approach was the focus on lifestages, without attempting to describe changes in susceptibility that occur within a lifestage. Timing of carcinogen exposure within a given age window can affect the cancer outcome. For example, experiments with 1-ethyl-1-nitroso-biuret in prenatal and adult rats showed a three-fold difference in activity between groups exposed on prenatal day -10 versus prenatal day -3. In a second example, female rats exposed early in the adult period were more than three times as sensitive to the breast cancer effects of MNU as females exposed six weeks later. In general, the adult comparison groups in the multi-lifestage exposure studies were fairly young. The extent to which this may result in an overall bias of the results presented here is unclear. Also for several cases, juvenile animals were used as the later life exposure group. In these cases the ASFs are likely underestimates of the relative sensitivity of the prenatal and postnatal lifestages, compared to that of the adult lifestage.

Excluded from the analysis were early in life studies in which the period of exposure for a specific exposure group crossed multiple lifestages. An example of results from studies of this type is provided by mouse studies for two non-genotoxic carcinogens, diphenylhydantoin (Chhabra *et al.*, 1993a) and polybrominated biphenyls (PBBs) (Chhabra *et al.*, 1993b), in which exposures began prior to conception, and continued throughout the prenatal, postnatal, and post-weaning period, up to the age of eight weeks. The data demonstrate an increased sensitivity of the early life period. Some studies that crossed multiple lifestages were included in the analyses of Barton *et al.* (2005) (Appendix I), which are consistent with the general conclusions discussed above.

Selection of Default Age-Sensitivity Factors (ASF)

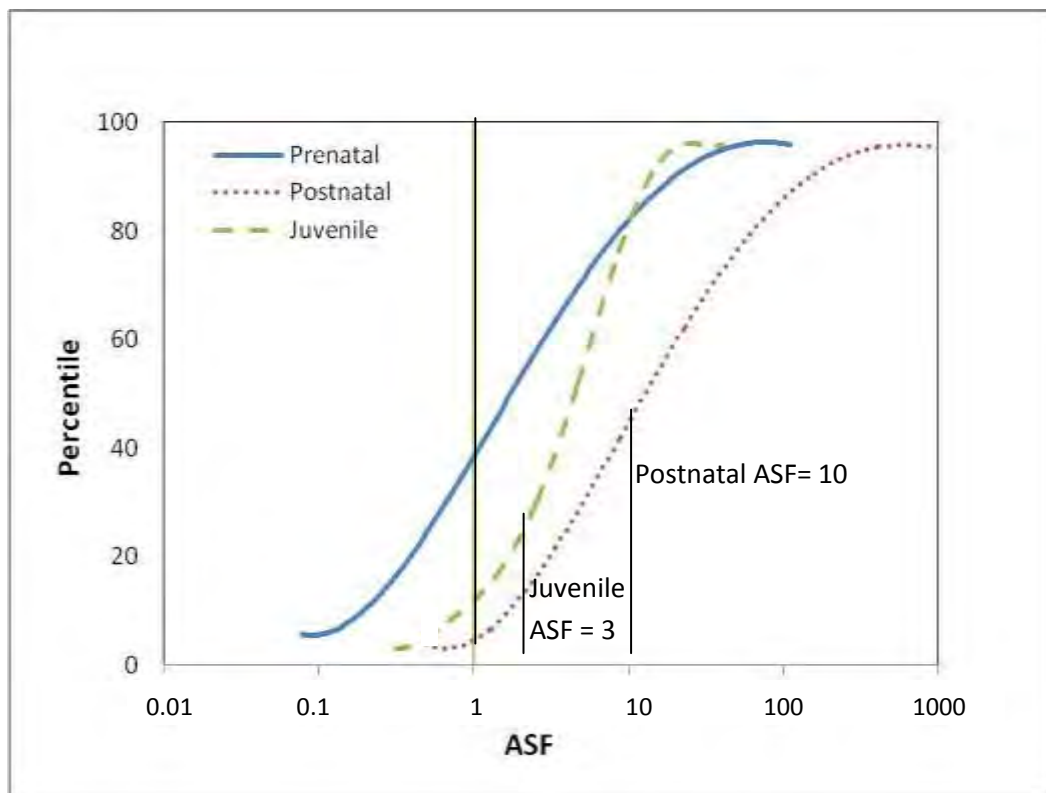
Selection of appropriate values to use to weight exposures that occur early in life using default ASFs for prenatal, postnatal and juvenile exposures is complicated by the limited database of chemicals and studies available for analysis, and the broad distribution of results for different chemicals as is shown in Figure 7, Figure 8, and ~~Figure 9~~ ~~Figure 9~~ ~~Figure 9~~ (see also Appendix J). In view of the variability thus shown, and the considerable uncertainty in applying conclusions from this relatively small set of chemicals to the much larger number of chemicals of concern, it is probably unreasonable to specify a default ASF with greater than half-log precision (*i.e.* values of 1, 3, 10, 30 etc.). Therefore, in the absence of chemical-specific data, OEHHA ~~will propose~~ ~~to~~ apply a default ASF of 10 for ages birth to 2 years, and a factor of 3 for ages 2 through 15 years to account for potential increased sensitivity to carcinogens during childhood. A factor of 10 for postnatal exposures falls just below the median estimate of the ASF for postnatal studies. This is also the value selected by U.S. EPA; while it is consistent with the OEHHA analysis, it may underestimate risk for some chemicals. The broad distribution of observed chemical-specific sensitivity ratios clearly indicates ~~certain number of~~ ~~that there are some~~ chemicals for which the sensitivity ratio is much larger than 10. Further research is needed to develop criteria for identifying these cases. Similarly, a factor of 3 for juvenile exposures is consistent with the range of estimates derived from the multi-lifestage exposure studies, and falls close to the median juvenile ASF estimate. It is acknowledged that there are few data available on which to base an estimate for the juvenile period. A factor of 3 adjusts for the longer time available for cancer to manifest, but may not fully account for some inherent differences in susceptibility to cancer, for example ~~those observed~~ ~~the observed susceptibility of in~~ breast tissue of pubescent girls exposed to radiation. For specific carcinogens where data indicate enhanced sensitivity during lifestages other than the immediate postnatal and juvenile periods, or demonstrate ASFs

different from the default ASFs, the chemical-specific data should be used in order to adequately protect public health.

The ASFs will be applied to all carcinogens, regardless of the theorized mode of action. While U.S. EPA currently intends to apply weighting factors only to those carcinogens with “a mutagenic mode of action” (U.S.EPA, 2005), OEHHA notes that there is evidence that early life is a susceptible time for carcinogens that are thought to act via non-mutagenic mode of action (DES is a prime example). Defining a mutagenic mode of action may be problematic if approached narrowly (ERG, 2008). Further, carcinogens may have multiple modes of action and one mode may predominant over other modes at different lifestages. The complexity of carcinogenesis argues against restricting the ASF to chemicals acting via a mutagenic mode of action.

~~Figure 10~~~~Figure 10~~~~Figure 10~~ provides a visual comparison of the ASF mixture distributions for the three early-life stages, prenatal, postnatal, and juvenile. In this figure, which is in log space, the policy choice for weighting factors of 10 for birth to age 2 years and 3 for the period of life from 2 to 15 years of age are indicated on the figure. ~~The x-axis represents the exponent (the figure is in log space).~~ It is apparent from this figure that weighting risk from exposures to carcinogens early in life is well-supported.

Figure 10. Prenatal, Postnatal, and Juvenile ASF Mixture Distributions and relation to default ASFs



OEHHA recognizes the limitations in the data and analyses presented, as discussed above. However, the analyses do provide some guidance on the extent risk may be over or underestimated by current approaches. While there is a great deal of variability across chemicals in the prenatal ASFs, the data indicate that the potency associated with prenatal carcinogen exposure is not zero. A factor of 3 is close to the median ASF, while a factor of 10 falls roughly at the 70th percentile of the prenatal ASF estimate. ~~This value~~ An ASF could be applied as a default ~~ASF to the potency estimate~~ when calculating lifetime cancer risk in humans arising from carcinogen exposures that occur *in utero*. In view of the considerable variability in the data for different carcinogens and the limited database available for analysis, OEHHA is not ~~including~~ proposing the application of ~~this a specific~~ factor to cancer potency estimates for prenatal exposures as a default position in these Guidelines. However, given that the rodent is born at a stage of maturation similar to a third trimester fetus, it may be reasonable to include the third trimester in the potency weighting proposed for birth to age 2 years. ~~The~~ applicability of a cancer potency adjustment factor for prenatal exposure will be evaluated on a case-by-case basis, and may be used as evidence develops that supports such use. The consideration of prenatal exposures, including application of an appropriate susceptibility factor, would not make a large difference for risk estimates based on continuous lifetime exposures, due to the relatively short duration of gestation. However, risk estimates for short-term or intermittent exposures ~~might~~ would be ~~significantly-slightly~~ increased by inclusion of the risks to the fetus during the prenatal period. Thus, risk may be underestimated when this lifestage is excluded from the analysis.

Age Bins for Application of ASFs

~~The choice of human ages to which the ASFs apply is based on toxicodynamic information on functional maturation of major organ systems and toxicokinetic considerations. Important toxicodynamic factors related to susceptibility to carcinogens include and the concept that the rate of cellular proliferation and differentiation, which is quite high during organ maturation processes renders the tissue more susceptible to carcinogenesis. In addition, toxicokinetic differences by age are important, as noted earlier, due to impacts on detoxification and clearance of xenobiotics carcinogens (see following section). OEHHA's analysis of the influence of age-at-exposure on carcinogenesis broke the experimental rodent age bins data into age bins that we termed "lifestages" into including prenatal, "postnatal" (birth to weaning, about day 21) and "juvenile" (weaning to sexual maturation, or about day 22 to about day 49). Experiments were placed into the lifestage bins if exposure occurred at some time during the experimental rodent age bin. The investigations of age at exposure and cancer potency used in OEHHA's analysis were all done with dissimilar protocols, and the windows of susceptibility are quite varied by chemical and organ system.~~

~~There is no simple way to compare the rodent age groups used in the OEHHA analysis of available data to equivalent age groups in humans. Complicating factors include variations in organ system structural and functional maturation both within and between species. Further, the rodent age bins were chosen by gross indicators of development namely birth, weaning and sexual maturation, not on the basis of known susceptibility to carcinogenesis. Thus, critical factors relating to carcinogen susceptibility by age are the focus of the choice of human age bins to which the ASFs of 10 and 3 apply, rather than an attempt at exact correlation of rodent lifestage bin with human age.~~

The investigations of age at exposure and cancer potency used in OEHHA's analysis were not conducted by standardized protocol. Further, the windows of susceptibility are quite varied by chemical and organ system, even within the lifestages defined in the OEHHA analysis. Additional complications in This complicates choosing a default ASF and the human age bin to which it applies are associated with changes in the potency by age at exposure that can be large for specific chemicals. Examples from animal studies provided in the appendix include the chemical diethylnitrosamine (DEN). The cancer potency varied over several orders of magnitude depending on when during gestation and postnatal life the exposure occurred. While the inability to metabolize DEN in early gestation influences the carcinogenicity of the compound, it is unlikely the only explanation. Benzidine and saffrole also require metabolic activation but are more potent with prenatal exposure. A three-fold difference in potency between exposure on postnatal day 3 and postnatal day 10 is noted for 1-ethyl-1-nitrosobiuret in rats. There are also human examples of extensive variation of potency by age at exposure, including radiation, DES, and chemotherapeutic agents. The diversity of responses to different agents obviously underscores uncertainty in the choice of age bins to apply the default ASFs. However, the ASFs are a *default* to use when you have no chemical-specific data on influence of age-at-exposure on potency in order to protect public health. There will always be specific chemical examples where the ASF for either the birth-<2 yrs or 2-<16 yrs age bin is quite a bit larger or quite a bit smaller than the default.

In the following sections, we discuss our logic in choosingproposing age bins of birth to age <2 years, and 2 to age <16 years to which the ASFs of 10 and 3 apply, respectively, and offer risk estimate results from other possible age bins.

Toxicokinetic Factors Relevant to Age Bins

Choice of the age-bins to which the default ASFs are applied is based on our understanding of the two primary drivers of age-related sensitivity to carcinogens, namely age-related toxicokinetic factors and toxicodynamic factors. In the case of toxicokinetics, the largest postnatal differences in xenobiotic metabolic capability occur between infants and adults. As noted in OEHHA (2001) and reviewed in detail elsewhere (e.g., Cresteil et al., 1998; Ginsberg et al., 2004), hepatic drug metabolism by the cytochrome p450 family of enzymes and the Phase II conjugating enzymes undergoes a maturation process during the first few years of life. The hepatic cytochrome p450 enzymes exist in fetal isoforms at birth, and progressively change to adult isoforms at a relatively early stage of postnatal development. Thus, in humans the metabolic capability towards prototypical substrates develops over the first year of life towards adult levels. Similarly, the largest differences in metabolic capability of Phase II enzymes (conjugation of xenobiotic metabolites prior to excretion) tend to be between infants and adults. Other factors such as renal capability also are most different between neonates and adults. Thus, the first 2 years of life would encompass the increased sensitivity of early life stages due to toxicokinetic differences between early life and adulthood.

Ontogeny of cytochrome P-450 Enzymes in Humans.

Cresteil (1998) describes three groups of neonatal cytochrome P450: Cyp3A7 and Cyp4A1 present in fetal liver and active on endogenous substrates; an early neonatal group including Cyp2D6 and 2E1 which surge within hours of birth; and a later developing group, Cyp3A4,

Cyp2Cs, and Cyp1A2. Total Cyp 3A protein, a major cytochrome p450 enzyme responsible for biotransformation of many xenobiotics, is relatively constant in neonates and adults. However, Cyp3A7 is the primary fetal form (Hakkola et al., 1998), while Cyp3A4 is the primary adult hepatic form of the 3A series. At one month there is about one-third of the Cyp3A4 activity as an adult liver (Lacroix et al., 1997; Hakkola et al., 1998). Allegaert *et al.* (2007) stated that Cyp3A4 (testosterone-6 β -hydroxylase) activity equaled or exceeded adult activity after 1 year of age. Cyp2E1, which metabolizes benzene, trichloroethylene and toluene, among others, increases gradually postnatally, reaching about one-third of adult levels by one year of age and attains adult levels by 10 years of age (Vieira et al., 1996; Cresteil, 1998). Cyp1A2, and Cyp2C9 and 2C19, the most abundant Cyp2 enzymes in adult human liver, appear in the weeks after birth, and reach 30% to 50% of adult levels at about 1 year of age (Treluyer et al., 1997; Hines and McCarver, 2002). Cyp1A1 is expressed in fetal liver where it can activate such xenobiotics as benzo[a]pyrene and aflatoxin B1 (Shimada et al., 1996), but is less important in adult liver (Hakkola et al., 1998).

Ontogeny of cytochrome P-450 Enzymes in Rodents.

Hart et al. (2009) report developmental profiles of a number of cytochrome P-450 enzymes (measured as levels of mRNA transcripts of the specific genes) in mice. They identified three groups of isoforms. Group 1 (Cyp3A16 in both sexes; Cyp3A41b in males) appeared rapidly after birth but declined to essentially zero at 15-20 days, which is the period of weaning in mice. A second group (Cyp2E1, Cyp3A11 and Cyp4A10 in both sexes; Cyp3A41b in females) also increased rapidly after birth, but reached a stable maximal level by postnatal day 5. The third group (Cyp1A2, Cyp2A4, Cyp2B10, Cyp2C29, Cyp2D22, Cyp2F2, Cyp3A13 and Cyp3A25) were expressed only at low levels until days 10 to 15, but reached high stable levels by day 20.

ElBarbry et al. (2007) examined the developmental profiles of two toxicologically significant cytochrome P-450 enzymes, Cyp1A2 and Cyp2E1 in rats. mRNA transcripts of these genes were very low postnatally, but thereafter increased to reach a peak at weaning (postnatal day 21 - 28 for rats). Immunoreactive Cyp1A2 and Cyp2E1 proteins were first detectable at postnatal day 3 and reached 50% of adult levels at weaning and adult levels at puberty. Differences in profiles between gene expression as MmRNA and appearance of specific proteins as determined by immunoassay may reflect changes in the relative importance of transcription and translation control process at various phases in development. Enzyme activities characteristic of Cyp1A2 and Cyp2E1 were found to parallel gene expression levels (ElBarbry et al., 2007) rather than immunodetectable protein levels, so there may also be issues of cross-reactivity between these two isoenzymes and others for which gene expression was not measured in these experiments.

In summary, the gene expression data in rats and mice show differences in details, but broadly resemble one another in that the main changes occur in the early postnatal period, with the major adjustments completed at or around the time of weaning, although the adult pattern may not be completely established until puberty. There do not appear to be substantive data for experimental species other than rats and mice, although the situation in humans appears similar in general outline and one may conclude that this pattern or some variant of it is a characteristic of mammalian species in general.

Ontogeny of Phase II enzymes

Phase II conjugating enzymes are generally less active in the neonate than the adult (Milsap and Jusko, 1994). Hence, there is concern that detoxification and elimination of chemicals is slower in infants. Expression of some of the UGT enzymes matures to adult levels in two months after birth, although glucuronidation of some drugs by the UGT1A subfamily does not reach adult levels until puberty (Levy et al., 1975; Snodgrass, 1992; McCarver and Hines, 2002). Reduced glucuronidation in neonates slows the clearance of N-hydroxyarylamines, phenol, and benzene metabolites. Acetylation by the N-acetyltransferases and sulfation by sulfotransferases are generally somewhat comparable to adult levels, although it varies by tissue and by specific sulfotransferase (McCarver and Hines, 2002). Glutathione (GSH) sulfotransferase (GST) is present as a fetal isoform which decreases postnatally, while GST-alpha and GST-mu increase over the first few years of life to adult levels (McCarver and Hines, 2002). Epoxide hydrolase, important in detoxifying reactive epoxide metabolites, is present in neonatal liver although at much reduced activity relative to adults (McCarver and Hines, 2002).

Clearances of drugs in infants and children vs. adults

Several investigators have evaluated age-related drug disposition (Renwick, 1998; Renwick et al., 2000; Ginsberg et al., 2002; Hattis et al., 2003). Renwick et al. (2000) noted higher internal doses in neonates and young infants versus adults for seven drugs that are substrates for glucuronidation, one with substrate specificity for CYP1A2, and four with substrate specificity for CYP3A4 metabolism. Ginsberg et al (2002) evaluated toxicokinetic information on 45 drugs in children and adults metabolized by different cytochrome P450 pathways, Phase II conjugations, or eliminated unchanged by the kidney. These authors noted half-lives in infants 3-9-fold longer than those of adults. It was also shown that the bulk of the elevated child/adult half-life ratios occurred primarily in the 0 to 6 month age range, and that for some compounds the clearance is actually higher in the 6 month to 2 year age grouping. In evaluating the interindividual variability by age, Hattis et al (2003) note that the largest interindividual variability occurs in the youngest children, apparently due to variability in development of critical metabolism and elimination pathways. Anderson and Holford (2008) noted that a comparison of three early-life drug clearance models (surface area, allometric $\frac{3}{4}$ power and per kilogram scaling) all demonstrated an increase in clearance over the first year of life due to the maturation of metabolic capacity.

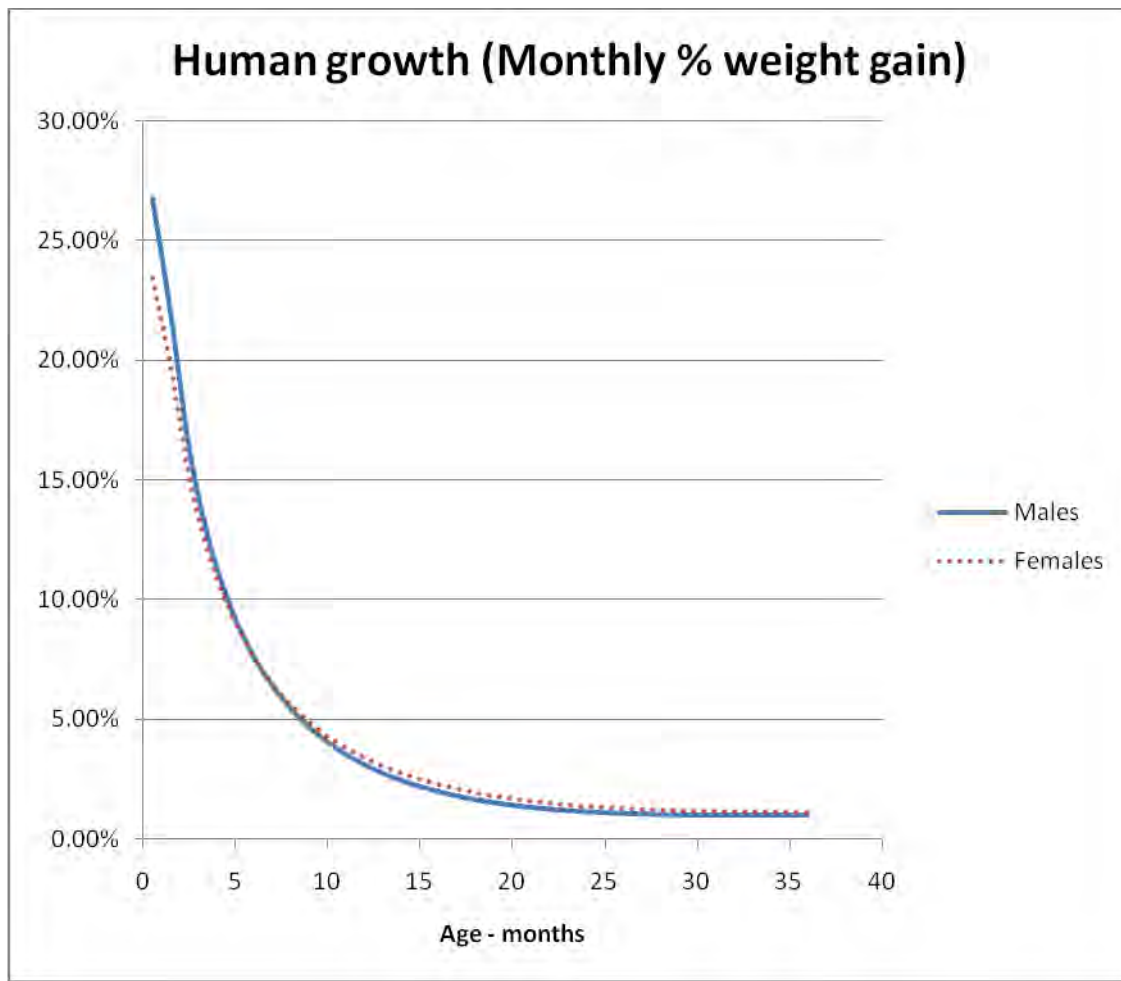
Renal elimination depends on maturity of processes related to tubular reabsorption and secretion, and glomerular filtration rates. At birth, the glomerular filtration rate (GFR) is low (2-4 ml/min), increases in the first few days (8-20 ml/min) and slowly increases to adult values in 8-12 month old infants (Plunkett et al., 1992; Kearns et al, 2003).

Newborn and young animals have less capacity to excrete chemicals into the bile than do adult animals. A number of chemicals are excreted more slowly via bile in neonates than adult rats, including ouabain, the glucuronide conjugate of sulfobromophthalein (Klaassen, 1973), and methyl mercury (Ballatori and Clarkson, 1982), resulting in a longer half-life in neonates.

Toxicodynamic Factors Relevant to Age Bins

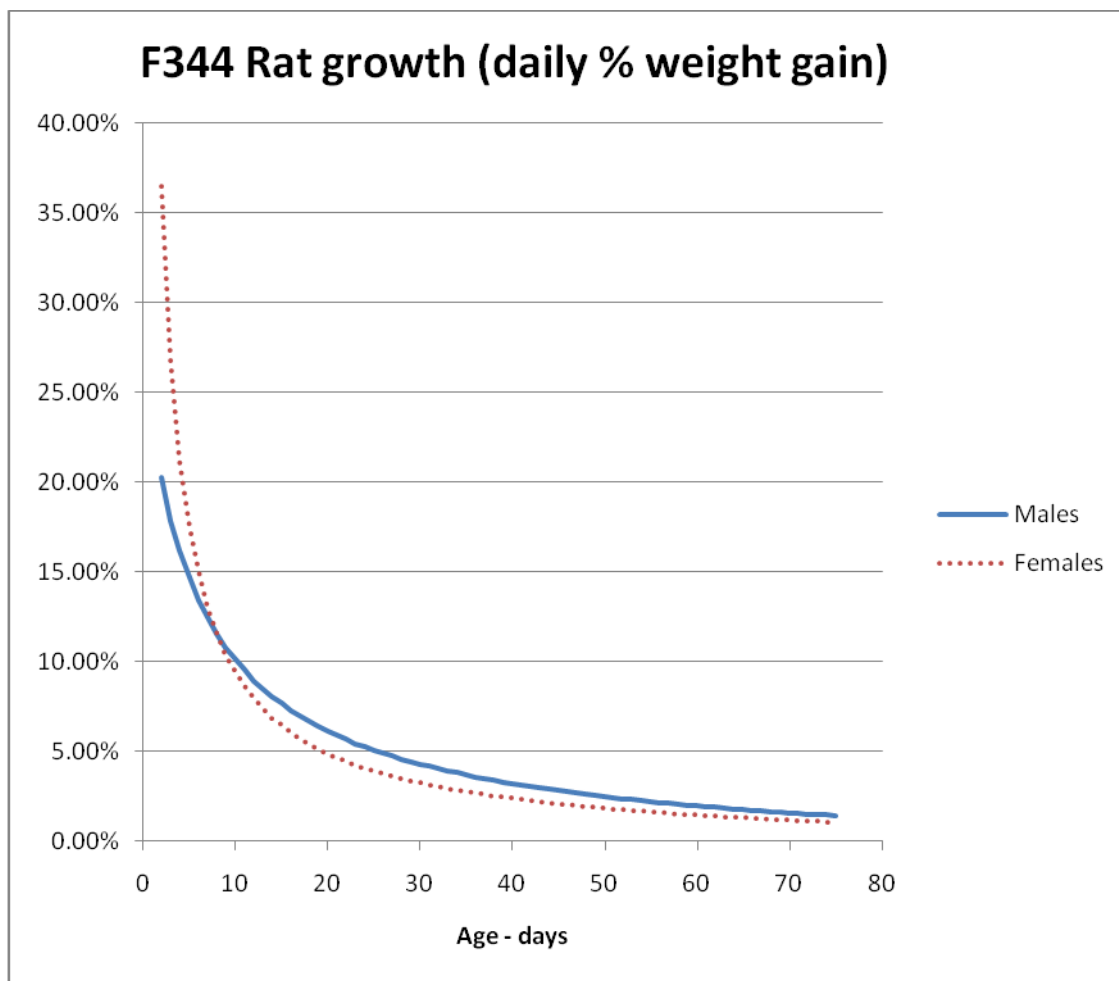
Important as the developmental changes in toxicokinetics are in determining sensitivity to carcinogens and other toxicants, it is likely that the toxicodynamic differences, i.e. intrinsic differences in susceptibility to carcinogenesis at the tissue or cellular level are even more influential. Changes in cell division rates and differentiation, which are thought to be important toxicodynamic determinants of susceptibility to carcinogenesis, peak in the first 2 years of life for most major organ systems. Cell division continues to accommodate growth throughout childhood and adolescence, extending in some cases even into the young adult period in both humans and experimental animals. Adolescence is an important period for organ cell division and differentiation for the mammary gland and reproductive organs.

As noted above, one of the key factors influencing susceptibility to carcinogenesis is believed to be cell division rate, which acts both by forcing error-prone repair which fixes DNA damage as mutated gene sequences (McLean et al, 1982) and by promoting expansion of mutated clones (Moolgavkar and Knudson, 1981). Actual cell division rates as a function of age are hard to determine for practical and (in the human case) ethical reasons. However, growth curves expressed as the proportional increment in body weight with time may be regarded as a reasonable although not perfect surrogate since for most tissues of the body cell size does not change markedly during growth. Both humans and rodents show remarkably high growth rates in infancy, which then drop steeply to a lower but still significant period during childhood. A growth spurt at the beginning of adolescence is noticeable in its absolute magnitude, especially in males, but does not approach the proportional growth rate seen in infancy. The time intervals proposed to reflect the period of highest sensitivity to carcinogenesis (birth to weaning, about 21 days in rodents, up to 24 months in humans) encompass the period of highest growth rate and thus is assumed the highest cell division rates, as show in the following charts:



Data from CDC NHANES 2000:

<http://www.cdc.gov/nchs/about/major/nhanes/growthcharts/datafiles.htm>



Data from [Tables A3 and A4 of Appendix J](#)

Cell division rates in adult rodents and humans are harder to relate to growth curves since at least some tissues retain active cell division as part of their ongoing functionality and repair. In humans growth in body weight slows to essentially zero at the end of adolescence (and any later increments represent tissue specific changes such as increase in muscle or adipose tissue mass rather than overall growth). On the other hand, rodents continue to increase in body size (at a modest rate compared to that seen in earlier lifestages) throughout the adult period. However, it appears reasonable to conclude from the body weight data that an essentially adult pattern of overall cell division is established by the late adolescent period (age six weeks in rodents; 16 years in humans). This clearly does not include the marked growth and increases in cell division and physiological activities seen in the reproductive system and its accessories during puberty.

Organ development

The age intervals chosen for the ASFs are generally supported by human organ system development data. Examples of supporting data are available for the lung, brain, immune system and liver. Zeltner and Burri (1987) stated that postnatal lung development consists of an alveolar stage, which lasts to about 1-1.5 years of age, and a stage of microvascular maturation, which

exists from the first months after birth to the age of 2-3 years. Pinkerton and Joad (2006) describe alveolar proliferation as occurring most prominently in the 0-2 year age range, with alveolar expansion continuing in the 2-8 year age range. Ballinoti et al. (2008) demonstrated that addition of alveoli rather than expansion is a major mode of lung growth in infants and toddlers by measuring a constant carbon monoxide diffusion capacity to lung volume from 3 through 23 months of age. Kajekar (2007) also considered the 0-2 age range to be the primary period of alveolar development, although there is continued cellular proliferation resulting in lung growth and expansion up to approximately 18 years of age.

Rice and Barone (2000) note that most of the cell proliferation phase of human radial glia and neuronal growth is finished by 2 years of age, based on evidence in Bayer et al. (1993). They note further that numerous studies have shown actively proliferating brain regions are more susceptible to anti-mitotic agents than the same structures after active proliferation ceases. Peak brain growth as a percentage of body weight occurs at birth and around post-natal day (PND) 7-8 in humans and rats, respectively (Watson *et al.*, 2006). De Graaf-Peters and Hadders-Algra (2006) reviewed the ontogeny of the human central nervous system and found that a large amount of axon and dendrite sprouting and synapse formation and the major part of telencephalic myelination take place during the first year after birth. While the brain continues to remodel itself throughout life, cellular proliferation in the whole brain peaks by about one year of age and is relatively complete by age 2. Development of the blood-brain barrier (BBB) appears to continue in humans until approximately 6 months of age. Rat BBB functionality is essentially complete by approximately two weeks after birth (Watson *et al.*, 2006).

The immune system development occurs in stages primarily prenatally in primates and both pre- and post-natally in rodents (Dietert et al., 2000). Formation and expansion of hematopoietic stem cells is followed by expansion of lineage-specific stem cells, colonization of bone marrow and thymus, and maturation of cells to immunocompetence. In the primate, this is largely complete by 1 to 2 years of age (Holsapple et al., 2003), although establishment of immune memory develops throughout childhood and beyond. In the rodent, maturation to immunocompetence occurs postnatally from birth to about 30 days of age. In terms of carcinogenesis, perhaps one of the more important immune cells is the NK cell, thought to be responsible for immune surveillance and killing of circulating transformed cells. Based on immunohistochemistry, the principal cell lines including NK cells are present at gestation day 100 in the monkey and are at about 60% of adult values at birth (Holladay and Smialowicz, 2000).

As noted above, renal and hepatic clearance are both lower in humans at birth than in adults. Nephrogenesis is complete by 35 ~~month~~weeks gestation in humans and before birth in the mouse (but after birth in the rat). The ability to concentrate urine and the development of acid-base equilibrium ~~occur~~appear in the first few months after birth (Zoetis and Hurtt, 2003). Renal clearance of drugs, a function of a number of processes in the kidney, appears to be comparable to adults within the first few months of life (Hattis et al., 2003; Ginsberg et al., 2002) , while glomerular filtration, which rises rapidly over the first few postnatal months, is at adult values by two years of age (Zoetis and Hurtt, 2003). While complete anatomic maturity of the human liver is noted by 5 years of age (Walthall et al, 2005), liver function also appears to mature within the first year of life as seen by drug clearance studies cited above.

Critical Windows of Susceptibility to Carcinogens

It has been shown that there are critical windows during development both pre-and postnatally where enhanced susceptibility to carcinogenesis occurs (Anderson et al, 2000). Some of these observations relate to factors affecting the incidence of cancers in childhood, resulting from prenatal or preconception mutational events. For example, prenatal exposure to ionizing radiation and DES can result in leukemia and vaginal carcinoma, respectively, in childhood. Although obviously a source of great concern, these cancers appearing during childhood are relatively rare compared to cancers appearing later in life. Thus the concern in risk assessment for early in life exposures is to address the lifetime cancer incidence as a result of these exposures, including both cancers appearing during childhood and those appearing later.

OEHHA (see Appendix J) and other investigators (U.S. EPA, 2005; Barton et al, 2005; Hattis et al., 2004) have examined the available rodent data on sensitivity to carcinogenic exposures early in life. All these investigators found substantial increases in sensitivity to carcinogens in animal studies where exposures to young animals were compared to similar exposures to adults. Hattis et al. (2004) reported maximum likelihood estimates for the ratio of carcinogenic potency during the period from birth to weaning to the adult potency of between 8.7 and 10.5, whereas Barton et al (2005) reported a weighted geometric mean of 10.4 for the ratio of juvenile (less than 6-8 weeks) to adult potency in rodents. However, the number of experiments which provide information of this type, and the carcinogenic agents which have been studied, are relatively limited. Hattis examined several different datasets and study designs, but these covered only 13 different chemicals, while Barton et al. reported analyses for six of the 18 chemicals which they examined. OEHHA's analysis included data in rodents on 23 chemicals, and found median potency ratios of 13.5 for the postnatal period (birth to day 22) and 4.5 for the juvenile period (postnatal days 22 to 49) relative to adults (day 49 to 2 years). These potency ratios include the adjustment for time to manifest tumor (e.g., age to the power of three), unlike the earlier investigations. All these investigations identified variations in the observed lifetime potency ratio depending on the type of experimental design, the sex of the animals, the time of exposure and especially between chemicals. Nevertheless these analyses, although falling far short of a comprehensive evaluation of the age dependence of carcinogenic potency for all the chemicals of interest, do show a consistent overall trend of increasing potency for exposures early in life, especially soon after birth.

An evaluation of cancer induction by ionizing radiation also provides support for the concept of enhanced sensitivity to carcinogenesis at younger ages. Various studies of this phenomenon have been undertaken in animal models, but the important point for the present discussion is that epidemiological data exist which indicate age-dependent sensitivity in humans (U.S. EPA, 1994; 1999). The most extensive data set showing age-dependent effects is that for Japanese survivors of the atomic bomb explosions at Hiroshima and Nagasaki. Analysis of these data shows linear increases in tumor incidence at a number of sites with increasing radiation dose and younger age at exposure. There are other data suggesting humans are more susceptible to chemical carcinogens when exposure occurs in childhood. These data exist for tobacco smoke (Marcus et al., 2000; Wiencke et al., 1999) and chemotherapy and radiation (Mauch et al., 1996; Swerdlow et al., 2000; Franklin et al., 2006).

Proposed Age bins for application of default age sensitivity factors

In developing a default science-based risk assessment policy to address this general conclusion, one key variable to define is the age interval or intervals over which age-dependent sensitivity factors should be applied. Different investigators have considered different age ranges, but in general the more sensitive period has at least been defined as including the time from birth up to mid-adolescence when the major phases of growth and hormonal change are complete. ~~This can be somewhat consistently defined in the case of laboratory rodents whose genetic and environmental factors are relatively constant: a transition point in the range of 6 to 8 weeks is generally identified as the start of adulthood. For humans there is inevitably a lot more variation in the timing of developmental landmarks. The comparison of human development with that of rodents is complicated by the fact that the various organ systems have markedly different pre- and postnatal timetables, both between species and between organ systems. Thus there is no single timeline of developmental equivalence for humans and rodents. Nevertheless there is a general similarity for all mammals.~~

It is also recognized that, apart from the dramatic prenatal developmental events, the earliest postnatal stages represent the greatest differences in physiology and biochemistry from the adult. This reflects ~~ing~~ the immaturity of many organ systems, extremely rapid growth and the incomplete maturation of various metabolic capabilities. ~~In animal studies, as reflected in the analysis of carcinogenesis by OEHHA, an important developmental milestone is generally identified at the time of weaning, which in rodents occurs at or about postnatal day 21. As noted earlier, the rodent age bins in OEHHA's analysis were based on gross developmental milestones (birth, weaning, sexual maturity). OEHHA's analysis of studies that included exposure sometime between birth and weaning indicated this period as having the highest sensitivity to carcinogenesis. The data for the later juvenile period (postnatal days 22 to 49) are somewhat sparse, covering only three carcinogens and only one where there are corresponding data for both infant and juvenile lifestages. However, it appears based on the overall range of potency ratios observed for the juvenile period that sensitivity to many carcinogens is elevated in this period also, but to a lesser extent than during the first 22 days. [Hattis et al. (2005) and Barton et al. (2005) report analyses for exposures at any time during the juvenile period, i.e. up to 6-8 weeks, and do not separate by additional age bins].~~

Weaning is not such an obvious or consistently timed transition for humans, being subject to a wide range of cultural and economic variables. However, it is generally considered that the human infant period encompasses the first two years of life. This period includes the most rapid periods of cellular division and differentiation for the major organ systems (excluding the breast and reproductive organs). Although there is linear growth between 2 and 8 years of age, the organ development is largely although not entirely complete.

Thus, considering both the development of major organ systems and the associated differences in toxicodynamic and toxicokinetic factors, OEHHA ~~ehose~~proposes to apply the postnatal ASF derived from rodent studies (birth to ~21 days) to the human age intervals of ~~4~~birth - <2years. Similarly, OEHHA chose to apply the "juvenile" ASF derived from rodent studies (~22- ~49 days) to the human ages 2 - <16 years. This timetable was also selected by U.S. EPA (2005) in their supplemental guidance for assessing early-life susceptibility to carcinogens. They describe their choice of critical periods as follows:

“The adjustments described below reflect the potential for early-life exposure to make a greater contribution to cancers appearing later in life. The 10-fold adjustment represents an approximation of the weighted geometric mean tumor incidence ratio from juvenile or adult exposures in the repeated dosing studies (see Table 8). This adjustment is applied for the first 2 years of life, when toxicokinetic and toxicodynamic differences between children and adults are greatest (Ginsberg et al., 2002; Renwick, 1998). Toxicokinetic differences from adults, which are greatest at birth, resolve by approximately 6 months to 1 year, while higher growth rates extend for longer periods. The 3-fold adjustment represents an intermediate level of adjustment that is applied after 2 years of age through <16 years of age. This upper age limit represents middle adolescence following the period of rapid developmental changes in puberty and the conclusion of growth in body height in NHANES data (Hattis et al., 2005). Efforts to map the approximate start of mouse and rat bioassays (i.e., 60 days) to equivalent ages in humans ranged from 10.6 to 15.1 years (Hattis et al., 2005).”

There is general agreement that rodents are born at a maturational stage approximately equivalent to a third trimester human fetus. Thus, there is good rationale to include the third trimester of pregnancy in the age bin for application of the ASF of 10.

While there is strong evidence that growth and therefore cell proliferation rates and cell differentiation are extremely high prior to age 2, there is still residual uncertainty with respect to the cutpoint for application of the ASFs of 10 and 3. Thus, another possible approach is to move the cut point for the application of the ASF of 10 to a later age to account for this uncertainty. We present the effect on risk estimates of varying cutpoints in Tables 2 and 3.

Special consideration of puberty

In addition to the general concerns over increased sensitivity to carcinogenesis during infancy and childhood, there are specific concerns for exposure during the period when hormonal and developmental changes associated with puberty are in process, especially for carcinogens with hormonal modes of action or with impacts on the reproductive system and its accessory organs. At puberty, there is increased development of breast and reproductive organs that clearly involves rapid cellular division and differentiation. Thus, for carcinogens that induce mammary and reproductive organ cancers, puberty represents a time of increased sensitivity. As noted in the section on Selection of Default Age-Sensitivity Factors (page 48), if the risk assessor is evaluating a chemical with the potential for more than usually enhanced potency during this period, such as those which induce mammary or reproductive organ tumors (e.g., a polycyclic aromatic hydrocarbon), then the risk assessment may use a larger ASF to calculate risk from exposure during puberty. OEHHA may recommend chemical-specific ASFs for puberty to the local air quality management districts for use in the Air Toxics Hot Spots program.

Application of ASFs in Risk Assessment

The effect of using the proposed default ASFs in calculating cancer risk over a 70 year lifetime, and for a 9 year exposure common in the Hot Spots program risk assessments is demonstrated in Table 2 and Table 3 below. Ignoring for the moment the increased exposures to carcinogens that children experience, the effect of the weighting factors is to increase the lifetime cancer risk by about 2. For risks from shorter exposures, such as the commonly used 9 year exposure scenario, OEHHA proposes to evaluate risk starting at age 0 in the surrounding general population. The weighting factors in this case increase the risk to a larger extent. Depending on the exposure scenario, the use of age-specific distributions for uptake rates for air, food and water would also increase the risk estimates significantly independent of any application of ASFs. This is because the uptake rates for all these media per unit of body weight are higher in children and, especially, infants.

Assessing risks to short-term exposures to carcinogens involves additional uncertainties. The cancer potency factors are generally based on long-term exposures. However, in reality, the local air districts in California are frequently assessing risk from short term activities related to construction, mitigation of contaminated soils, and so forth. OEHHA recommends that when assessing such shorter term projects, the districts assume a minimum of 2 years of exposure and apply the slope factors and the 10 fold ASF to such assessments. Exposure durations longer than 2 years would use the method for the remaining years as noted above.

Table 2. Example of default ASF use for a lifetime exposure (not adjusted for age-specific exposure)

Carcinogen Potency = 1 (mg/kg-d)⁻¹

Exposure = 0.0001 mg/kg-d

No consideration of differences of exposure

No adjustment: Lifetime Risk = potency × dose

70 year Lifetime risk = 1 × 0.0001

Risk

1.0 × 10⁻⁴

With proposed default ASF of 10 for birth to age 2 and 3 for age 2 to 16 years: LR = Σ (potency x dose x ASF x fraction of lifetime)

R (birth to age 2 yrs)

ASF

Duration

Risk

10

2/70

0.286 × 10⁻⁴

R (age 2 to 16 yrs)

3

13/70

0.557 × 10⁻⁴

R (age 16 to 70 yrs)

1

55/70

0.786 × 10⁻⁴

70 year Lifetime Risk

1.6 × 10⁻⁴

With proposed default ASF of 10 for third trimester to age 2 and 3 for ages 2 to 16 years: LR = Σ (potency x dose x ASF x fraction of lifetime)

R (third trimester to age 2yrs)

ASF

Duration

Risk

10

2.25/70.25

0.320 × 10⁻⁴

R (age 2 to age 16 yrs)

3

13/70.25

0.555 × 10⁻⁴

R (age 16 to 70 yrs)

1

55/70.25

0.783 × 10⁻⁴

70 year Lifetime Risk

1.66 × 10⁻⁴

With proposed default ASF of 10 for birth to age 5 and 3 for the ages 5 to 16 years: LR = Σ (potency x dose x ASF x fraction of lifetime)

R (birth to age 5)

ASF

Duration

Risk

10

4/70

0.571 × 10⁻⁴

R (age 5 to 16 yrs)

3

11/70

0.471 × 10⁻⁴

R (age 16 to 70 yrs)

1

55/70

0.786 × 10⁻⁴

70 year Lifetime Risk

1.8 × 10⁻⁴

Table 3. Example of default ASF use for a 9-year exposure

Carcinogen Potency = 1 (mg/kg-d)⁻¹

Exposure = 0.0001 mg/kg-d

No consideration of differences of exposure

No adjustment: Total Risk = potency × dose × fraction of lifetime

9-year Total Risk

<u>Duration</u>	<u>Risk</u>
<u>9/70</u>	<u>0.13×10^{-4}</u>

With default ASF of 10 for birth to age 2, and 3 thereafter: LR = Σ (potency × dose × ASF × fraction of lifetime)

R (birth to age 2 yrs)

<u>ASF</u>	<u>Duration</u>	<u>Risk</u>
<u>10</u>	<u>2/70</u>	<u>0.286×10^{-4}</u>

R (age 3 to 9 yrs)

<u>3</u>	<u>7/70</u>	<u>0.300×10^{-4}</u>
----------	-------------	--

9 year Total Risk

<u>0.59×10^{-4}</u>

With default ASF of 10 for third trimester to age 2 and 3 thereafter: LR = Σ (potency × dose × ASF × fraction of lifetime)

R (third trimester to age 2yrs)

<u>ASF</u>	<u>Duration</u>	<u>Risk</u>
<u>10</u>	<u>2.25/70.25</u>	<u>0.325×10^{-4}</u>

R (age 2 to 9 yrs)

<u>3</u>	<u>7/70.25</u>	<u>0.300×10^{-4}</u>
----------	----------------	--

9 year Total Risk

<u>0.625×10^{-4}</u>
--

With default ASF of 10 to age 5 and 3 thereafter: LR = Σ (potency × dose × ASF × fraction of lifetime)

R (birth to age 5 yrs)

<u>ASF</u>	<u>Duration</u>	<u>Risk</u>
<u>10</u>	<u>4/70</u>	<u>0.571×10^{-4}</u>

R (age 5 to 9 yrs)

<u>3</u>	<u>5/70</u>	<u>0.214×10^{-4}</u>
----------	-------------	--

9 year Total Risk

<u>0.785×10^{-4}</u>
--

U.S.EPA Analysis of the Effect of Age at Exposure on Cancer Potency

U.S. EPA addressed the potential for increased susceptibility to cancer caused by environmental chemicals when the exposure occurs during an early lifestage in “Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens” (U.S. EPA, 2005b) (referred to henceforth as the Supplemental Guidance). This document is intended to be a companion to the revised “Guidelines for Carcinogen Risk Assessment” (U.S. EPA, 2005a). We present a summary of their analysis, which support the policy decision to weight cancer potency and therefore risk by age-at-exposure. As previously noted, there are several methodological differences between the U.S. EPA analysis and the OEHHA analysis. Of note, in the OEHHA analysis all treatment-related tumors that were observed in a given lifestage exposure experiment were taken into account in estimating cancer potency. Thus in comparing cancer potencies

associated with early life vs. adult exposure, OEHHA compared the total cancer risk associated with exposure during a given lifestage, rather than comparing the risk for cancers at one single site in each lifestage, as the U.S. EPA did. In addition, the age groupings are a bit different in the U.S. EPA analysis than those used by OEHHA in their analysis (described above). For example, prenatal (*in utero*) exposures were not part of the analysis performed by U.S. EPA, and that Agency's analyses did not distinguish between postnatal and juvenile exposures.

U.S. EPA oral exposure cancer risk methodology relies on estimation of the lifetime average daily dose, which can account for exposure factor differences between adults and children (e.g. eating habits and body weight). However, early lifestage susceptibility differences have not been taken into consideration when cancer potency factors were calculated. The Supplemental Guidance document focused on studies that define the potential duration and degree of increased susceptibility that may arise from early-life exposures. An analysis of those studies including a detailed description of the procedures used was published in Barton *et al.* (2005) (included as Appendix I). The criteria used to decide if a study could be included in the quantitative analysis are as follows (excerpted from U.S. EPA, 2005b):

1. Exposure groups at different post-natal ages in the same study or same laboratory, if not concurrent (to control for a large number of potential cross-laboratory experimental variables including pathological examinations),
2. Same strain/species (to eliminate strain-specific responses confounding age-dependent responses),
3. Approximately the same dose within the limits of diets and drinking water intakes that obviously can vary with age (to eliminate dose-dependent responses confounding age-dependent responses),
4. Similar latency period following exposures of different ages (to control for confounding latency period for tumor expression with age-dependent responses), arising from sacrifice at >1 year for all groups exposed at different ages, where early-life exposure can occur up to about 7 weeks. Variations of around 10 to 20% in latency period are acceptable,
5. Postnatal exposure for juvenile rats and mice at ages younger than the standard 6 to 8 week start for bioassays; prenatal (*in utero*) exposures are not part of the current analysis. Studies that have postnatal exposure were included (without adjustment) even if they also involved prenatal exposure,
6. "Adult" rats and mice exposure beginning at approximately 6 to 8 weeks old or older, i.e. comparable to the age at initiation of a standard cancer bioassay (McConnell, 1992). Studies with animals only at young ages do not provide appropriate comparisons to evaluate age-dependency of response (e.g., the many neonatal mouse cancer studies). Studies in other species were used as supporting evidence, because they are relatively rare and the determination of the appropriate comparison ages across species is not simple, and
7. Number of affected animals and total number of animals examined are available or reasonably reconstructed for control, young, and adult groups (i.e., studies reporting only percent response or not including a control group would be excluded unless a reasonable estimate of historical background for the strain was obtainable).

Cancer potencies were estimated from a one-hit model (a restricted form of the Weibull time-to-tumor model), which estimates cumulative incidence for tumor onset. U.S. EPA (2005b) compared the estimated ratio of the cancer potency from early-life exposure to the estimated cancer potency from adult exposure. The general form of the equation for the tumor incidence at a particular dose, [P(dose)] is:

$$P(\text{dose}) = 1 - [1 - P(0)] \exp(-\text{cancer potency} * \text{dose})$$

where $P(0)$ is the incidence of the tumor in controls. The ratio of juvenile to adult cancer potencies at a single site were calculated by fitting this model to the data for each age group. The model fit depended upon the design of the experiment that generated the data. Studies evaluated by U.S. EPA had two basic design types: experiments in which animals were exposed either as juveniles or as adults (with either a single or multiple dose in each period), and experiments in which exposure began either in the juvenile or in the adult period, but once started, continued through life.

The model equations for the first study type are:

$$P_A = P_0 + (1 - P_0) (1 - e^{-m_A \delta_A})$$

$$P_J = P_0 + (1 - P_0) (1 - e^{-m_A e^{\lambda} \delta_J})$$

where A and J refer to the adult and juvenile period, respectively, λ is the natural logarithm of the juvenile:adult cancer potency ratio, P_0 is the fraction of control animals with the particular tumor type being modeled, P_x is the fraction of animals exposed in age period x with the tumor, m_A is the cancer potency, and δ_x is the duration or number of exposures during age period x .

The goal of the model is to determine λ , which is the logarithm of the estimated ratio of juvenile to adult cancer potencies. This serves as a measure of potential susceptibility for early-life exposure.

For the second study type, the model equations take into account that exposures that were initiated in the juvenile period continue through the adult period. The model equations for the fraction of animals exposed only as adults with tumors in this design are the same as in the first study type, but the fraction of animals whose first exposure occurred in the juvenile period is:

$$P_J = P_0 + (1 - P_0) (1 - e^{-m_A e^{\lambda} (\delta_J - \delta_A) - m_A \delta_A})$$

δ_J includes the duration of exposure during the juvenile period and the subsequent adult period.

Parameters in these models were estimated using Bayesian methods and all inferences about the ratios were based on the marginal posterior distribution of λ . A complete description of these procedures (including the potential effect of alternative Bayesian priors that were examined) was published in Barton *et al.* (2005) (Appendix I). This method produced a posterior mean ratio of the early-life to adult cancer potency, which is an estimate of the potential susceptibility of early-life exposure to carcinogens. Ratios of greater or less than one indicate greater or less susceptibility from early-life exposure, respectively.

U.S. EPA reviewed several hundred studies reporting information on 67 chemicals or complex mixtures that are carcinogenic via perinatal exposure. Eighteen chemicals were identified which had animal study designs involving early-life and adult exposures in the same experiment. Of those 18 chemicals, there were overlapping subsets of 11 chemicals involving repeated exposures during early postnatal and adult lifestages and 8 chemicals using acute exposures (usually single doses) at different ages. Those chemicals are listed in [Table 4](#).

Table 4 Chemicals having animal cancer study data available with early-life and adult exposures in the same experiment.

Chemical	Study Type
Amitrole	repeat dosing
Benzidine	repeat dosing
Benzo[a]pyrene (BaP)	acute exposure
Dibenzanthracene (DBA)	acute exposure
Dichlorodiphenyltrichloroethane (DDT)	lifetime exposure, repeat dosing
Dieldrin	lifetime exposure, repeat dosing
Diethylnitrosamine (DEN)	acute exposure, lifetime exposure
Dimethylbenz[a]anthracene (DMBA)	acute exposure
Dimethylnitrosamine (DMN)	acute exposure
Diphenylhydantoin, 5,5-(DPH)	lifetime exposure, repeat dosing
EthylNitrosourea (ENU)	acute exposure
Ethylene thiourea (ETU)	lifetime exposure, repeat dosing
3-Methylcholanthrene (3-MC)	repeat dosing
Methylnitrosourea (NMU)	acute exposure
Polybrominated biphenyls (PBBs)	lifetime exposure, repeat dosing
Safrole	lifetime exposure, repeat dosing
Urethane	acute exposure, lifetime exposure
Vinyl chloride (VC)	repeat dosing

U.S. EPA calculated the difference in susceptibility between early-life and adult exposure as the estimated ratio of cancer potency at specific sites from early-life exposure over the cancer potency from adult exposure for each of the studies that were determined qualitatively to have appropriate study designs and adequate data. The results were grouped into four categories: 1) mutagenic chemicals administered by a chronic dosing regimen to adults and repeated dosing in the early postnatal period (benzidine, diethylnitrosamine, 3-methylcholanthrene, safrole, urethane and vinyl chloride); 2) chemicals without positive mutagenicity data administered by a chronic dosing regimen to adults and repeated dosing in the early postnatal period (amitrole, dichlorodiphenyltrichloroethane (DDT), dieldrin, ethylene thiourea, diphenylhydantoin, polybrominated biphenyls); 3) mutagenic chemicals administered by an acute dosing regimen

(benzo[*a*]pyrene, dibenzanthracene, diethylnitrosamine, dimethylbenzanthracene, dimethylnitrosamine, ethylnitrosourea, methylnitrosourea and urethane); 4) chemicals with or without positive mutagenicity data with chronic adult dosing and repeated early postnatal dosing.

The acute dosing animal cancer studies were considered qualitatively useful by U.S. EPA because they involve identical exposures with defined doses and time periods demonstrating that differential tumor incidences arise exclusively from age-dependent susceptibility. However, they were not used to derive a quantitative cancer potency factor age adjustment, primarily because most of the studies used subcutaneous or intraperitoneal injection as a route of exposure. These methods have not been considered quantitatively relevant routes of environmental exposure for human cancer risk assessment by U.S. EPA, for reasons including the fact that these routes of exposure are expected to have a partial or complete absence of first pass metabolism which could affect potency estimates. Additionally, U.S. EPA decided that cancer potency estimates are usually derived from chronic exposures, and therefore, any adjustment to those potencies should be from similar exposures.

The repeated dosing studies with mutagenic chemicals using exposures during early postnatal and adult lifestages were used to develop a quantitative cancer potency factor age adjustment. Studies with repeated early postnatal exposure were included in the analysis even if they also involved earlier maternal and/or prenatal exposure, while studies addressing only prenatal exposure were not used in the analysis. The weighted geometric mean susceptibility ratio (juvenile to adult) for repeated and lifetime exposures in this case was 10.4 (range 0.12 – 111, 42% of ratios greater than 1).

USEPA suggests the use of age-dependent-adjustment factors (ADAF) for chemicals acting through a mutagenic mode of action, based on the results of the preceding analysis, which concluded that cancer risks generally are higher from early-life exposure than from similar exposure doses and durations later in life:

1. For exposures before 2 years of age (i.e., spanning a 2-year time interval from the first day of birth until a child's second birthday), a 10-fold ADAF.
2. For exposures between 2 and <16 years of age (i.e., spanning a 14-year time interval from a child's second birthday until their sixteenth birthday), a 3-fold ADAF.
3. For exposures after turning 16 years of age, no adjustment (ADAF=1).

The ADAF of 10 used for the 0 – 2 years of age range is approximately the weighted geometric mean cancer potency ratio from juvenile versus adult exposures in the repeated dosing studies. U.S. EPA considered this period to display the greatest toxicokinetic and toxicodynamic differences between children and adults. Data were not available to calculate a specific dose-response adjustment factor for the 2 to <16-year age range, so EPA selected an ADAF of 3 because it was half the logarithmic scale difference between the 10-fold adjustment for the first two years of life and no adjustment (i.e., 1-fold) for adult exposure. The ADAF of 3 represents an intermediate level of adjustment applied after 2 years of age through <16 years of age. The upper age limit (16 years of age) reflects the end of puberty and the attainment of a final body height. U.S. EPA recognizes that the use of a weighted geometric mean of the available study

data to develop an ADAF for cancer potencies may either overestimate or underestimate the actual early-life cancer potency for specific chemicals, and therefore emphasizes in the Supplemental Guidance that chemical-specific data should be used in preference to these default adjustment factors whenever such data are available.

U.S. EPA is recommending the ADAFs described above only for mutagenic carcinogens, because the data for non-mutagenic carcinogens were considered to be too limited and the modes of action too diverse to use this as a category for which a general default adjustment factor approach can be applied. OEHHA considers this approach to be insufficiently health protective. There is no obvious reason to suppose that the toxicokinetics of non-mutagens would be systematically different from those of mutagens. It would also be inappropriate to assume by default that non-mutagenic carcinogens are assumed to need a toxicodynamic correction factor of 1. Most if not all of the factors that make individuals exposed to carcinogens during an early-lifestage potentially more susceptible than those individuals exposed during adulthood also apply to non-mutagenic carcinogen exposures (*e.g.*, rapid growth and development of target tissues, potentially greater sensitivity to hormonal carcinogens, differences in metabolism). It should also be noted that carcinogens that do not cause gene mutations may still be genotoxic by virtue of causing chromosomal damage. Additionally, many carcinogens do not have adequate data available for deciding on a specific mode of action, or do not necessarily have a single mode of action. For these reasons, OEHHA will apply the default cancer potency factor age adjustments described above to all carcinogens unless data are available which allow for the development of chemical-specific cancer potency factor age adjustments. In those cases, an agent-specific model of age dependence (based on observational or experimental data) might be used, or alternative (larger or smaller) adjustment factors and age ranges may be applied where understanding of the mechanism of action and target tissues makes this appropriate.

Other Source Documents for Cancer Risk Assessment Guidance

As noted previously, the cancer potencies and unit risks tabulated in this technical support document have been developed by various programs over a number of years. The methods used therefore necessarily varied according to the date of the assessment and the program responsible. The following section summarizes the sources and procedures most commonly applied, and their historical context where this is apposite.

United States Environmental Protection Agency (U.S. EPA)

The U.S. EPA was one of the first regulatory agencies to develop and apply cancer risk assessment methodology. Their guidance documents and technical publications have been influential for many programs, including the California Air Toxics (Toxic Air Contaminants and Hot Spots) programs.

Guidelines for Carcinogen Risk Assessment (U.S. EPA, 1986)

Prior to the more recent guidelines updating project which, after nearly ten years of internal and public review drafts culminated in the 2005 final revision (see below), U.S. EPA carcinogen risk assessment procedures were generally as described in Anderson *et al.* (1983) and “Guidelines for Carcinogen Risk Assessment” (U.S. EPA, 1986). These methods, which are outlined below, were used to calculate the Integrated Risk Information System (IRIS) cancer potency values, some of which are cited in this document. U.S. EPA has always indicated that cancer risk estimates based on adequate human epidemiologic data are preferred if available over estimates based on animal data. Although the newer guidelines offer alternative methods for dose-response analysis of animal bioassays, and updated consideration of specific topics such as lifestage-related differences in sensitivity, and mechanism of action for some types of carcinogen, the underlying principles, and many of the specific procedures developed in these original guidelines are still applicable and in use.

U.S. EPA Calculation of Carcinogenic Potency Based on Animal Data

In extrapolating low-dose human cancer risk from animal carcinogenicity data, it is generally assumed that most agents that cause cancer also damage DNA, and that the quantal type of biological response characteristic of mutagenesis is associated with a linear non-threshold dose-response relationship. U.S. EPA stated that the risk assessments made with this model should be regarded as conservative, representing the most plausible upper limit for the risk. The mathematical expression used by U.S. EPA in the 1986 guidelines to describe the linear non-threshold dose-response relationship at low doses is the linearized multistage procedure developed by Crump (1980). This model is capable of fitting almost any monotonically increasing dose-response data, and incorporates a procedure for estimating the largest possible linear slope at low extrapolated doses that is consistent with the data at all experimental dose levels. A description of the linearized multistage procedure has been provided above (page [292928](#)). U.S. EPA used an updated version (GLOBAL86, Howe *et al.*, 1986) of the computer program GLOBAL79 developed by Crump and Watson (1979) to calculate the point estimate and the 95% upper confidence limit of the extra risk $A(d)$.

U.S. EPA separated tumor incidence data according to organ sites or tumor types. The incidence of benign and malignant tumors was combined whenever scientifically defensible. U.S. EPA considered this incidence combination scientifically defensible unless the benign tumors are not considered to have the potential to progress to the associated malignancies of the same histogenic origin. The primary comparison in carcinogenicity evaluation is tumor response in dosed animals as compared to contemporary matched control animals. However, U.S. EPA stated that historical control data could be used along with concurrent control data in the evaluation of carcinogenic responses, and notes that for the evaluation of rare tumors, even small tumor responses may be significant compared to historical data. If several data sets (dose and tumor incidence) are available (different animal species, strains, sexes, exposure levels, exposure routes) for a particular chemical, the data set used in the model was the set where the incidence is statistically significantly higher than the control for at least one test dose level and/or where the tumor incidence rate shows a statistically significant trend with respect to dose level. The data set generating the highest lifetime cancer risk estimate (q_1^*) was chosen where appropriate. An example of an inappropriate data set would be a set which generates an artifactually high risk estimate because of a very small number of animals used. If there are 2 or more data sets of comparable size for a particular chemical that are identical with respect to species, strain, sex and tumor sites, the geometric mean of q_1^* estimated from each of those data sets was used for risk estimation. U.S. EPA assumed that mg/surface area/day is an equivalent dose between species. Surface area was further assumed to be proportional to the $2/3$ power of the weight of the animal in question. Equivalent dose was therefore computed using the following relationship:

$$d = \frac{l_e * m}{L_e * W^{2/3}}$$

where L_e = experimental duration, l_e = exposure duration, m = average dose (mg/day) and W = average animal weight. Default average body weights for humans, rats and mice are 70, 0.35 and 0.03 kg, respectively.

Exposure data expressed as ppm in the diet were generally converted to mg/day using the relationship $m = \text{ppm} * F * r$, where ppm is parts per million of the chemical in the diet, F is the weight of the food consumed per day in kg, and r is the absorption fraction (assumed to be 1 in the absence of data indicating otherwise). The weight of food consumed, calories required, and animal surface area were generally all considered to be proportional to the $2/3$ power of the animal weight, so:

$$m \propto \text{ppm} * W^{2/3} * r, \text{ or } \frac{m}{rW^{2/3}} \propto \text{ppm}$$

The relationship could lead to the assumption that dietary ppm is an equivalent exposure between species. However, U.S. EPA did not believe that this assumption is justified, since the calories/kg food consumed by humans is significantly different from that consumed by laboratory animals (primarily due to differences in moisture content). An empirically derived food factor, $f = F/W$ was used, which is the fraction of a species' body weight consumed per day as food. U.S. EPA (1986) gave the f values for humans, rats and mice as 0.028, 0.05 and 0.13, respectively.

Dietary exposures expressed as concentrations in ppm were converted to mg/surface area using the following relationship:

$$\frac{m}{r * W^{2/3}} = \frac{\text{ppm} * F}{W^{2/3}} = \frac{\text{ppm} * f * W}{W^{2/3}} = \text{ppm} * f * W^{2/3}$$

Exposures expressed as mg/kg/day ($m/Wr = s$) were converted to mg/surface area using the relationship:

$$\frac{m}{rW^{2/3}} = s * W^{2/3}$$

The calculation of dose when exposure is via inhalation was performed for cases where 1) the chemical is either a completely water-soluble gas or aerosol and is absorbed proportionally to the amount of inspired air, or 2) where the chemical is a partly water-soluble gas which reaches an equilibrium between the inspired air and body compartments. After equilibrium is attained, the rate of absorption is proportional to metabolic rate, which is proportional to the rate of oxygen consumption, which is related to surface area.

Exposure expressed as mg/day to completely water-soluble gas or aerosols can be calculated using the expression $m = I * v * r$, where I is the inspiration rate/day in m^3 , v is the concentration of the chemical in air (mg/m^3), and r is the absorption fraction (assumed to be the same for all species in the absence of data to the contrary; usually 1). For humans, the default inspiration rate of 20 m^3 has been adopted. Inspiration rates for 113 g rats and 25 g mice have been reported to be 105 and 34.5 liters/day, respectively. Surface area proportionality can be used to determine inspiration rate for rats and mice of other weights; for mice, $I = 0.0345 (W / 0.025)^{2/3} \text{ m}^3/\text{day}$; for rats, $I = 0.105 (W / 0.113)^{2/3} \text{ m}^3/\text{day}$. The empirical factors for air intake/kg/day (i) for humans, rats and mice are 0.29, 0.64 and 1.3, respectively. Equivalent exposures in mg/surface area can be calculated using the relationship:

$$\frac{m}{W^{2/3}} = \frac{Ivr}{W^{2/3}} = \frac{iWvr}{W^{2/3}} = iW^{1/3}vr$$

Exposure expressed as mg/day to partly water-soluble gases is proportional to surface area and to the solubility of the gas in body fluids (expressed as an absorption coefficient r for that gas). Equivalent exposures in mg/surface area can be calculated using the relationships $m = kW^{2/3} * v * r$, and $d = m/W^{2/3} = kvr$. The further assumption is made that in the case of route-to-route extrapolations (e.g., where animal exposure is via the oral route, and human exposure is via inhalation, or vice versa), unless pharmacokinetic data to the contrary exist, absorption is equal by either exposure route.

Adjustments were made for experimental exposure durations shorter than the lifetime of the test animal; the slope q_1^* was increased by the factor $(L/L_e)^3$, where L is the normal lifespan of the experimental animal and L_e is the duration of the experiment. This assumed that if the average dose d is continued, the age-specific rate of cancer will continue to increase as a constant function of the background rate. Since age-specific rates for humans increase by at least the 2nd power of the age, and often by a considerably higher power (Doll, 1971), there is an expectation

that the cumulative tumor rate, and therefore q_1^* , will increase by at least the 3rd power of age. If the slope q_1^* is calculated at age L_e , it would be expected that if the experiment was continued for the full lifespan L at the same average dose, the slope q_1^* would have been increased by at least $(L/L_e)^3$.

U.S. EPA Calculation of Carcinogenic Potency Based on Human Data

U.S. EPA stated that existing human epidemiologic studies with sufficiently valid exposure characterization are always used in evaluating the cancer potency of a chemical. If they showed a carcinogenic effect, the data were analyzed to provide an estimate of the linear dependence of cancer rates on lifetime cancer dose (equivalent to the factor q_1^*). If no carcinogenic effect was demonstrated and carcinogenicity had been demonstrated in animals, then it was assumed that a risk does exist, but it is smaller than could have been observed in the epidemiologic study. An upper limit of cancer incidence was calculated assuming that the true incidence is just below the level of detection in the cohort studied, which is largely determined by the cohort size. Whenever possible, human data are used in preference to animal data. In human epidemiologic studies, the response is measured as the relative risk of the exposed cohort of individuals compared to the control group. The excess risk ($R(X) - 1$, where $R(X)$ is relative risk) was assumed to be proportional to the lifetime average exposure X , and to be the same for all ages. The carcinogenic potency is then equal to $[R(X) - 1]/X$ multiplied by the lifetime risk at that site in the general population. According to this original procedure, the confidence limit for the excess risk was not usually calculated: this decision was ascribed to the difficulty in accounting for inherent uncertainty in the exposure and cancer response data. More recent assessments have taken the opposite view and attempted to calculate and characterize this uncertainty by determining confidence limits, *inter alia*.

Guidelines for Carcinogen Risk Assessment (U.S. EPA, 2005a)

U.S. EPA revised its “Guidelines for Carcinogen Risk Assessment” (referred to henceforth as the “U.S. EPA Guidelines”) in 2005. Compared to the 1986 version of this document, more emphasis is placed on establishing a “mode of action” (MOA). The following excerpt provides a definition of this term:

“The term “mode of action” is defined as a sequence of key events and processes, starting with interaction of an agent with a cell, proceeding through operational and anatomical changes, and resulting in cancer formation. A “key event” is an empirically observable precursor step that is itself a necessary element of the mode of action or is a biologically based marker for such an element. Mode of action is contrasted with “mechanism of action,” which implies a more detailed understanding and description of events, often at the molecular level, than is meant by mode of action”.

Cancer risk assessments performed under the prior U.S. EPA Guidelines sometimes included a MOA description. However, the 1986 U.S. EPA Guidelines did not explicitly mandate the development of a MOA description in cancer risk assessments.

The MOA information is then used to govern how a cancer risk assessment shall proceed. Tumor incidence data sets arising from a MOA judged to be not relevant to humans are not used

to extrapolate a cancer potency factor. If an MOA cannot be determined or is determined to have a low-dose linear dose-response and a nonmutagenic MOA, then a linear extrapolation method is used to develop a cancer potency factor. The same linear extrapolation is used for all lifestages, unless chemical specific information on lifestage or population sensitivity is available. Carcinogens that act via an MOA judged to have a nonlinear low-dose dose response are modeled using MOA data, or the RfD/RfC risk assessment method is used as a default. Adjustments for susceptible lifestages or populations are to be performed as part of the risk assessment process.

If a carcinogen is deemed to act via a mutagenic MOA, then the data from the MOA analysis is evaluated to determine if chemical-specific differences between adults and juveniles exist and can be used to develop a chemical-specific risk estimate incorporating lifestage susceptibility. If this cannot be done, then early-life susceptibility is assumed, and age-dependent adjustment factors (ADAFs) are applied as appropriate to develop risk estimates. In cases where it is not possible to develop a toxicokinetic model to perform cross-species scaling of animal tumor data sets which arise from oral exposures, the U.S. EPA Guidelines state that administered doses should be scaled from animals to humans on the basis of equivalence of $\text{mg/kg}^{3/4}\text{-d}$ (milligrams of the agent normalized by the $3/4$ power of body weight per day). This is a departure from the 1986 U.S. EPA guidelines, which used a $2/3$ power of body weight normalization factor. Other adjustments for dose timing, duration and route are generally assumed to be handled in similar fashion to that described for the 1986 guidelines, although of course updated parameter values would be used where available.

The 2005 U.S. EPA Guidelines also use benchmark dose methodology (described above, page 27) to develop a “point-of departure” (POD) from tumor incidence data. For linear extrapolation, the POD is used to calculate a cancer potency factor, and for nonlinear extrapolation the POD is used in the calculation of a reference dose (RfD) or reference concentration (RfC).

It should be noted that none of the cancer potency factors listed in this document were obtained from U.S. EPA risk assessments performed under the 2005 U.S. EPA Guidelines. All U.S. EPA IRIS cancer potency values contained in this document were obtained from risk assessments using the 1986 U.S. EPA Guidelines.

Office of Environmental Health Hazard Assessment (OEHHA), California Environmental Protection Agency

The cancer risk assessment procedures originally used by the Office of Environmental Health Hazard Assessment (OEHHA) are outlined in “Guidelines for Chemical Carcinogen Risk Assessments and their Scientific Rationale” (referred to below as the Guidelines) (CDHS, 1985). These procedures were generally used in generating Toxic Air Contaminant (TAC) cancer potency values, standard Proposition 65 cancer potency values and Public Health Goal (PHG) cancer potency values. Expedited Proposition 65 cancer potency values depart somewhat from those procedures and are discussed separately below.

OEHHA cancer risk assessment methodology as described by CDHS (1985) generally resembled that used at that time by U.S. EPA (Anderson *et al.*, 1983; U.S. EPA, 1986). OEHHA risk

assessment practice similarly reflects the evolution of the technical methodology (e.g. as described in U.S. EPA, 2005a) since the original guidelines were published. The basic principles and procedures described below are still considered applicable. More recent additions to OEHHA cancer risk assessment methods such as the use of benchmark dose methodologies and early-lifestage cancer potency adjustments are discussed above. The Guidelines state that both animal and human data, when available, should be part of the dose-response assessment.

OEHHA Calculation of Carcinogenic Potency Based on Animal Data

The procedures used to extrapolate low-dose human cancer risk from animal carcinogenicity data assumed that a carcinogenic change induced in a cell is transmitted to successive generations of cell descendants, and that the initial change in the cell is an alteration (e.g. mutation, rearrangement, etc.) in the cellular DNA. Non-threshold models are used to extrapolate to low-dose human cancer risk from animal carcinogenicity data.

Several models were proposed for extrapolating low-dose human cancer risk from animal carcinogenicity data in the original Guidelines. These models include the Mantel-Bryan method (log-probit model), the one-hit model, the linearized multistage procedure, the gamma multihit model, and a number of time-to-tumor models. The Guidelines stated that time-to-tumor models (i.e., a Weibull-in-time model) should be used for low-dose extrapolation in all cases where supporting data are available, particularly when survival is poor due to competing toxicity. However, the Guidelines also noted the difficulty of determining the actual response times in an experiment. Internal tumors are generally difficult to detect in live animals and their presence is usually detected only at necropsy. Additionally, use of these models often requires making the determination of whether a tumor was the cause of death, or was found only coincidentally at necropsy when death was due to other causes. Further, competing causes of death, such as chemical toxicity, may decrease the observed time-to-tumor for nonlethal cancers by allowing earlier necropsy of animals in higher dose groups. The linearized multistage (LMS) procedure was noted as being an appropriate method for dose extrapolation in most cases, with the primary exception being a situation in which sufficient empirical data are available to indicate a dose-response curve of a “quasi-threshold” type (e.g., flat for two or three dose levels, then curving sharply upwards). In this case, the LMS procedure may underestimate the number of stages and overestimate the low-dose risks. In this case, the gamma multihit model was suggested as being a potential alternative. The Mantel-Bryan model was described as having little biological basis as applied to carcinogenesis, and being likely to underestimate risks at low doses. The Guidelines stated that this model should not be used for low dose extrapolation. More recent practice has departed from these original guidelines in some respects, for instance by experimenting with cell-proliferation based models in a few cases: however the LMS model remained the preferred extrapolation model for most purposes. Some of the difficulties in achieving a satisfactory fit to tumor incidence data were found to be alleviated by application of toxicokinetic models and use of an internal rather than applied dose metric with the LMS model. This has resulted in the alternative models originally advocated (Gamma multihit, Mantel-Bryan) being mostly abandoned. As noted above (Dose-Response Assessment, page 23), the use of allegedly biologically based statistical models such as LMS has fallen from favor in recent years, and benchmark dose methodology has become the preferred method for extrapolating cancer potency values from animal cancer incidence data. However, it should also be noted that results

generated by the LMS model and benchmark dose methodology from the same data set are often quite similar.

The 1985 Guidelines stated that both animal and human data, when available, should be part of the dose-response assessment. Although preference was given to human data when these were of adequate quality, animal studies may provide important supporting evidence. Low-dose extrapolation of human cancer risk from animal carcinogenicity data was generally based on the most sensitive site, species and study demonstrating carcinogenicity of a particular chemical, unless other evidence indicates that the data set in question is not appropriate for use. Where both benign and malignant tumors are induced at the same site and the benign tumors are considered to have the potential to progress to malignant tumors, the incidence data for both types of tumors could be combined to form the basis for risk assessment. Pharmacokinetic data on chemical metabolism, effective dose at target site, or species differences between laboratory test animals and humans were considered in dose-response assessments when available. In performing exposure scaling from animals to humans, the “surface area” correction (correcting by the 2/3 power of body weight) was used unless specific data indicates that this should not be done. The Guidelines assumed that in the absence of evidence to the contrary, chemicals that cause cancer after exposure by ingestion will also cause cancer after exposure by inhalation, and vice versa. These original proposals have continued in use with little change except that currently, TAC and PHG cancer potency factor calculations use a 3/4 power of body weight correction for interspecies scaling, in line with current U.S. EPA practice. The standard Proposition 65 cancer potency factor calculations still use a 2/3 power correction because the cancer potency calculation method is specified in regulation (California Health and Safety Code 25249.5 *et seq.*).

Cancer unit risk factors [in units of $(\mu\text{g}/\text{m}^3)^{-1}$] have been calculated from cancer potency factors [in units of $(\text{mg}/\text{kg}\text{-day})^{-1}$] using the following relationship:

$$\text{UR} = \frac{\text{CPF} * 20 \text{ m}^3}{70 \text{ kg} * \text{CV}}$$

where UR is the cancer unit risk, CPF is the cancer potency factor, 70 kg is the reference human body weight, 20 m³ is the reference human inspiration rate/day, and CV is the conversion factor from mg to μg (= 1000). The cancer unit risk describes the excess cancer risk associated with an inhalation exposure to a concentration of 1 $\mu\text{g}/\text{m}^3$ of a given chemical; the cancer potency factor describes the excess cancer risk associated with exposure to 1 mg of a given chemical per kilogram of body weight.

It should be noted that although this default method is still used in deriving published cancer unit risk values, for site-specific risk assessments age-appropriate distributions and percentile values are used in the current version of the Hot Spots exposure assessment document. Where exposure to children occurs (as it does in most exposures to the general population surrounding a source site) it is also necessary to apply the age-specific adjustment factors for the appropriate durations in accordance with the guidance offered above (Page 30 *et seq.*).

OEHHA Calculation of Carcinogenic Potency Based on Human Data

Human epidemiologic studies with adequate exposure characterization are used to evaluate the cancer potency of a chemical. If they show a carcinogenic effect, the data are analyzed to provide an estimate of the linear dependence of cancer rates on lifetime cancer dose. The 1985 Guidelines stated that with continuous exposure, age-specific incidence continues to increase as a power function (e.g., t^3 or t^4) of the elapsed time since initial exposure. Lifetime risks can be estimated by applying such a power function to the observed data and extrapolating beyond the actual followup period. OEHHA has generally undertaken the calculation of study power and confidence bounds on the potency estimate as important tools to establish the credibility of the estimate obtained and in comparing this with other estimates (from other human studies or from animal data). Due to the diversity in quality and type of epidemiological data, the specific approaches used in OEHHA risk assessments based on human epidemiologic studies vary on a case by case basis rather than following explicit general guidelines. Examples of the methods used can be observed in the Toxic Air Contaminant documents (these documents are listed in Appendix D: the methods used are described in the compound summaries provided in Appendix B).

Expedited Proposition 65 Cancer Risk Assessment Methodology

Expedited cancer potency values developed for several agents listed as carcinogens under Proposition 65 (California Health and Safety Code 25249.5 *et seq.*) were derived from selected animal carcinogenicity data sets of the Carcinogenic Potency Database (CPDB) of Gold *et al.* (1984, 1986, 1987, 1989, 1990, 1997) using default procedures specified in the administrative regulations for Proposition 65 (Title 22 California Code of Regulations [CCR] 12703). OEHHA hazard assessments usually describe all relevant data on the carcinogenicity (including dose-response characteristics) of the chemical under examination, followed by an evaluation of any pharmacokinetic and mechanistic (e.g. genotoxicity) data. An evaluation of the data set for the chemical may indicate that adjustments in target dose estimates or use of a dose response model different from the default are appropriate. The procedure used to derive expedited Proposition 65 cancer potency values differs from the usual methodology in two ways. First, it relies on cancer dose response data evaluated and extracted from the original literature by Gold *et al.* Second, the choice of a linearized multistage procedure for generating cancer potency values is automatic, and pharmacokinetic adjustments are not performed. The methods used to develop expedited cancer potency values incorporate the following assumptions:

1. The dose response relationship for carcinogenic effects in the most sensitive species tested is representative of that in humans.
2. Observed experimental results can be extrapolated across species by use of the interspecies factor based on "surface area scaling."
3. The dose to the tissue giving rise to a tumor is assumed to be proportional to the administered dose.
4. The linearized multistage polynomial procedure can be used to extrapolate potency outside the range of experimental observations to yield estimates of "low" dose potency.
5. Cancer risk increases with the third power of age.

The Carcinogenic Potency Database of Gold *et al.* (1984, 1986, 1987, 1989, 1990) contains the results of more than 4000 chronic laboratory animal experiments on 1050 chemicals by combining published literature with the results of Federal chemical testing programs (Technical Reports from the Carcinogenesis Bioassay Program of the National Cancer Institute (NCI)/National Toxicology Program (NTP) published prior to June 1987). The published literature was searched (Gold *et al.*, 1984) through the period December 1986 for carcinogenicity bioassays; the search included the Public Health Service publication "Survey of Compounds Which Have Been Tested for Carcinogenic Activity" (1948-1973 and 1978), monographs on chemical carcinogens prepared by the International Agency for Research on Cancer (IARC) and Current Contents. Also searched were Carcinogenesis Abstracts and the following journals: British Journal of Cancer, Cancer Letters, Cancer Research, Carcinogenesis, Chemosphere, Environmental Health Perspectives, European Journal of Cancer, Food and Cosmetics Toxicology, Gann, International Journal of Cancer, Journal of Cancer Research and Clinical Oncology (formerly Zeitschrift für Krebsforschung und Klinische Onkologie), Journal of Environmental Pathology and Toxicology, Journal of Toxicology and Environmental Health, Journal of the National Cancer Institute, and Toxicology and Applied Pharmacology. Studies were included in the database if they met the following conditions:

1. The test animals were mammals.
2. Chemical exposure was started early in life (100 days of age or less for hamsters, mice and rats).
3. Route of administration was via the diet, drinking water, gavage, inhalation, intravenous injection or intraperitoneal injection.
4. The test chemical was administered alone (not in combination with other chemicals).
5. Chemical exposure was chronic (*i.e.*, duration of exposure was at least one-fourth the standard lifespan for that species), with not more than 7 days between exposures.
6. The experiment duration was at least half the standard lifespan for the species used.
7. The study design included a control group and at least 5 animals/exposure group.
8. No surgical interventions were performed.
9. Pathology data were reported for the number of animals with tumors (not total number of tumors).
10. All results reported were original data (not analysis of data reported by other authors).

Included in their data set tabulations are estimates of average doses used in the bioassay, resulting tumor incidences for each of the dose levels employed for sites where significant responses were observed, dosing period, length of study and histopathology. Average daily dose levels were calculated assuming 100% absorption. Dose calculations follow procedures similar to those of Cal/EPA and U.S. EPA; details on methods used and standard values for animal lifespans, body weights, and diet, water and air intake are listed in Gold *et al.* (1984). OEHHA (1992) reviewed the quality assurance, literature review, and control procedures used in compiling the data and found them to be sufficient for use in an expedited procedure. Cancer potency estimates were derived by applying the mathematical approach described in the section below to dose response data in the Gold *et al.* database.

The following criteria were used for data selection:

1. Data sets with statistically significant increases in cancer incidence with dose ($p \leq 0.05$) were used. (If the authors of the bioassay report considered a statistically significant result to be unrelated to the exposure to the carcinogen, the associated data set was not used.)
2. Data sets were not selected if the endpoint was specified as "all tumor-bearing animals" or results were from a combination of unrelated tissues and tumors.
3. When several studies were available, and one study stood out as being of higher quality due to numbers of dose groups, magnitude of the dose applied, duration of study, or other factors, the higher quality study was chosen as the basis for potency calculation if study results were consistent with those of the other bioassays listed.
4. When there were multiple studies of similar quality in the sensitive species, the geometric mean of potencies derived from these studies was taken. If the same experimentalists tested two sexes of the same species/strain under the same laboratory conditions, and no other adequate studies were available for that species, the data set for the more sensitive sex was selected.
5. Potency was derived from data sets that tabulate malignant tumors, combined malignant and benign tumors, or tumors that would have likely progressed to malignancy.

Cancer potency was defined as the slope of the dose response curve at low doses. Following the default approach, this slope was estimated from the dose response data collected at high doses and assumed to hold at very low doses. The Crump linearized multistage polynomial (Crump *et al.*, 1977) was fit to animal bioassay data:

$$\text{Probability of cancer} = 1 - \exp[-(q_0 + q_1d + q_2d^2 + \dots)]$$

Cancer potency was estimated from the upper 95 % confidence bound on the linear coefficient q_1 , which is termed q_1^* .

For a given chemical, the model was fit to a number of data sets. As discussed in the section above, the default was to select the data for the most sensitive target organ in the most sensitive species and sex, unless data indicated that this was inappropriate. Deviations from this default occur, for example, when there are several bioassays or large differences exist between potency values calculated from available data sets.

Carcinogenicity bioassays using mice and/or rats will often use an exposure duration of approximately two years. For standard risk assessments, this is the assumed lifespan for these species. Animals in experiments of shorter duration are at a lower risk of developing tumors than those in the standard bioassay; thus potency is underestimated unless an adjustment for experimental duration is made. In estimating potency, short duration of an experiment was taken into account by multiplying q_1^* by a correction factor equal to the cube of the ratio of the assumed standard lifespan of the animal to the duration of the experiment (T_e). This assumes that the cancer hazard would have increased with the third power of the age of the animals had they lived longer:

$$q_{\text{animal}} = q_1^* * (104 \text{ weeks}/T_e)^3$$

In some cases excess mortality may occur during a bioassay, and the number of initial animals subject to late occurring tumors may be significantly reduced. In such situations, the above described procedure can, at times, significantly underestimate potency. A time-dependent model fit to individual animal data (i.e., the data set with the tumor status and time of death for each animal under study) may provide better potency estimates. When Gold *et al.* indicated that survival was poor for a selected data set, a time-dependent analysis was attempted if the required data were available in the Tox Risk (Crump *et al.*, 1991) data base. The Weibull multistage model (Weibull-in-time; multistage-in-dose) was fit to the individual animal data.

To estimate human cancer potency, q_{animal} values derived from bioassay data were multiplied by an interspecies scaling factor (K; the ratio of human body weight (bw_h) to test animal body weight (bw_a), taken to the 1/3 power (Anderson *et al.*, 1983)):

$$K = (bw_h/bw_a)^{1/3}$$

Thus, cancer potency = $q_{\text{human}} = K * q_{\text{animal}}$

Chemical-specific Descriptions of Cancer Potency Value Derivations

Unit Risk and potency values for chemicals whose cancer potency values were obtained from Toxic Air Contaminant documents, standard or expedited Proposition 65 documents, U.S. EPA's Integrated Risk Information System (IRIS) documents and Health Effects Assessment Summary Table (HEAST) entries, or from other documents prepared by OEHHA's Air Toxicology and Epidemiology Branch or Pesticide and Environmental Toxicology Branch are presented in Appendix A. Information summaries for these chemicals are presented in Appendix B.

REFERENCES

[Allegaert K, Verbesselt R, Rayyan M, Debeer A, de Hoon J \(2007\). Urinary metabolites to assess in vivo ontogeny of hepatic drug metabolism in early neonatal life. Methods Find Exp Clin Pharmacol 29\(4\):251-6.](#)

Anderson EL and the Carcinogen Assessment Group of the U.S. Environmental Protection Agency. 1983. Quantitative approaches in use to assess cancer risk. Risk Anal 3:277-295.

[Anderson LM, Diwan BA, Fear NT, Roman E. \(2000\) Critical windows of exposure for children's health: Cancer in human epidemiological studies and neoplasms in animal models. Environ Health Perspect 108 \(Suppl3\):573-94.](#)

[Armitage P, Doll R. \(1954\). The age distribution of cancer and a multistage theory of carcinogenesis. Br J Cancer 8\(1\): 1-12.](#)

[Barone S Jr, Das KP, Lassiter LT, White LD. \(2000\) Vulnerable processes of nervous system development: a review of markers and methods. NeuroTox 21:15-36.](#)

Barrett JC and Wiseman RW. 1987. Cellular and molecular mechanisms of multistep carcinogenesis: relevance to carcinogen risk assessment. Environ Health Perspect 76:65-70.

Barton HA, Cogliano VJ, Flowers L, Valcovic L, Setzer RW and Woodruff TJ. 2005. Assessing susceptibility from early-life exposure to carcinogens. Environ Health Perspect 113:1125-1133.

[Bayer SA, Altman J, Russo RJ, Zhang X. \(1993\) Timetables of neurogenesis in the human brain based on experimentally determined patterns in the rat. NeuroTox 14:83-144.](#)

Benya TJ, Busey WM, Dorato MA and Berteau PE. 1982. Inhalation carcinogenicity bioassay of vinyl bromide in rats. Toxicol Appl Pharmacol 64:367-379.

Bogen KT, Spear RC. Integrating uncertainty and inter-individual variability in environmental risk assessment. Risk Anal 1987; 7:427-436.

Bogen KT, Witschi HP. Lung tumors in A/J mice exposed to environmental tobacco smoke: estimated potency and implied human risk. Carcinogenesis 2002; 23:511-519.

Bogen KT. Cancer potencies of heterocyclic amines found in cooked foods. Food Chem Toxicol 1994; 32: 505-515.

Bois FY, Gelman A, Jiang J, Maszle DR, Zeise L and Alexeeff G. 1996. Population toxicokinetics of tetrachloroethylene. Arch Toxicol 70:347-55.

California Department of Health Services (CDHS). 1985. Guidelines for Chemical Carcinogen Risk Assessments and Their Scientific Rationale. CDHS, Health and Welfare Agency, Sacramento, CA.

TSD for Cancer Potency Factors: SRP Draft

April 2009

California Environmental Protection Agency (Cal/EPA). 1992. Expedited Cancer Potency Values and Proposed Regulatory Levels for Certain Proposition 65 Carcinogens. Office of Environmental Health Hazard Assessment, Reproductive and Cancer Hazard Assessment Section, Berkeley, CA.

[Cresteil T \(1998\). Onset of xenobiotic metabolism in children: toxicological implications. Food Addit Contam 15 Suppl:45-51.](#)

Crouch E and Wilson R. 1979. Interspecies comparison of carcinogenic potency. J Toxicol Environ Health 5:1095-1118.

Crouch E. 1992. MSTAGE (Version 1.1). E.A.C. Crouch, Cambridge Environmental Inc., 58 Buena Vista Road, Arlington, Massachusetts 02141.

Crump KS and Watson WW. 1979. GLOBAL79: A FORTRAN program to extrapolate dichotomous animal carcinogenicity data to low doses. National Institute of Environmental Health Sciences, Contract No. 1-ES-2123.

Crump KS, Guess HA and Deal LL. 1987. Confidence intervals and test of hypotheses concerning dose response relations inferred from animal carcinogenicity data. Biometrics 33:437-451.

Crump KS, Howe RB, Van Landingham C and Fuller WG. 1991. TOXRISK Version 3. TOXicology RISK Assessment Program. KS Crump Division, Clement International Division, 1201 Gaines Street, Ruston LA 71270.

Crump KS. 1980. An improved procedure for low-dose carcinogenic risk assessment from animal data. J Environ Pathol Toxicol 5:675-684.

Crump KS. 1984. A new method for determining allowable daily intakes. Fundam Appl Toxicol 4:854-871.

Crump KS. 1995. Calculation of benchmark doses from continuous data. Risk Anal 15:78-89.

Crump KS. 2002. Critical issues in benchmark calculations from continuous data. Crit Rev Toxicol 32:133-153.

[Dietert RR, Etzel RA, Chen D, Halonen M, Holladay SD, Jarabek AM, Landreth K, Peden DB, Pinkerton K, Smialowicz RJ, Zoetis T. \(2000\) Workshop to identify critical windows of exposure for children's health: immune and respiratory systems work group summary. Environ Health Perspect \(Suppl 3\):483-90.](#)

Doll R. 1971. Weibull distribution of cancer: implications for models of carcinogenesis. J Royal Stat Soc A 13:133-166.

Drew RT, Boorman GA, Haseman JK, McConnell EE, Busey WM and Moore JA. 1983. The effect of age and exposure duration on cancer induction by a known carcinogen in rats, mice, and hamsters. Toxicol Appl Pharmacol 68:120-130.

TSD for Cancer Potency Factors: SRP Draft

April 2009

[Elbarbry FA, McNamara PJ, Alcorn J \(2007\). Ontogeny of hepatic Cyp1A2 and Cyp2E1 expression in rat. J Biochem Mol Toxicol 21\(1\):41-50.](#)

[ERG \(2008\) Summary Report of the Peer Review Meeting: EPA's Draft Framework for Determining a Mutagenic Mode of Action for Carcinogenicity. Final Report. Submitted to Risk Assessment Forum, Office of the Science Advisor, U.S. Environmental Protection Agency, Washington D.C., by Eastern Research Group. May 23, 2008.](#)

Finkel AM. 1995. Toward less misleading comparisons of uncertain risks: the example of aflatoxin and alar. Environ Health Perspect 103:376-385

[Franklin J, Pluetschow A, Paus M, et al. \(2006\) Secondary malignancy risk associated with treatment of Hodgkin's lymphoma: meta-analysis of the randomized trials. Annals of Oncology 17:1749-60.](#)

Freireich EJ, Gehan EA, Rall DP, Schmidt LH and Skipper HE. 1966. Quantitative comparison of toxicity of anticancer agents in mouse, rat, hamster, dog, monkey, and man. Cancer Chemother Rep 50:219-244.

[Garshick E, Schenker MB, Munoz A, Segal M, Smith TJ, Woskie SR, Hammond SK, Speizer FE. \(1988\). A retrospective cohort study of lung cancer and diesel exhaust exposure in railroad workers. Am Rev Respir Dis 137: 820-825.](#)

Gaylor D, Ryan L, Krewski D and Zhu Y. 1998. Procedures for calculating benchmark doses for health risk assessment. Regul Toxicol Pharmacol 28:150-164.

Gaylor DW, Gold LS. 1994. Quick estimate of the regulatory virtually safe dose based on the maximum tolerated dose for rodent bioassays. Regul Toxicol Pharmacol 22:57-63.

Gold L, de Veciana M, Backman G, Magaw R, Lopipero P, Smith M, Blumenthal M, Levinson R, Bernstein L and Ames B. 1986. Chronological supplement to the Carcinogenic Potency Database: Standardized results of animal bioassays published through December 1984 and by the National Toxicology Program through May 1986. Environ Health Perspect 74:237-329.

Gold L, Sawyer C, Magaw R, Backman G, de Veciana M, Levinson R, Hooper N, Havender W, Bernstein L, Peto R, Pike M and Ames B. 1984. A Carcinogenic Potency Database of the standardized results of animal bioassays. Environ Health Perspect 58:9-319.

Gold L, Slone T, and Bernstein L. 1989. Summary of carcinogenic potency and positivity for 492 rodent carcinogens in the Carcinogenic Potency Database. Environ Health Perspect 79:259-272.

Gold L, Slone T, Backman G, Eisenberg S, Da Costa M, Wong M, Manley N and Ames B. 1990. Third chronological supplement to the Carcinogenic Potency Database; Standardized results of animal bioassays published through December 1986 and by the National Toxicology Program through June 1987. Environ Health Perspect 84:215-285.

TSD for Cancer Potency Factors: SRP Draft

April 2009

Gold L, Slone T, Backman G, Magaw R, Da Costa M and Ames B. 1987. Second chronological supplement to the Carcinogenic Potency Database; Standardized results of animal bioassays published through December 1984 and by the National Toxicology Program through May 1986. *Environ Health Perspect* 74:237-329.

Gold LS, Slone TH, Manley NB, Garfinkel GB, Rohrbach L, and Ames BN. 1997. Carcinogenic Potency Database. In: *Handbook of Carcinogenic Potency and Genotoxicity Databases*, Gold LS and Zeiger E, eds. CRC Press, Boca Raton, FL, pp. 1-605.

[Hakkola J, Tanaka E, Pelkonen O \(1998\). Developmental expression of cytochrome P450 enzymes in human liver. *Pharmacol Toxicol* 82\(5\):209-17.](#)

Hancock SL, Tucker MA and Hoppe RT. 1993. Breast cancer after treatment of Hodgkin's disease. *J Natl Cancer Inst* 85:25-31.

Hattis D, Goble R, Chu M. 2005. Age-related differences in susceptibility to carcinogenesis. II. Approaches for application and uncertainty analyses for individual genetically acting carcinogens. *Environ Health Perspect* 113:509-16.

Hattis D, Goble R, Russ A, Chu M, Ericson J. 2004. Age-related differences in susceptibility to carcinogenesis: a quantitative analysis of empirical animal bioassay data. *Environ Health Perspect* 112:1152-1158.

Hattis D. 1990. Pharmacokinetic principles for dose-rate extrapolation of carcinogenic risk from genetically active agents. *Risk Anal* 10:303-16.

Herbst AL and Scully RE. 1970. Adenocarcinoma of the vagina in adolescence. A report of 7 cases including 6 clear-cell carcinomas (so-called mesonephromas). *Cancer* 25:745-757.

Herbst AL, Ulfelder H and Poskanzer DC. 1971. Adenocarcinoma of the vagina. Association of maternal stilbestrol therapy with tumor appearance in young women. *N Engl J Med* 284:878-881.

Hill AB. 1971. Statistical evidence and inference. In: *Principles of Medical Statistics*, 9th ed., pp. 309-323. Oxford University Press, New York, NY.

[Hines RN, McCarver DG \(2002\). The ontogeny of human drug-metabolizing enzymes: Phase I oxidative enzymes. *J Pharmacol Exp Ther* 300\(2\):355-60.](#)

Hoel DG, Kaplan NL, Anderson MW. 1983. Implication of nonlinear kinetics on risk estimation in carcinogenesis. *Science* 219:1032-1037.

[Holsapple MP, West LJ, Landreth KS. \(2003\) Species comparison of anatomical and functional immune system development. *Birth Defects Research \(Part B\)* 68:321-34.](#)

Howe RB, Crump KS and Van Landingham C. 1986. GLOBAL86: A computer program to extrapolate quantal animal toxicity data to low doses. Clement Associates, Inc., Ruston, LA.

TSD for Cancer Potency Factors: SRP Draft

April 2009

Huff J. 1999. Long-term chemical carcinogenesis bioassays predict human cancer hazards. Issues, controversies, and uncertainties. *Ann N Y Acad Sci* 895:56-79.

IARC. 2006. Monographs on the Evaluation of Carcinogenic Risks to Humans: Preamble. International Agency for Research on Cancer, Lyon, France. Available at: <http://monographs.iarc.fr/ENG/Preamble/CurrentPreamble.pdf>

Institute of Medicine (2004). Gulf War and Health: Updated literature review of Sarin. The National Academy of Sciences, National Academy Press, Washington, DC, pp 20-22. www.nap.edu

[Lacroix D, Sonnier M, Moncion A, Cheron G, Cresteil T \(1997\). Expression of Cyp3A in the human liver--evidence that the shift between Cyp3A7 and Cyp3A4 occurs immediately after birth. *Eur J Biochem.* 247\(2\):625-34.](#)

[Lash TL, Aschengrau A \(1999\). Active and passive cigarette smoking and the occurrence of breast cancer. *Am J Epidemiol* 149:5-12.](#)

Lilienfeld AM and Lilienfeld DE. 1980. Foundations of epidemiology. Oxford University Press, Oxford, England.

[Marcus PM, Newman B, Millikan RC, Moorman PG, Baird DD, Oaguish B. \(2000\) The association of adolescent cigarette smoking, alcoholic beverage consumption, environmental tobacco smoke, and ionizing radiation with subsequent breast cancer \(United States\). *Cancer Causes Control* 11:271-8.](#)

[Marcus PM, Newman B, Millikan RC, Moorman PG, Baird DD, Qaqish B \(2000\). The associations of adolescent cigarette smoking, alcoholic beverage consumption, environmental tobacco smoke, and ionizing radiation with subsequent breast cancer risk \(United States\). *Cancer Causes Control* 11:271-278.](#)

[Mauch PM, Kalish LA, Marcus KC, Coleman CN, Shulman LN, Krill E, Come S, Silver B, Canellos GP, Tarbell NJ. \(1996\) Second malignancies after treatment for laporotomy staged IA-IIIB Hodgkin's disease: long-term analysis of risk factors and outcome. *Blood* 87:3625-32.](#)

McConnell EE. 1992. Comparative response in carcinogenesis bioassay as a function of age at first exposure. In: Guzelian P, Henry CJ, Olin SS, eds. Similarities and difference between children and adults: implications for risk assessment. ILSI Press, Washington, DC, pp. 66–67.

McDonald T and Komulainen H. 2005. Carcinogenicity of the chlorination disinfection by-product MX. *Journal of Environmental Science and Health Part C*, 23:163–214.

McDonald T, Hoover S, Faust J, Rabovsky J, MacGregor MK, Sherman C, Sandy M and Zeise L. 2003. Development of cancer potency estimates for California's Proposition 65. Poster at Society of Toxicology Annual Meeting. March 2003, Salt Lake City, UT. Abstract No. 687, *Toxicological Sciences* 72, S-1, 142.

Monson RR. 1986. Observations on the healthy worker effect. *J Occup Med* 28: 425-433.

TSD for Cancer Potency Factors: SRP Draft

April 2009

Moolgavkar SH, Knudson AG Jr. 1981. Mutation and cancer: a model for human carcinogenesis. J Natl Cancer Inst 66:1037-1052.

[Morabia A, Bernstein MS, Bouchardy I, Kurtz J, Morris MA. \(2000\). Breast cancer and active and passive smoking: the role of the N-acetyltransferase 2 genotype. Am J Epidemiol 152:226-232.](#)

Moysich KB, Menezes RJ and Michalek AM. 2002. Chernobyl-related ionising radiation exposure and cancer risk: an epidemiological review. Lancet Oncol 3:269-279.

National Research Council (NRC). 1983. Risk Assessment in the Federal Government: Managing the Process. Committee on the Institutional Means for Assessment of Risks to Public Health. National Academy Press, Washington, DC.

National Research Council (NRC). 1990. Health Effects of exposure to low levels of ionizing radiation. BEIR V. Committee on the Biological Effects of Ionizing Radiation. National Academy Press, Washington, DC

National Research Council (NRC). 1994. Science and Judgment in Risk Assessment. Committee on Risk Assessment of Hazardous Air Pollutants, Board on Environmental Studies and Toxicology, Commission on Life Sciences. National Academy Press, Washington, DC.

O'Brien PC, Noller KL, Robboy SJ, Barnes AB, Kaufman RH, Tilley BC and Townsend DE. 1979. Vaginal epithelial changes in young women enrolled in the National Cooperative Diethylstilbestrol Adenosis (DESAD) project. Obstet Gynecol 53:300-308.

Office of Environmental Health Hazard Assessment (OEHHA). 2001a. Prioritization of Toxic Air Contaminants Under the Children's Environmental Health Protection Act. California Environmental Protection Agency, Sacramento, CA.

Office of Environmental Health Hazard Assessment (OEHHA). 2001b. Public Health Goals for chemicals in drinking water: Tetrachloroethylene. California Environmental Protection Agency, Sacramento, CA.

[Office of Environmental Health Hazard Assessment \(OEHHA\). \(1998\). Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant. Part B: Health Effects. \(Approved by the Scientific Review Panel April 22, 1998\). California Environmental Protection Agency, Sacramento, CA.](#)

Office of Environmental Health Hazard Assessment (OEHHA). 1992. Proposed Identification of Perchloroethylene as a Toxic Air Contaminant. Part B: Health Effects. (Approved by the Scientific Review Panel, 1991: revised 1992). California Environmental Protection Agency, Sacramento, CA.

Office of Environmental Health Hazard Assessment (OEHHA). 2005a. Air Toxics Hot Spots Program Risk Assessment Guidelines. Part II: Technical Support Document for Describing Available Cancer Potency Factors. California Environmental Protection Agency, Sacramento, CA.

TSD for Cancer Potency Factors: SRP Draft

April 2009

Office of Environmental Health Hazard Assessment (OEHHA). 2005b. Proposed Identification of Environmental Tobacco Smoke as a Toxic Air Contaminant. Part B: Health Effects. As approved by the Scientific Review Panel, June 24, 2005. California Environmental Protection Agency, Sacramento, CA.

Office of Environmental Health Hazard Assessment (OEHHA). 2007. Air Toxics Hot Spots Technical Support Document for the Derivation of Noncancer Reference Exposure Levels (Public Review Draft). California Environmental Protection Agency, Sacramento, CA.

[Pinkerton KE, Joad JP. \(2000\) The mammalian respiratory system and critical windows of exposure for children's health. Environ Health Perspect 108\(Suppl3\):457-62.](#)

Preston-Martin S. 1989. Epidemiological studies of perinatal carcinogenesis. IARC Sci Publ 96:289-314.

[Rice D, Barone S Jr. \(2000\) Critical periods of vulnerability for the developing nervous system: evidence from humans and animal models. Environ Health Perspect 108\(suppl3\):511-33.](#)

Rothman K and Greenland S. 1998. Modern epidemiology. 2nd edition. Lippincott-Raven, Philadelphia, PA, pp. 133-134.

[Rothman KJ and Greenland S. \(2005\) Causation and causal inference in epidemiology. Am J Public Health 95 Suppl1:S144-S150.](#)

Salmon AG, Monserrat L and Brown JP. 1992. Use of a pharmacokinetic model in cancer risk assessment for vinyl bromide. Presented at the Society of Toxicology Annual Meeting, Seattle, WA, February 1992. Abstract: The Toxicologist 12(1): 96.

[Shimada T, Yamazaki H, Mimura M, Wakamiya N, Ueng YF, Guengerich FP, Inui Y \(1996\). Characterization of microsomal cytochrome P450 enzymes involved in the oxidation of xenobiotic chemicals in human fetal liver and adult lungs. Drug Metab Dispos 24\(5\):515-22.](#)

[Smith AH, Marshall G, Yuan Y, Ferreccio C, Liaw J, von Ehrenstein O, Steinmaus C, Bates MN, Selvin S \(2006\) Increased mortality from lung cancer and bronchiectasis in young adults after exposure to arsenic in utero and in early childhood. Environ Health Perspect 114:1293-1296.](#)

[Swerdlow AJ, Barber JA, Vaughan Hudson G, Cunningham D, Gupta RK, Hancock BW, Horwich A, Lister TA, Linch DC. \(2000\) Risk of second malignancy after Hodgkin's disease in a collaborative British cohort: the relation to age at treatment. J Clin Oncology 18:498-509.](#)

Travis CC and White RK. 1988. Interspecific scaling of toxicity data. Risk Anal 8:119-125.

[Treluyer JM, Gueret G, Cheron G, Sonnier M, Cresteil T \(1997\). Developmental expression of Cyp2C and Cyp2C-dependent activities in the human liver: in-vivo/in-vitro correlation and inducibility. Pharmacogenetics 7\(6\):441-52.](#)

TSD for Cancer Potency Factors: SRP Draft

April 2009

U.S. Dept. of Health and Human Services (U.S. DHHS) 1982. The health consequences of smoking: Cancer. A Report of the Surgeon General. United States Department of Health and Human Services. Pub No (PHS) 82-50179. Washington DC.

U.S. Dept. of Health and Human Services (U.S. DHHS). 1994. The health consequences of smoking: a report of the Surgeon General. Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, Washington, DC.

U.S. Environmental Protection Agency (U.S. EPA). 1986. Guidelines for Carcinogen Risk Assessment. Federal Register 51:33992-34003.

U.S. Environmental Protection Agency. 2002. A review of the reference dose and reference concentration process. Risk Assessment Forum, Washington, DC. EPA/630/P-02/002F. Available from: <http://cfpub.epa.gov/ncea/raf/recordisplay.cfm?deid=55365>.

U.S. Environmental Protection Agency. 2005a. Guidelines for Carcinogen Risk Assessment. Risk Assessment Forum, Washington, DC. EPA/630/P-03/001F.

U.S. Environmental Protection Agency. 2005b. Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens. EPA/630/R-03/003F. Available from: <http://www.epa.gov/iris/children032505.pdf>.

Van Landingham CB, Allen BC, Shipp AM and Crump KS. 2001. Comparison of the EU T25 single point estimate method with benchmark dose response modeling for estimating potency of carcinogens. Risk Anal 21:641-56.

[Walthall K, Cappon GD, Hurtt ME, Zoetis T. 2005. Postnatal development of the gastrointestinal system: a species comparison. Birth Defects Res Part B 74:132-56.](#)

[Watson RE, DeSesso JM, Hurtt ME and Cappon GD. 2006. Postnatal growth and morphological development of the brain: a species comparison. Birth Defects Res Part B. 77:471-484.](#)

Wen CP, Tsai SP and Gibson RL. 1983. Anatomy of the healthy worker effect: A critical review. J Occup Med 25: 283-289.

[Wiencke JK, Thurston SW, Kelsey KT, Varkonyi A, Wain JC, Mark EJ, Christiani DC. \(1999\) Early age at smoking and tobacco carcinogen DNA damage in the lung. J Natl Cancer Inst 91:614-9.](#)

Zeise L, Salmon AG, McDonald T and Painter P. 1991. Cancer potency estimation. In: Risks of carcinogenesis from urethane exposure. Salmon AG and Zeise L, eds, CRC Press, Boca Raton, FL, pp 97-112.

[Zoetis T, Hurtt ME. 2003. Species comparison of anatomical and functional renal development. Birth Defects Res PartB 68:111-120.](#)

TSD for Cancer Potency Factors: SRP Draft

April 2009

[Vieira I, Sonnier M, Cresteil T \(1996\). Developmental expression of Cyp2E1 in the human liver. Hypermethylation control of gene expression during the neonatal period. Eur J Biochem. 238\(2\):476-83.](#)

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)



BOARD MEETING DATE: April 2, 2010

AGENDA NO. 25

PROPOSAL:

Annual Meeting of the Brain & Lung Tumor and Air Pollution Foundation

SYNOPSIS:

This item is to conduct the annual meeting of the Brain & Lung Tumor and Air Pollution Foundation. The Foundation staff will present an annual report detailing the research supported by the Foundation over the past year, the Foundation's plans for the future, and a financial report.

COMMITTEE:

Not Applicable

RECOMMENDED ACTIONS:

Receive and file the annual report and ratify the Foundation disbursements described in the annual report.

Barry R. Wallerstein, D.Env.
Executive Officer

2009 Annual Report

1. Background

In February, 2003, the Board established the Brain Tumor and Air Pollution Foundation. In March, 2004 the Foundation amended its Articles of Incorporation to change its name to Brain & Lung Tumor and Air Pollution Foundation and to specify that its purpose is related to the effects of air pollution on brain and lung cancer. The mission of the Foundation is to support research studies on the association between air pollution and brain and lung cancer, as well as research for the development of novel therapeutics for such tumors. To carry out its purpose, the Foundation has funded research projects investigating the links between air pollution and brain and lung tumors. The dollar amount of the funding received to date is \$3,722,568. The current projects are described below.

2. Directors and Officers

The Directors of the Foundation are: Michael D. Antonovich, Chairman
Dennis Yates, Vice Chairman
Bill Campbell
Dr. Thomas Godfrey
Josie Gonzalez

The Foundation's staff is: Barry Wallerstein, Chief Executive Officer
Denise Whitcher, Secretary
Lisa Virgo, Treasurer

3. Report on the Foundation's Activities

Current Research Projects

In 2008, the Foundation Board approved funding for the following projects.

A. Brain Tumors and Air Pollution

Principal Investigator: Dr. Keith Black, Cedars Sinai Medical Center

Approved Funding: \$1,250,000

Allocated Funding: \$625,000

In previous studies funded by the Foundation, the researchers discovered that the activities of several genes were altered in laboratory animals exposed to concentrated ambient particulate pollutants. These genes may play a significant role in the development of brain tumors. In the new study, a more detailed analysis at the molecular level is being conducted. Individual areas of the brain, as well as other organs, are being included to determine if there are specific tissue types that are affected by particulate matter exposures. The research is being done in collaboration with the UC Irvine School of Medicine. This project is currently ongoing, and a report of results is expected by the end of this year.

B. Childhood Brain Tumors and Air Pollution

Principal Investigator: Roberta McKean-Cowdin, Ph.D., USC School of Medicine

Approved Funding: \$220,000

Allocated Funding: \$199,627

In a preliminary epidemiologic investigation on the potential role of air pollution with brain tumor risk funded by the Foundation, the researchers found a significant association of risk of brain tumors in children and exposure to PM2.5. The study population included children between the ages of 0-5 years diagnosed with brain tumors from in Los Angeles, Orange, Riverside, and San Bernardino counties from 1991 through 2002. This new study is conducting additional analyses including more detailed estimates of PM2.5 exposure based on geospatial extrapolations of monitoring data, and also includes distance of residential address from roadways as an estimate of exposure to traffic-related pollutant emissions. The study population is being expanded to include data from the West Coast Childhood Brain Tumor study. The latter database includes children aged 1-19 years diagnosed with brain tumors in Los Angeles county from 1984

through 1991. This project is currently ongoing, and a report of results is expected by the end of this year.

4. Financial Report

As of December 31, 2009, the Foundation had a cash balance of \$689,263. Following is an accounting of the Foundation's operations since its inception (7/23/03):

Revenue from Operations	
Contributions	\$3,722,568
Interest Income	<u>36,256</u>
<i>Total Revenue from Operations</i>	<u>\$3,758,824</u>
Operating Expenses	
Grants Awarded	
-Cedars-Sinai	\$2,684,250
-USC	377,967
Corporation Filing Costs	820
Bank charges	524
Professional fees-audit	<u>6,000</u>
<i>Total Operating Expenses</i>	<u>\$3,069,561</u>
Cash Balance, 12/31/09	\$689,263

5. Plans for Upcoming Year

The Foundation will continue monitoring the progress of existing research projects. The Foundation will evaluate potential new projects and provide funding to the extent that additional funds become available.

The Foundation Board asked that any funds transferred to the Health Effects Research Fund by the AQMD Governing Board be reserved for the Foundation's use to support brain and lung tumor and air pollution research, but not transferred until specific projects are identified by the Foundation Board. The Foundation Board also asked staff to prepare a plan for future research.

This page updated: March 25, 2010

URL: <http://www.aqmd.gov/hb/2010/April/100425a.htm>

Darisa Vargas

Subject: FW: World Logistics Center

From: K. Lakkees [<mailto:klakkees2@hotmail.com>]

Sent: Tuesday, June 16, 2015 9:31 AM

To: Mark Gross

Subject: World Logistics Center

Good morning,

I have a few questions regarding the World Logistics Center. If you are not the correct person to contact for this, please let me know to whom these questions should be forwarded.

1. According to the map (if I read it correctly) there are many homes/ranches that will be affected by this - will these residents lose their homes to eminent domain?
2. What will be done about the increased traffic and pollution?
3. How much will this project cost the taxpayers? Please include the cost for the increased damage to the roads and freeway caused by the semi trucks.
4. I do understand that this could bring jobs to Moreno Valley, but it will also increase traffic times for the majority of us that have to commute. Can the city and the builder honestly ensure that the residents will be priority, or is the main factor taken into consideration the increased revenue to the city?

Thank you for your time.

Grace Espino-Salcedo

Subject: RE: World Logistic Center Planning Commission Hearing 6/11 - Inadequate Notice and Planning Commissioner Conflict of Interest

From: Kathleen Dale [<mailto:kdalenmn@aol.com>]

Sent: Wednesday, June 10, 2015 10:57 AM

To: CityAttorney

Cc: Jesse L. Molina; George Price; Dr. Yxstian A. Gutierrez; Jeffrey J. Giba; D. LaDonna Jempson

Subject: World Logistic Center Planning Commission Hearing 6/11 - Inadequate Notice and Planning Commissioner Conflict of Interest

Sir - I raised concerns as noted in the subject line at last night's Council meeting and, as usual, the requests were completely ignored.

On the first matter, the City's first public disclosure of the Development Agreement dated June 3, 2015 was made late in the evening on June 4, 2015 with posting of the Planning Commission agenda on the City's website. Moreno Valley Municipal Code Sections 9.02.110(D)(2) and 9.02.200 require a minimum 10 days public notice of the Planning Commission review. This requirement has not been met and the Planning Commission hearing must be postponed until the required notice has been provided.

On the second matter, I understand your office has been made aware of biased activities by Planning Commissioner Meli Van Natta through her role as a neighborhood lead in the City's Next Door social media platform. I have also seen numerous postings on other social media sites in which this commissioner has publicly expressed a favorable bias toward the World Logistics Center project. These activities are just cause for her dismissal from the Council and warrant immediate action to that effect.

In addition, Commissioner Van Natta owns and operates a real estate business in the WLC project area. Review of the Rancho Belago Realty website this morning revealed two active listings in the immediate proximity of the WLC project boundaries - one on Gifford Avenue and one on Muirfield Street. If the City continues to ignore the substantial basis for dismissal of Commissioner Van Natta noted above, surely these obvious economic interests in the WLC project influence area are reasons for declaration of a conflict of interest and her recusal as to the WLC.

Considering the hearing scheduled for tomorrow, time is of the essence in these matters. Your prompt and considered reply is requested and warranted.

Kathleen Dale
Aleppo Way, District 4
909.641.1750

Cindy Miller

Executive Assistant to Mayor/City Council

City Council Office

City of Moreno Valley

p: 951.413.3006 | e: cindym@moval.org W: www.moval.org

14177 Frederick St., Moreno Valley, CA 92553

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

June 11, 2015

Moreno Valley City Planning Commission
 c/o Mark Gross, Senior Planner
 14177 Frederick Street
 Moreno Valley, CA 92553

Subject: June 11, 2015 Planning Commission Meeting
 Public Hearing Item 2, World Logistics Center Project

Commissioners:

The matter before you is not a popularity contest, nor as we often hear from your members a simple proclamation that it “is a good project and we should approve it”. You have an obligation to review each of the entitlement applications, individually and collectively, and render a decision as to whether the record before you demonstrates compliance with procedural requirements and whether the findings necessary for the multiple General Plan amendments, the rezoning, the Specific Plan, the pre-zoning, the subdivision map, and the development agreement (and at least one additional Municipal Code amendment that has been omitted from the disclosed required actions) are supported by substantial evidence in the record.

Due to procedural errors detailed in the enclosure to this letter, the Commission may not take any affirmative action on this matter at this time. In addition, errors, omissions and inconsistencies with the substantive content of the CEQA documentation, also as detailed in the enclosure to this letter, render the Commission unable to make an informed recommendation to the City Council regarding certification of the Final EIR or approval of the entitlement applications.

While the substandard condition of the administrative record precludes you from taking any affirmative action at this time, I wish to register my strong opposition to this project, and request that you recommend that the City Council deny each and every application, and not certify the EIR, for the following reasons:

1. The City's Economic Development website discloses that the City already has about 15 million square feet of occupied warehouses in the Moreno Valley Industrial Area, the Centerpointe Business Park, and on SR-60 at Redlands Boulevard. More than 7 million square feet of additional warehouse space is approved or available within the city limits. There is an additional 32 million square feet of warehouse space on the City's south and west borders within the City of Perris, on March JPA lands, and within the City of Riverside's Sycamore Canyon Business Park. Collectively these existing warehouse districts provide nearly 55 million square feet of such use within our City and immediate environs. It is simply irresponsible to designate more land for this particular use. **As a City, we deserve and demand more diversity in our job market.**
2. **This is the wrong place for such uses.** While we cannot undo the poor decisions that thrust Skechers, Aldi and ProLogis upon the eastern end of the State Route 60 corridor, we do have the power to ensure those mistakes are not repeated. Modern warehouse development requires adjacency to other modes of transportation, particularly rail and/or air. This location does not provide such modality flexibility and it is not feasible to resolve this deficiency in the future. It is not a coincidence that planned regional transportation improvements in the eastern inland area are focused upon enhancement of rail along the I-10 corridor and that no further funding is

Kathleen Dale
 June 11, 2015 Planning Commission Comments
 World Logistic Center
 Page 2 of 2

programmed for widening of State Route 60 in this area. The existing warehouse areas along the City's west and south boundaries enjoy excellent access along Interstate 215, existing rail service, and proximity to the outstanding joint-use airfield at March Inland Port.

3. The project proponent makes exorbitant claims about the economic benefits of this project. If these projections were even in the realm of realism, the existing core of warehousing within our City should have solved our job woes, filled the City coffers to overflowing, and jettisoned our schools to the top of the performance charts. This is simply not the case, and it is unreasonable to expect that benefits to the City of a further 40 million square feet of warehouse uses will be any different. **As a City, we deserve and demand a more diversified economic development base that will provide a varied and more robust revenue stream.**
4. Approval of this project requires overriding 15 unavoidable significant impacts. Among these are air quality and traffic impacts that will adversely affect the general quality of life in our City and the extended region that is adversely impacted by this project. The lifetime risk comparison chart added to the Final EIR (Figure 4.3.21, Track Changes Version of Final EIR, page 4.3-157) is highly offensive and is irrelevant to you deliberations. **The fact is that, if approved, the EIR presented for your consideration tells you that this project will make people sick and will kill people. Not one of you has the right to inflict such a future on any other individual.**

Please consider the future vibrancy and prosperity of the City, and the health and well-being of families within the City and the extended region beyond that will be adversely affected if this project is approved. If the decision is to proceed with a hearing process for this ill-conceived project, you must acknowledge the significant deficiencies with the CEQA record before you and direct staff to prepare a revised draft EIR and conduct the required new public review and comment period before a recommendation is rendered.

Please note that these comments are based upon a reasonable review of the voluminous and poorly presented documents released by the City prior to the June 11th hearing date, including the critical Development Agreement which was only disclosed to the public for the first time late in the evening of June 4th. I reserve the right to submit further comments as time permits additional review and as the hearing process proceeds.

Respectfully submitted,

Kathleen Dale
 Aleppo Way, District 4
 Moreno Valley, CA 92553
 Life-long Moreno valley Resident
 Bachelor of Science, Environmental Sciences, UCR
 35-year career as planner and environmental consultant

enc Summary of Procedural and Substantive Errors, Omissions and Inconsistencies (8 pages)

World Logistics Center
Summary of Procedural and Substantive Errors, Omissions and Inconsistencies
Enclosure to June 11, 2015 Comment Letter from Kathleen Dale

1. Agenda Description. The agenda description is inaccurate and misleading as to the nature of the item before you.
 - a. Item PA12-0014 is not an annexation action, it is a pre-zoning.
 - b. The agenda description fails to include the proposed amendment to Municipal Code Chapter 12.36 to modify the City's designated truck routes
 - c. The agenda description fails to acknowledge the City as a co-applicant of this project (by virtue of the City's May 22, 2012 action to compel numerous property owners to participate in the project and by virtue of the City's role as a party to the Development Agreement)
2. Public Notice
 - a. Public notice for this evening's meeting has not conformed to Moreno Valley Municipal Code requirements for 10-day notice of the development agreement (MVMC Section 9.02.110(D)(2) and 9.02.200.
 - b. The Development Agreement document before you is dated June 3, 2015 and was release to the public late on the evening of June 4, 2015.
 - c. The document before you bears no resemblance to the document that has accompanied previous EIR document releases.
 - d. Adequate public notice, and resolution of the significant inconsistencies between the development agreement and the EIR (see item 3, below) must be resolved before the hearing process proceeds.
3. Development Agreement (PA12-0011)
 - a. The document before you significantly undermines mitigating project features proclaimed and assumed throughout the EIR and the recommended findings and statement of overriding considerations. The reader can be easily misled by the agreement if close attention is not paid to Article 1, Definitions. Of particular importance is the definition of Development Impact Fee (Section 1.5) and the special exclusion from the arterial streets, interchanges, traffic signals, and fire facilities components for this project. The conflicts this provision of the Development Agreement raises with the EIR are too numerous to detail here, but can be found by searching the EIR and supporting documents for "DIF". Examples include (1) a statement in the EIR Project Description (page 3-77 in the Track Changes Revised Draft EIR) that payment of DIF fees from future implementing projects within the specific plan area will fund future roadway improvements in the immediate surrounding City area and (2) a statement in the traffic impacts discussion (page 4.15-253 in the Track Changes Revised Draft EIR) that payment of DIF constitutes a portion of the developer's mitigation for offsite improvement of non-TUMF roads within the City.

As noted in the accompanying cover letter, the points noted in this enclosure are based upon partial review of the poorly constructed, voluminous, and changing record for this monumental undertaking. The right is reserved to submit additional comments as the hearing process proceeds.

World Logistics Center
Summary of Procedural and Substantive Errors, Omissions and Inconsistencies
Enclosure to June 11, 2015 Comment Letter from Kathleen Dale

- b. There are a limited number of DIF facilities within the Specific Plan area.
Reimbursement under the DIF program is allowed only when a particular building permit entails associated construction of DIF facilities. Many of the building sites within the Specific Plan area do not include associated DIF transportation facilities. Waiving the DIF arterial streets, interchange, and traffic signal components for all of the future buildings within the Specific Plan may seriously erode the overall DIF program. The City must do a better job of quantification and disclosure of the ramifications of the DIF exclusions for this project, including an update of the DIF program nexus study.
- c. Mitigation Measures 4.15.4A and 4.15.4C assume project responsibility for DIF payments in accordance with the Municipal Code. The special exclusions from the arterial streets, interchanges, and traffic signals components provided for in the Development Agreement are inconsistent with the EIR mitigation measures. This discrepancy must be resolved before a recommendation to the City Council can be rendered.
- d. The EIR Executive Summary states that the project will generate \$10 million dollars in DIF fees for Fire services (page 1-21 of the Track Changes Revised Draft EIR) and also proclaims that the WLC project is responsible for building the fire station and paying DIF fees. The special exclusion from the fire services component provided for in the Development Agreement is inconsistent with the EIR. This discrepancy must be resolved before a recommendation to the City Council can be rendered.
- e. Section 4.12 of the Development Agreement includes the word “Library” in the section title. There is no commitment regarding library facilities in the text that follows. This section requires clarification and correction before a recommendation to the City Council can be rendered. While this may seem trivial, the reference to “library” in this document has particular relevance to informed citizens of the community who saw the City’s Library Fund raided to front substantial road improvements on behalf of Highland Fairview for another development that lies dormant to this day.
- f. While evidence before you should make it clear that entering into this Development Agreement is not in the City’s best interests, if the Commission is inclined to recommend approval, the following revisions should be incorporated in the agreement. These modifications address timely and appropriate benefits to the City consistent with the recommended statement of overriding considerations and establish a document that stands alone without need to pour through thousands of pages of administrative record to understand key provisions. :
 - i. The initial payment in Section 4.12 should be due upon project approval.
Highland Fairview receives a significant benefit from the rezoning action alone.

World Logistics Center
 Summary of Procedural and Substantive Errors, Omissions and Inconsistencies
 Enclosure to June 11, 2015 Comment Letter from Kathleen Dale

The initial payment for the educational training program should be due upon the effective date of the rezoning ordinance.

- ii. Add performance criteria and a penalty structure for job creation and local hiring.
 - iii. Detail the public infrastructure and services the City will provide and the associated costs/value (per Section 4.10).
 - iv. Detail public infrastructure Highland Fairview is responsible for and associated costs/value (per Section 4.10).
 - v. Provide an inventory and accounting of the lost DIF fees by Planning Area reflecting the special exclusion from arterial streets, interchanges, traffic signals, and fire facilities components.
4. Environmental Impact Report (P12-016)
- a. Recirculation - CEQA Guidelines Section 15088.5 addresses the circumstances under which recirculation of an EIR is required before certification. Qualifying circumstances triggering the requirement to recirculate include new information that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect or a feasible way to mitigate or avoid such an effect. New information can include changes in the project or the environmental setting. One of the examples cited in the Guidelines is that the draft EIR was so fundamentally and basically inadequate that meaningful public review and comment were precluded. Recirculation requires a new period of notice and consultation. Circumstances warranting recirculation of a revised draft EIR in this case, include¹:
 - i. General Project Description Changes - one only need page through the Project Description Section of Final EIR Volume 2 (Revised DEIR Track Changes) to gain a sense of the substantial degree of change from the 2013 draft EIR. There are fewer than 10 pages of the 126 pages in the track changes version of the project description that have not been modified. The project boundary has been adjusted, the circulation improvements have been modified, project phasing has been modified, the zoning provisions of the specific plan have been modified, and the build-out year has been modified. In summary, the project has been modified in substantive ways, which has necessitated substantial modification of the entire draft EIR and 12 of the 13 technical appendices (Appendix C - Agricultural Resources, Appendix D - Air Quality, Greenhouse Gas, and Health

¹ Given the extensive changes to the supporting technical studies it is highly likely that many more changes warranting recirculation would be discovered with a comprehensive review of the documents released May 1, 2015 and improperly characterized as a final EIR.

World Logistics Center
 Summary of Procedural and Substantive Errors, Omissions and Inconsistencies
 Enclosure to June 11, 2015 Comment Letter from Kathleen Dale

- Risk Assessment Report, Appendix E – Biological Resources, Appendix F – Cultural Resources, Appendix G - Geotechnical, Appendix H – Specific Plan, Appendix J – Draft Master Plan of Drainage and Preliminary Water Quality Management Plan, Appendix K - Noise, Appendix L - Traffic, Appendix M - Water Supply, Appendix N -Utilities, and Appendix O – Fiscal and Economic Impact Study). The City's decision to dispense with the obligation to recirculate a revised draft EIR has deprived the citizens of the opportunity for meaningful public review, and comment upon, the substantially revised project.
- ii. Municipal Code Amendment to Revise Truck Routes - Final EIR Table 1-C and multiple references to addition of a truck route map throughout the Final EIR characterize this update to the traffic section of the EIR as simple addition of a truck route figure. This is a mischaracterization of the updated content of the revised Traffic Impact Analysis (TIA) Report (September 2014), which now discloses that the project involves a modification to the Municipal Code to change the City's designated truck routes. Final EIR pages 40, 89 and 90 include a figure of the existing truck routes, a statement that the project includes proposed changes, and a figure depicting the proposed changes.

The addition of a Municipal Code Amendment to revise the City's designated truck routes is a new project element that was not addressed in the Draft EIR as circulated for public review. The proposed modifications evident by quick comparison of the existing and proposed truck route exhibits included in the TIA include: (1) elimination of an existing truck route segment on Alessandro Boulevard between Moreno Beach Drive and Merwin Street, (2) addition of a truck route along Eucalyptus Avenue between Redlands Boulevard and Gilman Springs Road, and (3) addition of new internal specific plan roads as designated truck routes, including segments in proximity to established residential neighborhoods in Old Moreno.

Contrary to the characterization of the nature of this change in Final EIR Table 1-C, this added project element represents a new entitlement element and entails changes in truck movement patterns that present the potential for new or more severe traffic, noise and air quality impacts affecting existing and future sensitive receptors (as one example, truck traffic that would have used Alessandro Boulevard to travel east through the City will now be diverted north along Moreno Beach Drive). This change in the project requires recirculation of a revised draft EIR disclosing the new project element, characterizing the nature of the change, assessing the resultant impacts, and determining the need for

World Logistics Center
 Summary of Procedural and Substantive Errors, Omissions and Inconsistencies
 Enclosure to June 11, 2015 Comment Letter from Kathleen Dale

new or modified mitigation measures. The City must conduct a new notice and consultation period and respond to any comments received in the course of the new notice period. Only then may a Final EIR be presented for the Commission's consideration of a recommendation to the City Council regarding certification of the EIR and action on the project entitlements.

- iii. Noise Impacts - Page 4.12-51 of the track changes version of the Final EIR identifies an added segment of Gilman Springs Road impacted by excessive noise levels and an increase in the number of time horizons for which there is a significant noise increase. The text at this location indicates there are existing residential receptors in these areas. This change in the projected impacts requires recirculation of a revised draft EIR to inform the affected sensitive receptors, the public, and the decision-makers and to afford the affected residential receptors an opportunity to comment. The City must conduct a new notice and consultation period and respond to any comments received in the course of the new notice period. Only then may a Final EIR be presented for the Commission's consideration of a recommendation to the City Council regarding certification of the EIR and action on the project entitlements.
- iv. Noise Impacts – Page 4.12-54 of the track changes version of the Final EIR substantially modifies the mitigation measures for sound walls to include a convoluted balloting process that could result in no mitigation being provided. The City's failure to disclose this change in a revised, recirculated draft EIR deprives the affected residents (and other sensitive receptors) and the general public the opportunity for comment on changes to the likely environmental effects and the feasibility of the modified mitigation measure. It is also noted that the text at page 4.12-57 appears to conclude that the modified mitigation measures would reduce impacts to below a level of significance, but does not appear to address the conditional circumstance in which the balloting procedure results in no sound wall (i.e., impacts would be unmitigated).
- b. Moreno Valley Implementing Rules Procedural Failures – The EIR (see Clean Revised Draft EIR, page 2-5) proclaims that the EIR has been prepared in accordance with the "rules, regulations and procedures for implementing CEQA as adopted by the City". This is simply untrue. The following identifies numerous instances of procedural errors based upon the City of Moreno Valley *Rules and Procedures for the Implementation of the California Environmental Quality Act*²

² The EIR does not contain a formal citation or reference to the rules and procedures document. These comments are based upon the *Rules and Procedures for the Implementation of the California Environmental Quality Act* document provided by e-mail on July 14, 2014 by City of Moreno Valley Associate Planner Jeff Bradshaw (as

World Logistics Center
Summary of Procedural and Substantive Errors, Omissions and Inconsistencies
Enclosure to June 11, 2015 Comment Letter from Kathleen Dale

- i. The City's rules and procedures identify two advisory bodies for CEQA review – the Environmental and Historic Preservation Board and the Planning Commission (Section 2, Advisory Body definition). Section 10.3 requires review of the **Draft EIR** by the advisory bodies, and inclusion of their comments in the Final EIR. The record before you provides no evidence that required Draft EIR review by the advisory bodies was completed.
- ii. The City's procedures define alternate contracting provisions when the City is a project proponent. With the City as a co-applicant for this project, contracts for the environmental consultant(s) should have been subject to the City's Public Services Agreement procedures and provisions.
- iii. Section 9.4.B requires mailed notice of availability of the Draft EIR to property owners within 300 feet of the project exterior boundary. Neither the staff report (page 18) nor the EIR (page 2-8, Clean Revised Draft EIR) provide confirmation of completion of this important notification requirement.
- iv. Section 9.4.C requires that copies of the Draft EIR be provided to members of the advisory (Environmental and Historic Preservation Board and the Planning Commission) and decision-making (City Council) bodies at the time the notice of completion is filed. Neither the staff report (page 18) nor the EIR (page 2-8, Clean Revised Draft EIR) document completion of this important notification requirement.
- v. Section 9.5.A requires that the Final EIR be prepared by staff or a consultant retained by the City. The record suggests that this was not the case.
- vi. Section 9.5.E requires that the Final EIR and the "project documents" are to be available to the public when the public hearing notice is given. There has been a significant breach of this requirement with respect to the proposed Development Agreement, which was only completed June 3, 2015 and posted for public access after close of business on June 4, 2015. The hearing notice for this project was distributed by personal delivery to selected individuals April 30, 2015 (myself included), dated May 1, 2015, and published in the Press Enterprise May 4, 2015.
- vii. Section 10.4.E.2 requires that significant environmental issues raised during the decision-making body hearings, and responses thereto, shall (underline added for emphasis) be added to the Final EIR. While this provision does not directly address the Planning Commission hearing on a Final EIR, for consistency, it

related to the recent Prologis project). As a citizen routinely engaged in land use matters in this City, I am not aware of any noticed action by the City since July 14, 2014 to modify these procedures.

World Logistics Center
Summary of Procedural and Substantive Errors, Omissions and Inconsistencies
Enclosure to June 11, 2015 Comment Letter from Kathleen Dale

would be appropriate that any significant environmental issues raised during the advisory body hearings should be treated the same.

- c. Invalid and Inaccurate Comparison of No Project and Plus Project Trip Generation – Page 6-21 of the track changes version of the Final EIR presents Table 6.G, Comparison of Average Daily Trips. This table provides a very cursory comparison of total average daily trips for various development scenarios. This simple comparison is repeated throughout the collection of EIR documents and is used in the proposed Statement of Overriding Considerations as justification that the project trip generation, and therefore traffic impacts, a reduced when compared to the existing General Plan. **The problem is that the comparison is not that simple and, in fact, is inconsistent with the analysis and findings presented in the Traffic impact Analysis (TIA).**

The problem with this oversimplified comparison of trip numbers is that traffic from different uses is characterized by varying vehicle types and varying distribution, both in time and direction. Modeling results are required to provide a proper basis for comparison. Modeling results are provided in the TIA (Revised September 2014) on pages 214 through 253 for 2022 projected conditions and pages 289 through 333 for 2035 project conditions. The conclusions in the TIA show that for each category of transportation facilities assessed (road segments, intersections, freeway mainlines, freeway weaving, and freeway ramps) the impacts for projected conditions under the proposed project are more severe than the impacts for projected development under the existing General Plan. **The evidence before you does not support the grossly oversimplified contention that a reduced number of trips correlates to reduce traffic impacts (and associated claims of reduced air and noise impacts).**

- d. Mitigation Measures Unclear, Unenforceable and Ineffective. These examples of issues with the proposed mitigation measures became evident in the course of a very focused review of selected sections of the voluminous and cumbersome EIR documents that was conducted to generate these comments. It is reasonable that numerous additional items requiring clarification would be identified in a comprehensive review, which the Planning Commission should ensure is conducted before a recommendation to the City Council is rendered.
- i. On page 4.3-80 of the revised Draft EIR (Clean version), it is explained that Mitigation Measure 4.3.6.3.B requires all diesel trucks “accessing” the project during the operation phase be model year 2010 or newer. This measure is focused upon record-keeping at each future warehouse building to document that trucks operating on each site comply with numerous requirements, including the commitment to use 2010 or better engine technology. The section

World Logistics Center
Summary of Procedural and Substantive Errors, Omissions and Inconsistencies
Enclosure to June 11, 2015 Comment Letter from Kathleen Dale

- within which this measure first appears addresses localized impacts; however, this measure is also cited as contributing to mitigation of regional air quality impacts, which extend throughout the entire South Coast Air Basin. Unless the mitigation measure is reworked to require tracking of trucks as they enter the basin, it is ineffective in mitigating the regional impact. With an appropriately modified measure, implementation would likely require establishment of off-site inspection stations would also that require consideration in the environmental analysis. Reconsideration and clarification is required before a recommendation to the City Council is rendered.
- ii. The discussion of item 4.iv, above identifies a contradiction in the soundwall mitigation and significance conclusions related to the balloting procedure. This contradiction warrants reconsideration and clarification of the mitigation measure and significance conclusion before a recommendation to the City Council is rendered.

Grace Espino-Salcedo

Subject: RE: Message from WLC Link

From: Karen Jakpor [<mailto:kmjakpor@gmail.com>]

Sent: Saturday, June 13, 2015 8:11 PM

To: Mark Gross

Subject: Fwd: Message from WLC Link

I attended the entire planning commission hearing on June 11, 2015, but was not given the opportunity to speak. I am unavailable for the next two dates, so I have submitted my testimony in written form. Please see attached document and please distribute it to the Planning Commission.

Sincerely,

Karen Jakpor

Mark Gross

Senior Planner

Community & Economic Development

City of Moreno Valley

p: 951.413.3215 | e: markg@moval.org w: www.moval.org

14177 Frederick St., Moreno Valley, CA 92553

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Testimony to the Planning Commission on the World Logistics Center planned for June 11, 2015. (I was unable to present this testimony, so here is my testimony in written form.)

Karen Jakpor, MD, MPH

Hello my name is Dr. Karen Jakpor and I am a physician volunteer with the American Lung Association, although I am speaking now as an individual. I am speaking not only from the point of view of a physician, but also that of a patient with severe asthma who has been to the ER countless times.

The California Air Resources Board finds the Final Environmental Impact Report “legally inadequate and unresponsive” to the recommendations the ARB made concerning zero and near-zero emission technology. Instead the final EIR does only partial mitigation by requiring trucks from 2010 on. The fEIR relies on a rat study the ARB called inadequate and said should be removed from the entire report. According to the Press-Enterprise, “Dan Greenbaum, the president of the Health Effects Institute, said the city’s report appears to have overstated the study’s findings.”

It would be irresponsible to assume that there will be no health effects from the WLC if it is allowed to proceed while ignoring full-mitigation measures. Just as the health effects evaluation is likely full of error, I suspect that the traffic estimates are also hugely in error.

To give you an idea of how much error, a study by Bluffstone and Ouderkirk published in the Journal of Contemporary Economic Policy in 2007 estimates that a warehouse the size of 800,000 SF implies roughly 560 truck trips/day. Since the WLC is 52 times bigger, I multiplied by that and found an estimate of 29,120 truck trips per day for the World Logistics Center, based on this study. If that’s true, then the EIR estimate of 14,682 truck trips per day should perhaps be doubled. That means you should also double the emissions projections which would greatly increase the health impact. The authors of that study further concluded with the emissions data they had when they wrote the study that in the range of 15,000 to 25,000 additional diesel truck trips would be associated with an excess mortality

in the range of 3.2 to 6.4 deaths per year, with a combined excess mortality and morbidity value of \$24.7 to \$45.5 million dollars per year—that's 3 to 6 people dying each year. This is a serious issue. The analysis of the traffic, air pollutant emissions, and resulting health effects should be accurate before you make any decision.

Particulate air pollution not only causes increased deaths due to asthma and respiratory conditions. But very small particulate gets absorbed into the blood stream and causes heart attacks, strokes and cancer. (and perhaps autism) This is no small problem. According to MIT researchers, air pollution accounted for 200,000 deaths in the US in 2005. And air pollution related mortality shortened the average victim's lifespan by 12 years. Approximately 7,000 Californians die each year from particulate air pollution, more than twice the number killed in car accidents.

The American Lung Association State of the Air Report shows that again this year our community has received straight F's in all air quality measures and has some of the worst air quality in the nation. So I don't believe it is coincidental that Riverside County has the highest mortality rate in California for deaths from heart disease, and close to the worst in cancer, lung disease, and stroke. An article in the New England Journal of Medicine showed that residents of Pittsburgh and Buffalo which have made the most progress in cleaning their air, gained almost 3 ½ years longer life expectancy in the last two decades.

Bad air quality is costly. The California Department of Public Health reported that over \$1 billion was spent on asthma hospitalizations in 2010, with the majority of that expense covered by MediCal and Medicaid.

Why should Moreno Valley chose between jobs and health? Instead, why not create jobs that don't have the potential to shorten the life expectancy of every citizen? Please vote against this proposed development.

Grace Espino-Salcedo

Subject: FW: missing crucial exhibits in FINAL EIR & horrible DA

-----Original Message-----

From: Lindsay Robinson [<mailto:lindsay.robinson@ucr.edu>]

Sent: Monday, May 18, 2015 7:45 AM

To: George Price; Jeffrey J. Giba; Jesse L. Molina; Dr. Yxstian A. Gutierrez; ladaonnaj@moval.org

Cc: Mark Gross; Michelle Dawson; Mike Lee; Richard Sandzimier; Allen D. Brock, CBO

Subject: missing crucial exhibits in FINAL EIR & horrible DA

Dear Council Members and staff,

I have been working my way thru the recently released FINAL EIR submitted for the World Logistics Center which is posted on the city website and I have some very large concerns. I'm not sure who I need to address these matters to so I am including everyone that might be involved.

It does not seem logical nor transparent for a document to be released as the FINAL if it is incomplete, but this document seems to be missing some very important exhibits- A1, A2 and B in the development agreement which would describe the property involved and the public improvements that the developer is responsible for. These items are critical/crucial to the entire issue at hand and should be in the FINAL EIR. The fact that they are missing indicates that this should not have been presented to the public as a final document. It's difficult enough to wade through this once and very frustrating to find information is missing.

Even more appalling to an average resident like me is the entire Development Agreement and I can not believe that city staff would accept this as a final agreement. It is completely one sided and should never have been allowed in the FINAL document. The developer is promoting his project as bringing 20,000 jobs (gross exaggeration by newer automated technology) yet in this agreement he never has to build anything. That needs to be brought out by the city not buried in a website folder. Citizens should not lose their right to contest or change this project either. There is so much more that is completely awful about this agreement and I hope you all read and understand it completely and thus reject it in it's entirety.

It also seems like there have been way too many changes from the original so it should have been submitted as a revised EIR not a FINAL EIR.

Since this document is not complete and also contains a horribly one-sided Development Agreement, I feel you should reject the document until it's complete and return it to the developer. A new 45 day review would begin when a complete final document is submitted.

The city has promised transparency and ethical behavior and I hope you will follow those practices regarding this document.

Thank you for your time and consideration,

Lindsay Robinson

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Grace Espino-Salcedo

Subject: RE: WLC

-----Original Message-----

From: Lindsay Robinson [<mailto:lindsay.robinson@ucr.edu>]

Sent: Thursday, June 11, 2015 5:19 AM

To: Allen D. Brock, CBO; Brian Lowell; George Price; Jeffrey J. Giba; Jesse L. Molina; D. LaDonna Jempson; Michelle Dawson; Richard Sandzimier; Dr. Yxstian A. Gutierrez; Mark Gross; Mike Lee

Subject: WLC

Dear City Staff, Council Members and Planning Commissioners:

Just in case you aren't following the comments in the Press Enterprise- the following was from the Warehouse Vote not going to the public article. Very well written and says what so many of us have been trying to articulate to you all. More transparency and details are needed. Mr. Benzeevi has a poor track record on delivering what is promised and the current development agreement is so vague he will be able to wiggle out of so many of the issues leaving taxpayers to foot the bill and all the negative impacts. Are you following the law by bringing this forward to the planning commission before 10 days of review? Don't gamble with our health, well being and quality of life so that a "developer" with investor money can get richer. He promised us high end homes and business park when he obtained the renaming of the east end to Rancho Belago - make him keep that promise. He promised a beautiful senior development and performing arts center with Aquabella which later changed to a medical corridor and he got a road thru his property- make him keep that promise before you destroy the east end. Anyone who thinks it's a good project for that location doesn't know the city very well nor understand the damage that will occur. And believe it or not, many residents are able to understand the complicated agreement which is why we continue to point out how bad this project is for the City of Moreno Valley.

Thank you for your time,
Lindsay Robinson

Jim Baylor · Westminster High

The people need to have access to all the information so we can vote intelligently on this project. Anytime someone says ..."it's too complicated for the voters"... is an indication that there's something that is not entirely ethical, moral about some aspect of this project. Don't refer to the voters, the people who make this city/county/state/country what it is through the democratic process of one person one vote. I'm concerned, as well as all citizens should be, about the increase in traffic - rail, highway, air and the ramifications it will have on the community, pollution, congestion of all types. I don't see the infrastructure robust enough to control the anticipated increase of general activity. The people need accountability when the motivation is money, the justification for the sacrifices necessary to be made by the community. Jobs are being promised? 20,000 and billions of dollars into the city/county. We the people need to hear about all of that. What kind of jobs? Good paying middle class jobs with benefits like retirement, health care, and of course proper and fair wages, not part time warehouse jobs for minimum wage and therefore no benefits. Workers will need the collective bargaining rights afforded to all American workers so that there are some assurances that a viable sustaining living can be realized. We need accountability. What will the additional income of money to the area be used for? Community improvements? Infrastructure modernization? Being transparent and accountable with real metrics even projections. Or will it be stuffed into the pockets of politicians and corporate executives and bankers? Where is all the goods coming from and going to that will pass through this mammoth size warehouse? Will they be American goods? or mostly goods manufactured from sources that have outsourced the millions of American jobs over the last couple of decades? We need manufacturing jobs in America. We need jobs that will pay a middle class wage so the products can be purchased by the workers and in so doing will grow the economy. I know that's a lot of information but don't make the people sound so dumb as to not be able to comprehend the complexities of the project. When you insult

people like that you put yourselves on a pedestal, insinuating that you, this council, that is going to make all the decisions, is so much smarter than the average worker and voter that the people couldn't possibly make an informed, intelligent decision. So we should just trust you and basically accept whatever happens, whether it's good for the people or not? If this has anything to do with the Trans Pacific Partnership - with all its secrecy, and the disregard for the workers, the environment, lack of regulations, corporate decisions for their profits, over and beyond what the rights and needs of the people. Then the people should know about all the details, before it happens, in all fairness. Thank you...

Grace Espino-Salcedo

Subject: RE: MV Graduations [WLC Development Agreement]

-----Original Message-----

From: Lindsay Robinson [<mailto:lindsay.robinson@ucr.edu>]

Sent: Wednesday, June 10, 2015 5:11 AM

To: Michelle Dawson

Subject: RE: MV Graduations

Ms. Dawson,

Thank you for your reply.

I attended part of last night's council meeting and one speaker mentioned that city rules/regulations (not sure correct term) require that there be 10 days for review of the development agreement before it goes to Planning Commission. Would you please verify if this is true and if so why is it going to the Planning Commission before 10 days? It is a very large document and doubtful that most of the commission and council have been able to study it carefully in such a short amount of time. A project of this magnitude that will be gambling with our health, well being and quality of life not to mention destroying our dreams and investments should require the maximum scrutiny possible and not be rubber stamped through. If the rule/regulation requires 10 days minimum than Thursday's Planning Commission meeting should not include the WLC development agreement.

While I have your attention I also am deeply troubled that the 8 staff members who recommended this project be approved do not live in Moreno Valley. I'm not sure how long most of them have been on the payroll, but do know that Mark Gross was and he worked with us on the FINAL build out plan for Moreno Valley which included very detailed wording on the animal keeping areas. The FINAL build out plan was well balanced and afforded diversity of jobs and allowed the east end to remain rural. A promise was made to the residents and other groups when this plan was adopted. The FINAL build out plan was also in place to prevent what is happening now with this WLC rezoning request. Progress is having a well balanced community not paving everything over.

Thank you for your time.

Respectively,

Lindsay Robinson

From: Michelle Dawson [michelled@moval.org]

Sent: Tuesday, June 09, 2015 4:45 PM

To: Lindsay Robinson

Subject: RE: MV Graduations

Thank you for bringing this to our attention. The June 11th Public Hearing before the Planning Commission was scheduled (and Public Notices issued) to reflect the Planning Commission's standing schedule as meetings are regularly held on the second and/or fourth Thursday of each month. Staff continues to believe that the Noticed Hearing date is appropriate because deviating from the standard Planning Commission schedule could also generate criticism.

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Attendance at the June 11 Hearing is one of several methods that can be used to provide public input on the proposed Project. Public Comment can also be provided via e-mails or letters. Recognizing the significance of the proposed project, the City has taken extra steps to provide the community with additional time and multiple methods to consider the materials. We have provided the following information on the City's main web page, which includes a link for comments to be forwarded directly to the City Clerk via e-mail; we are sending out a press release with this information as well. Lastly, it should be noted that the Planning Commission and City Council will each have the authority, if they so choose, to continue their respective hearings and adjourn to subsequent dates/times that could afford further opportunities for public participation."

Below, for your information, is a copy of the text recently (and prominently) posted to the City's website.

Proposed World Logistics Center Project

The public hearing for the proposed World Logistics Center project is scheduled for the June 11th Planning Commission meeting at 7:00 p.m. Please note, the meeting will be held at the Moreno Valley Conference & Recreation Center (Grand Ballroom) located at 14075 Frederick Street. If you are unable to attend the public hearing and would like to submit a comment, you may submit your comment to the City Clerk's office by clicking this link. You may also mail your comments to:

City Clerk City of Moreno Valley

PO Box 88005

Moreno Valley, CA 92552

Michelle Dawson

City Manager

City Manager's Office

City of Moreno Valley

p: 951.413.3020 | e: michelled@moval.org w: www.moval.org

14177 Frederick St., Moreno Valley, CA 92553

[The City of Moreno Valley - Where Dreams Soar]<<http://www.moval.org>>

-----Original Message-----

From: Lindsay Robinson [<mailto:lindsay.robinson@ucr.edu>]

Sent: Wednesday, June 03, 2015 11:57 AM

To: George Price; Jeffrey J. Giba; Jesse L. Molina; D. LaDonna Jempson; Michelle Dawson; Dr. Yxstian A. Gutierrez; Brian Lowell

Subject: MV Graduations

Dear Council Members and City Staff,

Both Canyon Springs and Vista del Lago High Schools have their graduations on June 11 the same day as the Planning Commission meeting on WLC. Please consider changing the meeting date so that people won't have to choose.

Thank you,

Lindsay Robinson



T 510.836.4200
F 510.836.4205

410 12th Street, Suite 250
Oakland, Ca 94607

www.lozeaudrury.com
richard@lozeaudrury.com

Via Electronic Email and Hand Delivery

June 10, 2015

Chairperson Jeffrey D. Sims, and
Honorable Member of the
Moreno Valley Planning Commission
c/o Richard Sandzimier, Community & Economic Development
14177 Frederick St.
Moreno Valley, CA 92553
Email: RichardSa@moval.org

Mark Gross, Senior Planner
City of Moreno Valley
Planning Division
14177 Frederick Street
Post Office Box 88005
Moreno Valley, CA 92553
Email: markg@moval.org

RE: Comment on the Final Environmental Impact Report for the World Logistics Center Project (SCH # 2012021045)

Chairperson Sims, Honorable Members of the Planning Commission and Mr. Sandzimier and Mr. Gross:

I am writing on behalf of Laborers International Union of North America, Local Union No. 1184 and its members living in Riverside County (collectively "LIUNA Local Union No. 1184" or "LIUNA" or "Commenters") regarding the Final Environmental Impact Report ("DEIR") prepared for the World Logistics Center Project, State Clearinghouse No. 2012021045 ("Project"). We have submitted detailed comments on the Draft EIR for the Project, which comments are incorporated herein by reference in their entirety.

We have reviewed the DEIR with the assistance of:

1. Traffic Engineer Tom Brohard, P.E.

2. Hydrogeologist, Matthew Hagemann, C.Hg., MS.
3. Biologist, Dr. Shawn Smallwood, Ph.D.
4. Agricultural Consultant, Gregory A. House.

These experts have prepared written comments that are attached hereto, and which are incorporated in their entirety. The City of Moreno Valley (“City”) should respond to the expert comments separately. These experts and our own independent review demonstrate that the FEIR is woefully inadequate and that a new supplemental EIR is required to be prepared and recirculated for public comment. Commenters urge the City to revise the EIR to adequately describe, analyze, and mitigate the Project and its impacts.¹ The revised EIR should be recirculated to allow public review and comment.

I. PROJECT DESCRIPTION

The Project site encompasses 3,918 acres of land located in Rancho Belago, the eastern portion of the City of Moreno Valley, and is situated directly south of State Route 60 (SR-60) with the Badlands area to the east and northeast, the Mount Russell Range to the southwest, and Mystic Lake and the San Jacinto wildlife Area to the southeast. (DEIR, p. 3-19.)

The Specific Plan being evaluated in this EIR covers 2,610 acres and proposes a maximum of 40.4 million square feet of “high-cube logistics” warehouse distribution uses classified as “Logistics Development” (LD) and 200,000 square feet (approximately 0.5%) of warehousing-related uses classified as “Light Logistics” (LL). The lands within the WLC Specific Plan that are designated LL are existing rural lots, some containing residential uses, that will become “legal, non-conforming uses” once the WLC Specific Plan is approved. In addition, the LD designation includes land for two special use areas; a fire station and a “logistics support” facility for vehicle fueling and sale of convenience goods (3,000 square feet is assumed for planning purposes for the “logistics support”). (FEIR, p. 3-19).

The Project site primarily consists of active farmland. (DEIR, pp.3-1, 3-2.) Approximately 3,389 acres, or 89 percent of the 3,814-acre project area, are designated as Farmland of Local Importance and approximately 25 acres are designated as Unique Farmland. (DEIR, p. 4.2-7.) The site is also scattered with seven residences. (DEIR, p. 3-2.)

¹ We reserve the right to supplement these comments at later hearings and proceedings for this Project. (See, *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal. App. 4th 1109.)

II. STANDING

Hundreds of members of Local Union No. 1184 live, work, and recreate in the immediate vicinity of the Project site. These members will suffer the impacts of a poorly executed or inadequately mitigated Project, just as would the members of any nearby homeowners association, community group, or environmental group. Hundreds of LIUNA Local Union No. 1184 members live and work in areas that will be affected by traffic, air pollution, and water pollution generated by the Project.

In addition, construction workers will suffer many of the most significant impacts from the Project as currently proposed, such as from air pollution emissions from poorly maintained or controlled construction equipment, possible risks related to hazardous materials on the Project site, and other impacts. Therefore, LIUNA Local Union No. 1184 and its members have a direct interest in ensuring that the Project is adequately analyzed and that its environmental and public health impacts are mitigated to the fullest extent feasible.

III. LEGAL STANDARDS

A. FEIR.

The lead agency must evaluate comments on the draft EIR and prepare written responses in the final EIR. (PRC §21091(d)) The FEIR must include a “detailed” written response to all “significant environmental issues” raised by commenters. As the court stated in *City of Long Beach v. LA USD* (2009) 176 Cal.App.4th 889, 904:

The requirement of a detailed written response to comments helps to ensure that the lead agency will fully consider the environmental consequences of a decision before it is made, that the decision is well informed and open to public scrutiny, and that public participation in the environmental review process is meaningful.

The FEIR’s responses to comments must be detailed and must provide a reasoned, good faith analysis. (14 CCR §15088(c)). Failure to provide a substantive response to comments renders the EIR legally inadequate. (*Rural Land Owners Assoc. v. City Council* (1983) 143 Cal.App.3d 1013, 1020).

The responses to comments on a draft EIR must state reasons for rejecting suggested mitigation measures and comments on significant environmental issues. “Conclusory statements unsupported by factual information” are not an adequate response. (14 CCR §15088(b, c); *Cleary v. County of Stanislaus* (1981) 118 Cal.App.3rd 348). The need for substantive, detailed response is particularly appropriate when comments have been raised by experts or other agencies. (*Berkeley Keep Jets v. Bd. of Port Comm’rs* (2001) 91 Cal.App.4th 1344, 1367; *People v. Kern* (1976) 72 Cal.app.3d 761). A reasoned analysis of the issue and references to supporting evidence are required for substantive comments raised. (*Calif. Oak Found. v. Santa Clarita* (2005) 133 Cal.App.4th 1219).

The FEIR abjectly fails to meet these legal standards, as it is riddled with conclusory statements lacking any factual support or analysis.

B. SUPPLEMENTAL EIR

Recirculation of an EIR prior to certification is required “when the new information added to an EIR discloses: (1) a new substantial environmental impact resulting from the project or from a new mitigation measure proposed to be implemented (cf. CEQA Guidelines, § 15162, subd. (a)(1), (3)(B)(1)); (2) a substantial increase in the severity of an environmental impact unless mitigation measures are adopted that reduce the impact to a level of insignificance (cf. CEQA Guidelines, § 15162, subd. (a)(3)(B)(2)); (3) a feasible project alternative or mitigation measure that clearly would lessen the environmental impacts of the project, but which the project’s proponents decline to adopt (cf. CEQA Guidelines, § 15162, subd. (a)(3)(B)(3), (4)); or (4) that the draft EIR was so fundamentally and basically inadequate and conclusory in nature that public comment on the draft was in effect meaningless.” (*Laurel Heights Improvement Assn. v. Regents of University of California* (1993) 6 Cal. 4th 1112, 1130, citing *Mountain Lion Coalition v. Fish & Game Comm’n* (1989) 214 Cal.App.3d 1043.)

Significant new information requiring recirculation can include:

- (1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
- (2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
- (3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project’s proponents decline to adopt it.
- (4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

(CEQA Guidelines, § 15088.5(a).)

The FEIR fails to analyze significant environmental impacts pertaining to the Project and to fully consider available mitigation measures to address those impacts. A revised EIR is required to be prepared and recirculated to address these deficiencies.

IV. THE FINAL EIR FAILS ADEQUATELY TO DISCLOSE AND MITIGATE SIGNIFICANT PROJECT IMPACTS.

A. THE PROJECT WILL HAVE MASSIVE TRAFFIC IMPACTS THAT HAVE NOT BEEN ADEQUATELY MITIGATED.

Traffic Engineer Tom Brohard, PE, has submitted comments concluding that the Project will have massive and significant traffic impacts that have not been adequately mitigated. A new EIR is required to analyze these impacts and propose all feasible mitigation measures. (Brohard Comments, Exhibit A).

The Project will generate 69,542 daily trips, with 4590 trips in the AM peak hour and 5010 trips in the PM peak hour. This will double the existing AM and PM peak hour traffic on SR60, creating 60 direct traffic impacts and 205 cumulative traffic impacts. (Brohard Comment, p.1-2). Nevertheless, the FEIR fails to include adequate or enforceable traffic mitigation measures and fails to disclose several direct traffic impacts.

Traffic Engineer Brohard identifies 18 direct traffic impacts of the Project that are not identified in the EIR or its traffic study. Direct traffic impacts are when the Project alone causes an intersection or road segment to fall below the acceptable Level of Service (LOS). Mr. Brohard identified 18 direct traffic impacts that are either ignored entirely or identified improperly as cumulative impacts. This is a significant omission since a Project must fully mitigate all of its direct traffic impacts, while it need only contribute a "fair share" to mitigate cumulative impacts. Thus, by failing to identify these impacts properly, the EIR fails to ensure adequate mitigation. Mr. Brohard identified the following direct traffic impacts that are not identified in the EIR:

1. Eastbound SR-60 from Euclid to Grove. Degrades from LOS D to LOS E in AM peak hour;
2. Eastbound SR-91 from Central to 14th St. Degrades from LOS D to LOS E in AM Peak hour;
3. Cactus Ave from Redlands Blvd. to Cactus Ave Extension – Degrades from LOS A to LOS E;
4. Gilman Springs Rd/Bridge Street – Degrades from LOS C to LOS D in PM Peak hour;
5. San Timoteo Canyon Rd./Alessandro Rd. – Degrades from LOS C to LOS F in PM peak hour.
6. Eastbound SR-60 from Euclid to Grove – Degrades from LOS D to LOS E in AM peak hour;
7. Eastbound SR-60 from Central to Fair Isle Drive/Box Springs Rd. – Degrades from LOS D to LOS E.
8. Gilman Springs Rd/Bridge St. – Degrades from LOS C to LOS D;
9. Eastbound SR-60 from Pigeon Pass Rd/Fredrick St. to Heacock St. – Degrades from LOS D to LOS E in AM peak hour;

10. Eastbound SR-60 from Heacock to Perris Blvd. – Degrades from LOS C to LOS E in AM peak hour.
11. SR-60 Eastbound on-ramp from Cetnral Ave. – Degrades from LOS D to LOS F.
12. Gilman Springs Rd. from Alesandro to Bridge St. – Degrades from LOS D to LOS F.
13. Lasselle St/Cactus Ave – Degrades from LOS C to LOS D in PM peak hour.
14. Central Ave/Chicago Ave – Degrades from LOS D to LOS E in AM peak hour.
15. Westbound SR-60 from Reservoir St. to Ramona Ave. – Degrades from LOS D to LOS E.
16. Westbound SR-60 from Redlands Blvd. to Theodore St. – Degrades from LOS D to LOS E in PM peak hour.
17. Eastbound SR-60 from Main St. to SR-91 – Degrades fro LOS D to LOS E.
18. SR-60 Eastbound on-ramp from Theodore St. – Degrades to LOS F in PM peak hour.

Since the FEIR fails to disclose the impacts above to be direct impacts of the Project, it does not adequately mitigate the impacts. Instead, the EIR relies on “fair share” contributions to unspecified mitigation programs that may or may not ever be implemented. This approach is legally inadequate since the EIR must require a Project to fully mitigate all of its direct impacts. A new EIR is required to disclose all of the above as direct impacts, and to propose that the Project fund and implement fully all feasible mitigation measures to reduce those impacts.

The EIR improperly relies on deferred mitigation measures. Mitigation Measure 4.15.7.4G states, “City shall work directly with Western Riverside Council of Governments to request that Transportation Uniform Mitigation Fee funding priorities be shifted to align with the needs of the City, including improvements identified in the World Logistics Center Specific Plan traffic impact analysis. Toward this end, City shall meet regularly with Western Riverside Council of Governments.” This is plainly deferred mitigation that will be developed (or not) after Project approval. CEQA prohibits such deferred mitigation since there is no way to determine if the mitigation will be adequate, or if it will ever be implemented at all.

Feasible mitigation measures for significant environmental effects must be set forth in an EIR for consideration by the lead agency's decision makers and the public before certification of the EIR and approval of a project. The formulation of mitigation measures generally cannot be deferred until after certification of the EIR and approval of a project. Guidelines, section 15126.4(a)(1)(B) states: "Formulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way. "[R]eliance on

tentative plans for future mitigation after completion of the CEQA process significantly undermines CEQA's goals of full disclosure and informed decisionmaking; and[,] consequently, these mitigation plans have been overturned on judicial review as constituting improper deferral of environmental assessment." (*Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 92.) The Findings and EIR are replete with such deferred mitigation. A supplemental EIR is required to clearly define mitigation measures in a manner that can be analyzed and reviewed by the public and governmental decision makers.

The EIR also improperly relies on fee-based mitigation without defining mitigation measures or ensuring that specific adequate measures will ever be implemented. CEQA prohibits this approach. Mitigation fees are not adequate mitigation unless the lead agency can show that the fees will fund a specific mitigation plan that will actually be implemented in its entirety. (*Napa Citizens for Honest Gov. v. Bd. Of Supervisors* (2001) 91 CallApp.4th 342 (no evidence that impacts will be mitigated simply by paying a fee); *Anderson First Coal. v. City of Anderson* (2005) 130 Ca.App.4th 1173 (traffic mitigation fee is inadequate because it does not ensure that mitigation measure will actually be implemented)).

B. THE PROJECT WILL HAVE SIGNIFICANT AIR QUALITY IMPACTS THAT HAVE NOT BEEN DISCLOSED IN THE FEIR AND HAVE NOT BEEN ADEQUATELY MITIGATED.

The Final EIR is so patently deficient in the area of air quality, that the California Air Resources Board (CARB) has taken the highly unusual step of filing a formal comment letter criticizing the FEIR and requesting preparation of a supplemental EIR to remedy the obvious defects. (See CARB Comment letter dated June 8, 2015 (Exhibit B)).

CARB points out that the FEIR dismisses health impacts of diesel particulate matter (DPM) based on a single recent study, the Advanced Collaborative Emissions Study (ACES). The FEIR repeatedly references that the ACES study concludes that the "application of new emissions control technology to diesel engines have virtually eliminated the health impacts of diesel exhaust." CARB states:

"First, the use of only one study as the basis for this analysis is not sufficient for the purpose of providing a comprehensive analysis of health risk from project construction and operations. The ACES study is only one of many scientific studies related to health risk and emissions, and therefore, cannot serve as substantial evidence regarding the project impact to human health. In fact, there are many other studies that conclude that diesel particulate matter (PM) is a health hazard. For example, the International Agency for Research on Cancer evaluated the scientific literature as a whole and concluded in 2012 that diesel PM is carcinogenic to humans (class 1). Second, and more importantly, the ACES study's methodology and findings render it inadequate for inclusion in an

environmental document, and cannot serve as substantial evidence supporting a finding that the project will not result in significant cancer risk impacts. Therefore, use of and reference to the ACES study should be removed throughout the FEIR.”

CARB points out the DPM is listed as a known human carcinogen by the California Office of Environmental Health Hazard Assessment (OEHHA). The EIR cannot simply ignore the legal conclusions of CARB and OEHHA, the California agencies with regulatory authority over the issue of airborne carcinogens. Yet the Final EIR does exactly this, based on a single study conducted on rats.

Matthew Hagemann, C.Hg., and environmental scientist Jessie Jaeger of the consulting firm SWAPE point out this same defect. (SWAPE Comment Letter p.2 (Exhibit C)). Mr. Hagemann concludes that using standard California risk assessment methodology, the Project will have significant cancer impacts from DPM on nearby residences above the SCAQMD CEQA significance thresholds. Mr. Hagemann calculated cancer risk of 15.7 per million, well above the 10 per million CEQA significance threshold set by SCAQMD. SCAQMD requires the use of the CARB risk assessment methodologies, not the ACES study.

When a regulatory agency with appropriate jurisdiction (such as CARB) has adopted a CEQA significance threshold and methodology for calculating an impact, the lead agency must apply that duly adopted methodology. *Comtys. for a Better Env't v. So. Coast Air Quality Mgmt. Dist.* (2010) 48 Cal.4th 310, 327 (impact is significant because it exceeds “established significance threshold for NOx ... constitute[ing] substantial evidence supporting a fair argument for a significant adverse impact”); *Lotus v. Dep't of Transportation* (2014) 223 Cal. App. 4th 645, 652; *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 783-4). The EIR essentially ignores CARB’s and OEHHA’s official findings that DPM is a known human carcinogen, relying on the recent ACES report conducted on a small number of rats. This ignores decades of scientific research finding that DPM is a potent human carcinogen, and ignores all relevant regulatory agencies. Since the ACES study conflicts with duly adopted CEQA thresholds, it is entitled to no deference and does not constitute substantial evidence. “A ‘clearly inadequate or unsupported study is entitled to no judicial deference.’” (*Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs.* (2001) 91 Cal. App. 4th 1344, 1355). CEQA does not allow such an approach.

A supplemental EIR is required to properly calculate and disclose this impact under California law, using duly adopted California health risk assessment methodology – not the unapproved ACES study. Once disclosed, the EIR must propose all feasible mitigation measures. Mr. Hagemann points out that feasible mitigation should include installation of Minimum Efficiency Reporting Value (MERV) filters rated at 13 or above at all residential units where incremental cancer risks exceed one in one hundred thousand (FEIR Volume I, p. 665-666).

CARB concludes that feasible mitigation should include a requirement of zero-emission and near-zero-emission vehicles at the Project where feasible. (CARB Comment Letter, p. 4). Since the FEIR dismissed this impact using spurious, unapproved calculation methods, the FEIR also failed to require implementation of these and all other feasible mitigation measures.

C. THE PROJECT WILL HAVE SIGNIFICANT BIOLOGICAL IMPACTS THAT HAVE NOT BEEN ADEQUATELY DISCLOSED OR MITIGATED.

Dr. Shawn Smallwood points out that the Project will have numerous biological impacts on special status species in the area that have not been disclosed or mitigated in the Final EIR. (Smallwood Comment Ltr. (Exhibit D)).

Dr. Smallwood concludes that the Project will have significant impacts on burrowing owls, and that the surveys done for the Project were conducted using an improper, unscientific and biased method that would fail to identify burrowing owls on site. For example, the burrowing owl survey performed for the FEIR states, "Burrowing owls are crepuscular owls, being most active during the early morning or evening hours." Dr. Smallwood points out, "In fact, burrowing owls are most active at night. Burrowing owl surveys should be performed on the project site by professionals with more experience with burrowing owls, and the surveys should follow the guidelines of CBOC 2013 and CDFG (2012)." The EIR consultant, FirstCarbon, appears to be wholly unqualified to conduct burrowing owl surveys since they are unfamiliar even with the times that burrowing owls are active. This study is therefore entitled to no deference since it is unscientific. "A 'clearly inadequate or unsupported study is entitled to no judicial deference.'" (*Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs.* (2001) 91 Cal. App. 4th 1344, 1355, quoting, *Laurel Heights Improvement Assn. v. Regents of University of California*, 47 Cal. 3d 376, 391 409, fn. 12 (1988)).

Dr. Smallwood also concludes that the Project will have significant impacts on wildlife movement, contrary to the EIR. Dr. Smallwood states:

According to the FEIR (1-38), the project will not restrict the movement of wildlife between the Badlands and the SWAN and Mystic Lake areas. This conclusion was incorrect. Constructing several thousands of acres of warehouses and trucking infrastructure between the Badlands and Mount Russell will most definitely restrict wildlife movement across the valley (Figure 1). Animal species that have for thousands of years been capable of crossing the valley between the Badlands and Mount Russell will no longer be able to do so. The Mount Russell range will be isolated from the Badlands for the first time, and so the project's impacts will fragment habitat in the region.

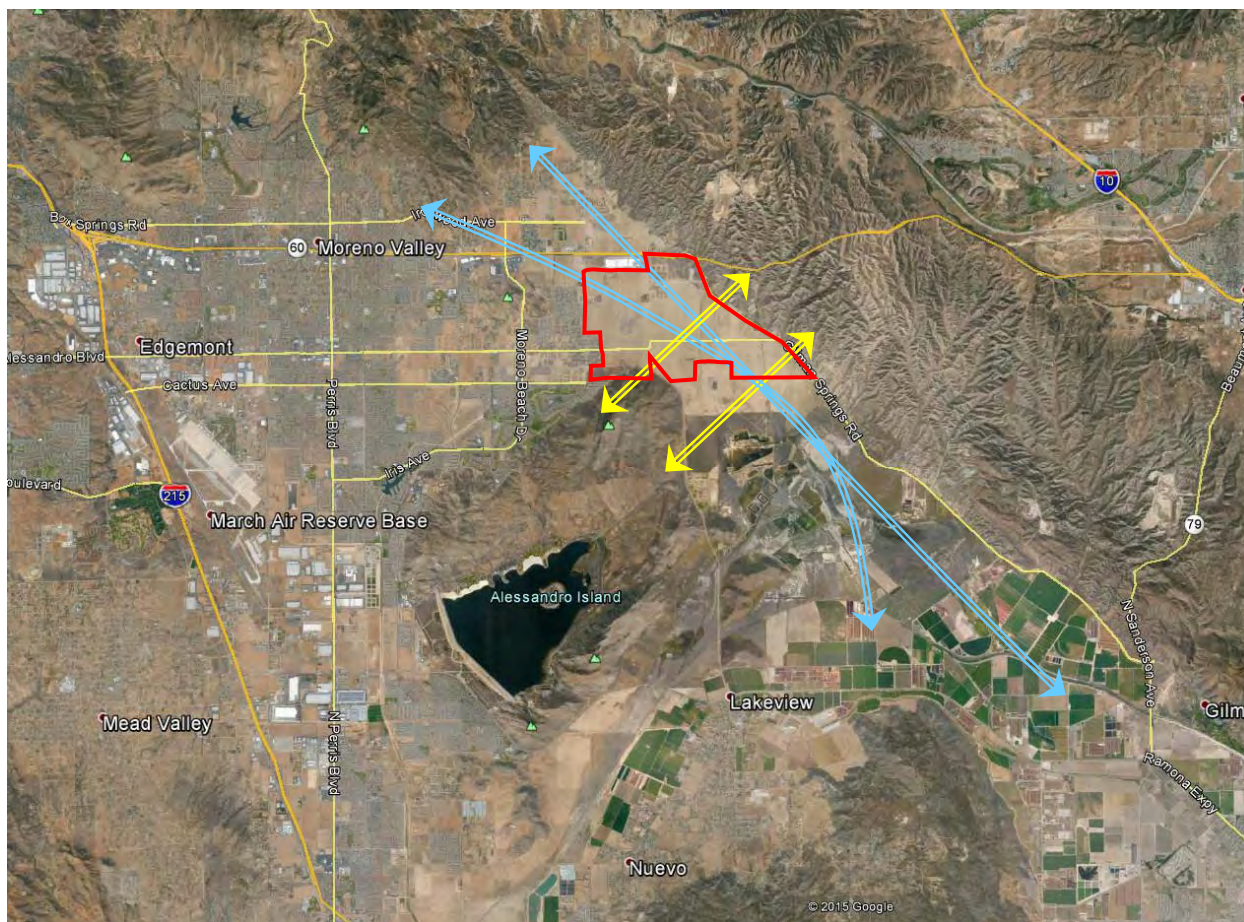


Figure 1. Likely movement trajectories of wildlife across the project area (red boundary), including avian flights along the valley (blue arrows) and avian and terrestrial wildlife movements between the Badlands and Mount Russell and Lake Perris (yellow arrows).

Dr. Smallwood concludes that the Project will have significant cumulative impacts on habitat loss when considered together with large industrial scale solar photovoltaic and wind projects being constructed in the area. The FEIR fails to consider these cumulative impacts.

Dr. Smallwood concludes that as a mitigation measure, the EIR should require all 2000 acres of rooftops on the Project be covered with solar panels. While the EIR currently requires solar panels sufficient to offset energy use by the office space in the Project itself, this leaves much of the rooftop area open for further solar development. Covering all 2000 acres of rooftops with solar panels would generate 282 megawatts of electricity. (Smallwood Comment, p. 8). This would offset the need to construct additional solar panels on habitat in the area. It would also help to offset air quality impacts from DPM and nitrogen oxides (NO_x) discussed by CARB and SWAPE.

D. THE PROJECT WILL HAVE SIGNIFICANT AGRICULTURAL IMPACTS THAT ARE NEITHER DISCLOSED NOR MITIGATED IN THE EIR.

The Project would result in the conversion to non-agricultural use of 2,201 acres of land designated as Farmland of Local Significance within the Specific Plan area, as well as 25 acres of Unique Farmland. The FEIR and findings conclude that the conversion of the 2201 acres of Farmland of Local Significance is a less than significant impact, and proposes to mitigate only the loss of 25 acres of Unique Farmland. (Proposed Findings, p. 73).

Agricultural consultant Gregory House concludes that the Project will have significant agricultural impacts, contrary to the conclusion of the FEIR. (House Comment letter, Exhibit E). The FEIR concludes that the Land Evaluation and Site Assessment Score (LESA) is 60.4. This indicates a significant impact to agriculture. However, the Parsons-Brinckerhoff study concludes that since the Site Assessment portion of the cumulative score is less than 20 – 19.5 – the Project does not have a significant impacts on agriculture.

Mr. House calculates that the Site Assessment score was improperly calculated. In particular, the Parsons-Brinckerhoff study concluded that citrus farming is no longer economically viable on the site because the price of water would allegedly be greater than the value of the citrus produced. However, Mr. House notes that recycled water is available in sufficient quantities from the Eastern Municipal Water District (EMWD). Mr. House notes that contrary to the conclusion of the EIR, this water is adequate for citrus irrigation. Mr. House also calculates that the recycled water could be used in sufficient quantities to irrigate mandarins and lemons and that those citrus crops could be produced at a significant profit of about \$2400 to \$4000 per acre. (House Comment Letter, p.3).

Taking these facts into consideration, the Site Assessment portion of the LESA score increases to between 20.1 to 22 – above the 20 threshold. This means that the Project has a significant impact on agricultural resources that must be disclosed in the EIR. The EIR is deficient for failing to disclose this impact. This also means that the EIR must propose all feasible mitigation measures to reduce the impact to agriculture. Typical mitigation would be a requirement to create agricultural offsets at, at least, a 1:1 ratio for the entire 2200 acres of lost agricultural land – not just 25 acres. *Mira Mar Mobile Community v. City of Oceanside* (4th Dist. 2004) 119 Cal. App. 4th 477.

E. THE EIR FAILS TO ANALYZE URBAN DECAY IMPACTS.

The Final EIR contains a two-sentence “section” on urban decay. (FEIR p. 5-7). While this section references another section of the FEIR, 4.13, that section contains no substantive analysis of urban decay at all. A supplemental EIR is required to analyze the urban decay impacts of the Project and to propose feasible mitigation measures.

Placing 40 million square feet of warehouse space in the city, together with massive amounts of traffic snarling, diesel engine exhaust above cancer thresholds, nitrogen oxide pollution, and other impacts may surely cause urban decay. The EIR fails to analyze this impact entirely – other than a two-sentence statement.

It is well established that an EIR must analyze urban decay impacts of a Project. Yet, the DEIR and FEIR are virtually silent on the potentially significant impacts related to urban decay or blight. The approval and construction of the Project clearly could result in significant impacts regarding the creation of urban decay or deterioration in the area. Yet, this impact is not addressed in the EIR. Consideration of this topic in environmental documents prepared under CEQA has increased over the recent years in direct response to the California Appeals Court Decision (December 2004) in *Bakersfield Citizens for Local Control v. City of Bakersfield*. In that decision, the Court determined that CEQA Guidelines Section 15054 requires such research and analysis, “when the economic or social effects of a project cause physical change, this change is regarded as a significant effect in the same manner as any other physical change resulting from the project.” In addition, in the *Anderson First Coalition v. City of Anderson* (June 2005), the Court found that social or economic changes that may have a physical impact should be considered in an EIR. While such EIR analyses are most often associated with big box or retail complexes that have the potential to result in urban decay by redirecting sales from existing businesses, urban decay impacts can also occur as a result of uses that present a nuisance thereby impacting other land uses in an area or as a result of uses that result in an area no longer being viable for existing or planned land uses as may well be the case here.

In *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) (124 Cal.App.4th 1184) (*Bakersfield Citizens*), the court expressly held that an EIR must analyze a project’s potential to cause urban decay if there is substantial evidence showing that the project may lead to such impacts. The court pointed out that CEQA requires the project proponent to discuss the project’s economic and social impacts where “[a]n EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic and social changes.” (CEQA Guidelines §§ 15131(a) and 15064(f).) *Bakersfield Citizens* concerned a proposal to construct two WalMart Stores within 3 miles of each other. Evidence was submitted that the stores could cause urban decay by forcing local downtown stores to close. The court held that this impact must be analyzed in the EIR. Most of the cases cited by the *Bakersfield Citizens* court concerned other retail developments with alleged urban decay impacts. (See, *Citizens Assoc. for Sensible Dev. of Bishop Area v. County of Inyo* (1985) 172 Cal.App.3d 151, 170 171 (shopping mall threatens downtown businesses and urban decay); *Citizens for Quality Growth v. City of Mt. Shasta* (1988) 198 Cal.App.3d 433, 445-446 (shopping mall may cause “business closures” in downtown area); *Friends of Davis v. City of Davis* (2000) 83 Cal.App.4th 1004, 1019 (insufficient evidence that Borders bookstore may threaten local bookstores); see also, *Anderson First Coalition v. City of Anderson* (2005) 30 Cal.Rptr.3d 738 (shopping

center); *American Canyon Community United for Responsible Growth v. City of American Canyon* (2006) 145 Cal.App.4th 1062, 1074 (urban decay impacts of supercenter must be analyzed); *Gilroy Citizens for Responsible Planning v. City of Gilroy* (2006) 140 Cal.App.4th 911, 920 (EIR adequately analyzed urban decay impacts of supercenter.)

The *Bakersfield Citizens* court also cited an industrial and a prison project that were alleged to have blighting impacts. The court noted that in *Christward Ministry v. Superior Court* (1986) (184 Cal. App. 3d 180, 197) (*Christward Ministry*) an agency was required to analyze in the EIR the potential that odors, noise, and traffic from a garbage dump could adversely impact a nearby religious retreat center. The *Bakersfield Citizens* court noted that this was a type of “urban blight” impact. The court also noted that in *City of Pasadena v. State of California* (1993) (14 Cal.App.4th 810) (*City of Pasadena*) the “blighting” impact of a parole office on a nearby residential neighborhood was recognized (however the court held that insufficient evidence had been presented to establish that the parole office may have an urban blight impact.

The proposed World Logistics Project may have a blighting impact on the City of Moreno Valley and the surrounding area, much like the blighting impact of the waste dump discussed in *Christward Ministry, supra*, or the parole office discussed in *City of Pasadena, supra*. The proposed Project will have a blight and a cumulative blight impact together with other sources of toxic pollution in the area by generating toxic emissions, noise, truck traffic, and other impacts. These impacts depress property values, drive people and businesses away, and create a downward spiral of urban blight. A UCLA study published in the American Journal of Public Health (March 1991) found that communities living downwind of sources of air pollution suffer significantly reduced lung function. Psychological studies show that poor air quality and unpredictable industrial noise events adversely affect psychological well-being, concentration levels, and workplace performance. (S. Klitzman and J. Stellman, “The Impact of the Physical Environment on the Psychological Well-Being of Office Workers,” 29(6) Soc. Sci. Med. 733-742 (1989).)

These documented impacts, and other impacts identified in the EIR and the comments on the EIR, constitute substantial evidence that the Project may have adverse urban decay impacts on the area that must be analyzed in a supplemental DEIR. The EIR is deficient for ignoring such impacts entirely.

V. INADEQUATE FINDINGS.

Findings must be made for each identified significant impact, and must be supported by substantial evidence in the record. (*Sierra Club v. Contra Costa County* (1992) 10 Cal.App.4th 1212, 1222 1224.) Findings must present some explanation to supply the logical step between the ultimate finding and the facts in the record. (*Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 515.) When alternatives or mitigation measures are rejected as infeasible, the

findings must reveal the agency's reasons for reaching that conclusion. Conclusory statements are inadequate. (*Village Laguna of Laguna Beach, Inc. v. Board of Supervisors* (1982) 134 Cal.App.3d 1022, 1034-1035.) Finally, detailed findings force decision makers to draw legally relevant sub-conclusions which support their ultimate decisions. In so doing, the agency minimizes the likelihood that it will randomly leap from evidence to conclusions. (*Sacramento Old City Assn. v. City Council of Sacramento* (1991) 229 Cal.App.3d 1011,1034.) CEQA requires that for each significant impact, the agency must make findings that: (1) through changes it avoided or substantially lessened the project's impacts; (2) or, such changes were the responsibility of another agency; (3) or, specific economic, legal, social, technological or other considerations made mitigation infeasible. (CEQA Guidelines, § 15091.)

As discussed above, the EIR failed to disclose numerous significant impacts on traffic, biology, air pollution, urban decay, agriculture and others. Since significant impacts have not been disclosed, the City cannot find that all impacts have been mitigated or avoided if feasible, and cannot issue a statement of overriding considerations.

Also, the EIR fails to impose many feasible mitigation measures that have been proposed by experts and even regulatory agencies such as the CARB. Having failed to impose all feasible mitigation measures, the City cannot make the findings required by CEQA.

Across the board, the City's findings contain only ultimate decisions absent proper factual and/or legal sub-conclusions connecting them to the final decision. The City did not make findings to support its decision to approve the Project despite its significant, unmitigated impacts; its unsupported statement of overriding considerations, its failure to mitigate traffic and air quality impacts; and its failure to disclose impacts to agriculture and urban decay.

In *Preservation Action Council*, Petitioners requested that Respondent City of San Jose reject a proposal by Lowe's Inc. to build a 162,000 square-foot garden center because there was a feasible, reduced-sized alternative that would preserve an historic building. (Id. at 906-7.) Petitioners had submitted comments showing the feasibility of a two-story Lowe's which would avoid tearing down the historic structure. (Ibid.) The City of San Jose rejected the two-story option, based on Lowe's claim that a reduced-sized alternative would be economically infeasible. (Id. at 907.) But the Court rejected the City's finding on this issue as unsupported: "The FEIR provides no independent facts or analysis to support that claim. While it was not necessary for the evidentiary basis for this claim to be contained in the FEIR itself, it was necessary for such a basis to exist in the administrative record." (Id. at 917.) The Court found that neither the final EIR or the administrative record contained the meaningful detail or independent analysis necessary to validate Lowe's' claim that the reduced-size alternative was infeasible, nor did the City Council make a specific finding on the claim that the reduced-size store would be much less profitable. (Id. at 917-18.)


Here the City made the same mistake. As discussed by CARB, the EIR fails to impose feasible mitigation of zero-emission or near-zero-emission trucks. As discussed by Mr. Hagemann, the EIR fails to impose the feasible mitigation of air filtration devices to reduce airborne cancer risks. As discussed by Dr. Smallwood, the EIR fails to impose the feasible mitigation of 1:1 of requiring solar panels on the entire roof area. As discussed by Mr. House, the EIR fails to impose the feasible mitigation measure of 1-to-1 offsets for agricultural land. These and many other feasible mitigation measures are not implemented, and the findings provide no substantial evidence to support a finding of infeasibility.

A supplemental EIR is required to analyze these and all other feasible mitigation measures to reduce Project impacts.

VI. CONCLUSION

For the foregoing reasons, LIUNA Local Union No. 1184 and its members living in the City of Moreno Valley and the surrounding areas, urge the City to continue the matter for future consideration pending completion of a supplemental EIR addressing the Project's significant impacts and mitigation measures. Thank you for your attention to these comments. Please include this letter and all attachments hereto in the record of proceedings for this project.

Sincerely,



Richard T. Drury
Lozeau Drury LLP
Attorneys for LIUNA Local Union No. 1184

EXHIBIT A

Tom Brohard and Associates

May 29, 2015

Adriano Martinez, Staff Attorney
 Earthjustice California Office
 800 Wilshire Blvd, Suite 1010
 Los Angeles, California 90017

SUBJECT: Review of the FEIR for the World Logistics Center (WLC) Project in the City of Moreno Valley – Continuing Traffic and Transportation Issues

Dear Mr. Martinez:

At the request of the Sierra Club, I, Tom Brohard, P.E., have reviewed various portions of the May 2015 Final Environmental Impact Report (FEIR) prepared by LSA for the World Logistics Center (Proposed Project) in the City of Moreno Valley. I have also reviewed the Revised Traffic Impact Analysis prepared by Parsons Brinkerhoff for the WLC Project with focus on the following:

- Volume 1 – Response to Comments; particularly Letter F-9B
- Volume 2 - Revised DEIR, Appendix L – September 2014 Traffic Impact Analysis Report and Appendices A through P
- Volume 3 – FEIR Section 4.15 – Traffic and Circulation

My March 29, 2013 letter to you provided a number of comments on the Draft EIR for the Proposed Project (Letter F-9B Comments 1 through 47) and was enclosed with your comments (Letter F-9A). While some of my comments have been addressed, significant traffic and circulation issues remain as they have not been resolved or fully addressed. For these continuing issues, this letter includes summary quotes from my initial comment letter, the FEIR response, and my rebuttal to the FEIR response. These various issues and concerns require further study, analysis, and explanation before the City of Moreno Valley considers the Proposed Project.

Continuing Traffic and Circulation Issues

According to the FEIR, the WLC Project Specific Plan proposes a maximum of 40.4 million square feet of “high-cube logistics” warehouse distribution uses classified as “Logistics Development” (LD) and 200,000 square feet (approximately 0.5%) of warehousing-related uses classified as “Light Logistics” (LL). The overall project has been reduced by about 1,000,000 square feet from the DEIR. Page 4.15-46 of the FEIR forecasts that the WLC Project will generate 69,542 daily trips with 4,590 trips in the AM peak hour and 5,010 trips in the PM peak hour. These added traffic volumes that will be generated by the WLC Project are extremely high. To put these volumes in perspective, these additional trips are the same as the existing daily and peak hour traffic volumes on SR-60

81905 Mountain View Lane, La Quinta, California 92253 7611
 Phone (760) 398-8885 Fax (760) 398-8897
 E-mail tbrohard@earthlink.net

Adriano Martinez, Staff Attorney
WLC FEIR – Continuing Traffic and Transportation Issues
May 29, 2015

at Moreno Beach Drive. It is no wonder that the WLC Project will create 60 direct traffic impacts and will contribute to 205 cumulative traffic impacts throughout Southern California.

The mitigation measures that have been proposed do not properly or fully address the resulting significant traffic impacts that the Proposed Project will create. Direct project traffic impacts on freeways, roadways, and intersections continue to be confused with cumulative project traffic impacts, leading to defective mitigation measures. Funding is not shown to be available to construct mitigation measures in a timely manner as the significant traffic impacts occur. The following traffic and circulation issues were identified during my review of the documents associated with May 2015 World Logistics Center FEIR, beginning with those issues I found most significantly concerning:

- 1) Comments F-9B-2, F-9B-18, F-9B-19, and F-9B-20 – Direct and Cumulative Traffic Impacts – “Direct Project traffic impacts are repeatedly confused with cumulative Project traffic impacts...”

In response, Page 841 of the FEIR states “The commenter confusions [sic] direct and indirect impacts.”

In rebuttal to this response, my Comment F-9B-18 agreed with and directly quoted Page 4.15-85 of the Draft EIR as follows:

- Direct Traffic Impacts – “A significant project-specific impact would occur if the project would cause a decrease from satisfactory LOS (based on local agency adopted standards) to an unsatisfactory LOS on a study area intersection, roadway segment, freeway mainline lane, freeway weaving segment or freeway ramp.”
- Cumulative Traffic Impacts – “A significant cumulative traffic impact would occur if the project contributes toward those facilities operating at unsatisfactory LOS in the pre-project condition.”

Comment F-9B-20 cited 52 instances where the Draft EIR and the TIA Report incorrectly identified many cumulative traffic impacts when they were actually direct traffic impacts from the definitions above. Further, other direct impacts were not disclosed even though these direct impacts were clearly shown in the various tables when the LOS degraded from an acceptable to an unacceptable level with the addition of only Project traffic.

Over the four analysis scenarios, the TIA identifies 42 direct project traffic impacts and a total of 205 cumulative impacts. As indicated below, there are 18 additional direct project traffic impacts beyond those identified in the TIA where WLC traffic causes an intersection or segment to fall below the

Adriano Martinez, Staff Attorney
WLC FEIR – Continuing Traffic and Transportation Issues
May 29, 2015

acceptable LOS. In each of the various sections in the different scenarios, the text in the TIA conflicts with the entries in the tables throughout the discussion of traffic impacts. Instead, these locations which experience direct impacts are either incorrectly shown as cumulative impacts or they are omitted altogether from the listings.

In response to Comment F-9B-20, the FEIR made some minor corrections to the listing of impacts under various scenarios. In the TIA listings, the locations that fail to meet the thresholds of significance both without and with project traffic added should be more clearly and simply identified as “Cumulative Impacts”. Similarly, those locations that meet the thresholds of significance without project traffic added but then degrade below the standard with project traffic added should be more clearly and simply identified as “Direct Impacts.”

The following impacts are incorrectly identified as cumulative impacts or omitted from the disclosure of “direct” impacts as the addition of Project traffic directly causes a decrease from satisfactory LOS to an unsatisfactory LOS:

Existing plus Phase 1 Conditions – Freeway Segments

- Eastbound SR-60 from Euclid Avenue to Grove Avenue – Degrades from LOS D (density of 34.7) to LOS E (density of 36.7) in AM peak hour with Project traffic added (shown on Page 135 in Table 30 as direct impact but omitted from list of directly impacted freeway segments on Page 134 of the September 2014 TIA).
- Eastbound SR-91 from Central Avenue to 14th Street – Degrades from LOS D (density of 34.8) to LOS E (density of 35.6) in AM peak hour with Project traffic added (shown on Page 136 in Table 30 as direct impact but omitted from list of directly impacted freeway segments on Page 134 of the September 2014 TIA).

Existing plus Build-Out Conditions – Road Segments

- Cactus Avenue from Redlands Boulevard to Cactus Avenue Extension – Degrades from LOS A to LOS E with Project traffic added (shown on Page 146 in Table 36 as direct impact but not identified as a directly impacted road segment on Page 145 of the September 2014 TIA).

Existing plus Build-Out Conditions – Intersections

- Gilman Springs Road/Bridge Street – Degrades from LOS C (delay of 20.8) to LOS D (delay of 25.1) in PM peak hour with Project traffic added (shown on Page 169 in Table 37 as direct impact but omitted from list of directly impacted intersections on Page 171 of the September 2014 TIA).
- San Timoteo Canyon Road/Alessandro Road – Degrades from LOS C (delay of 23.9) to LOS F (delay of 98.1) in PM peak hour with Project

Adriano Martinez, Staff Attorney
WLC FEIR – Continuing Traffic and Transportation Issues
May 29, 2015

traffic added (shown on Page 169 in Table 37 as direct impact but omitted from list of directly impacted intersections on Page 171 of the September 2014 TIA).

Existing plus Build-Out Conditions – Freeway Segments

- Eastbound SR-60 from Euclid Avenue to Grove Avenue – Degrades from LOS D (density of 34.7) to LOS E (density of 38.4) in AM peak hour with Project traffic added (shown on Page 173 in Table 39 as direct impact but omitted from list of directly impacted freeway segments on Page 172 of the September 2014 TIA).

Existing plus Build-Out Conditions – Freeway Weaving LOS

- Eastbound SR-60 from Central Avenue to Fair Isle Drive/Box Springs Road – Degrades from LOS D (density of 32.4) to LOS E (density of 35.0) in PM peak hour with Project traffic added (shown on Page 179 in Table 41 as direct impact but omitted from list of directly impacted freeway weaving LOS on Page 179 of the September 2014 TIA).

2022 plus Phase 1 Conditions – Intersections

- Gilman Springs Road/Bridge Street – Degrades from LOS C (delay of 22.3) to LOS D (delay of 25.4) in AM peak hour with Project traffic added (shown on Page 236 in Table 51 as direct impact but omitted from list of directly impacted intersections on Page 240 of the September 2014 TIA).

2022 plus Phase 1 Conditions – Freeway Segments

- Eastbound SR-60 from Pigeon Pass Road/Frederick Street to Heacock Street – Degrades from LOS D (density of 29.2) to LOS E (density of 37.2) in AM peak hour with Project traffic added (shown on Page 245 in Table 53 as direct impact but omitted from list of directly impacted freeway segments on Page 244 of the September 2014 TIA).
- Eastbound SR-60 from Heacock Street to Perris Boulevard – Degrades from LOS C (density of 25.0) to LOS E (density of 35.0) in AM peak hour with Project traffic added (shown on Page 245 in Table 53 as direct impact but omitted from list of directly impacted freeway segments on Page 244 of the September 2014 TIA).

2022 plus Phase 1 Conditions – Freeway Ramp LOS

- SR-60 Eastbound On-Ramp from Central Avenue – Degrades from LOS D (density of 28.8) to LOS F (density of 31.9) in AM peak hour with Project traffic added (shown on Page 254 in Table 57 as direct impact but omitted from list of directly impacted freeway ramp LOS on Page 253 of the September 2014 TIA).

Adriano Martinez, Staff Attorney
WLC FEIR – Continuing Traffic and Transportation Issues
May 29, 2015

2035 plus Build-Out Conditions – Road Segments

- Gilman Springs Road from Alessandro Boulevard to Bridge Street – Degrades from LOS D to LOS F with Project traffic added (shown on Page 290 in Table 64 as direct impact but not identified as a directly impacted road segment on Page 289 of the September 2014 TIA).

2035 plus Build-Out Conditions – Intersections

- Lasselle Street/Cactus Avenue – Degrades from LOS C (delay of 34.8) to LOS D (delay of 38.2) in PM peak hour with Project traffic added (shown on Page 314 in Table 65 as direct impact but omitted from list of directly impacted intersections on Page 292 of the September 2014 TIA).
- Central Avenue/Chicago Avenue – Degrades from LOS D (delay of 46.8) to LOS E (delay of 60.7) in AM peak hour with Project traffic added (shown on Page 311 in Table 65 as direct impact but omitted from list of directly impacted intersections on Page 292 of the September 2014 TIA).

2035 plus Build-Out Conditions – Freeway Segments

- Westbound SR-60 from Reservoir Street to Ramona Avenue – Degrades from LOS D (density of 34.6) to LOS E (density of 35.8) in PM peak hour with Project traffic added (shown on Page 324 in Table 67 as direct impact but omitted from list of directly impacted freeway segments on Page 321 of the September 2014 TIA).
- Westbound SR-60 from Redlands Boulevard to Theodore Street – Degrades from LOS D (density of 29.7) to LOS E (density of 35.0) in PM peak hour with Project traffic added (shown on Page 324 in Table 67 as direct impact but omitted from list of directly impacted freeway segments on Page 321 of the September 2014 TIA).

2035 plus Build-Out Conditions – Freeway Weaving LOS

- Eastbound SR-60 from Main Street to SR-91 – Degrades from LOS D (density of 34.1) to LOS E (density of 35.8) in AM peak hour with Project traffic added (shown on Page 329 in Table 69 as direct impact but omitted from list of directly impacted freeway weaving LOS on Page 328 of the September 2014 TIA).

2035 plus Build-Out Conditions – Freeway Ramp LOS

- SR-60 Eastbound On-Ramp from Theodore Street – Degrades to LOS F (density of 43.6) in PM peak hour when constructed with Project traffic added (shown on Page 333 in Table 71 as direct impact but omitted from list of directly impacted freeway ramp LOS on Page 332 of the September 2014 TIA).

Adriano Martinez, Staff Attorney
WLC FEIR – Continuing Traffic and Transportation Issues
May 29, 2015

- 2) Comments F-9B-22 and F-9B-39 – Mitigation of Traffic Impacts – “The Project must be required to fully mitigate its direct impacts created when the LOS falls from a satisfactory level to an unsatisfactory level when project traffic is added.” The FEIR did not provide a response to Comment F-9B-22. For Comment F-9B-39, Page 852 of the FEIR states “The FEIR and TIA have been clarified to state that fair share payments for direct project impacts will be made in addition to TUMF and DIF payments.”

In rebuttal to this response, the FEIR and the TIA continue to misinterpret how mitigation measures are financed. Payment of TUMF, DIF, and other development fees are always required to be made. Those fees are typically used by agencies to address cumulative traffic impacts as well as to address minor increases in traffic across the area. As indicated at the beginning of this letter, adding 69,542 daily trips including with 4,590 trips in the AM peak hour and 5,010 trips in the PM peak hour (equal to daily and peak hour volumes that travel on SR-60 at Moreno Beach Drive) are significant. Direct impacts created by traffic from a particular project are the full and total responsibility of the project to address and to mitigate. As stated previously, the Project must be required to:

- Provide all costs associated with mitigation of each of the 60 direct project traffic impacts (42 identified in the TIA and 18 identified in the listing above) when the LOS falls from a satisfactory level to an unsatisfactory level when project traffic is added.
- Participate in and provide a fair-share of the funding for implementation of each of the mitigation measures to address each of the 205 cumulative impacts identified in the FEIR. TUMF and DIF fees can be used for this purpose as long as the projects in the fee programs match up with the improvements that are shown in the fee programs.

Page 341 of the TIA states: “The direct impacts of the WLC Project were determined by comparing the LOS of study facilities from Existing to Existing plus Build-out conditions.” The determination of direct traffic impacts and mitigation measures based solely on the comparison of “Existing” to “Existing plus Build-out Conditions” is woefully incomplete. The TIA identified direct traffic impacts at different times including 5 direct traffic impacts under “Existing plus Phase 1 Project” conditions, 9 direct traffic impacts under “Existing plus Build-out Conditions”, 13 direct traffic impacts under “2022 plus Phase 1 Conditions”, and 15 direct traffic impacts under “2035 plus Build-out Conditions.” There is no reason to evaluate these four scenarios and then to conclude that the direct traffic impacts occur only under “Existing plus Build-out Conditions”. As shown in the TIA, additional direct project traffic impacts occur in 2022 and in 2035. However, the TIA incorrectly omits requirements

Adriano Martinez, Staff Attorney
WLC FEIR – Continuing Traffic and Transportation Issues
May 29, 2015

that WLC must implement mitigation measures to address these direct project traffic impacts.

CEQA also requires that the implementation of mitigation measures be timely. The TIA has identified direct project traffic impacts as well as mitigation in 2022 and in 2035 but it has failed to require implementation of mitigation measures as they are needed in a timely manner in the future.

- 3) Comments F-9B-2, F-9B-39, and F-9B-40 – Funding of Mitigation Measures – “Funding is not shown to be available to construct mitigation measures in a timely manner as the significant Project traffic impacts occur.” In response, Page 841 of the FEIR states “Funding for the identified improvements is expected to come from a variety of sources including Development Impact Fee (DIF), DIF-like fee programs in other jurisdictions, the Transportation Uniform Mitigation Fee (TUMF) Program, State and Federal sources, fair-share contributions from the WLC for improvements in the City, and fair-share contributions from the WLC for improvements outside the City under programs to be established.”

In rebuttal to the response, this generalized statement provides no specifics regarding the implementation schedule or the cost of any of the improvements that are required as mitigation measures. The TIA does not provide any information whatsoever that indicates that any of the improvements are now included or are planned to be included in any fee program. The TIA indicates that other programs may be established with neighboring jurisdictions but there are no specific details about any of these potential programs. The response concludes that “The City does not have direct control over the expenditure of TUMF funds but has pledged to work with WRCOG to shift funding priorities to align with the improvements in the TIA.” The response has not addressed our prior concerns and certainly does not provide any assurance or substantial evidence that the implementation of mitigation will be timely as required by CEQA.

- 4) Comment F-9B-16 and 17 – Truck Percentages Are Too Low – “Both Appendix S and Appendix T to the TIA Report clearly demonstrate that the 2003 Fontana Study should not be used to forecast truck trip generation for the World Logistics Center Project. By doing this, the Draft EIR and TIA Report have significantly underestimated the number of truck trips that the World Logistics Center will generate.” In response, Page 846 of the FEIR states “The commenter’s suggests the truck percentages from the NAIOP study should be used would be appropriate if the overall trip generation rate from the NAIOP study was also used. Instead, the commenter suggests cherry-picking where the high truck percentage from one source (NAIOP) is selected and then combined with the high overall trip generation rate selected

Adriano Martinez, Staff Attorney
WLC FEIR – Continuing Traffic and Transportation Issues
May 29, 2015

from a different source Institute of Transportation Engineers (ITE) to produce a very high estimate of project truck traffic.”

In rebuttal to this response, my prior comments indicated the 2003 Fontana Study was outdated and that more current data should have been used. The City's recently compiled data from 2013 represents the most current local data but it has not been used by the revised Traffic Study.

Columns labeled “All City Survey Sites” and in “City Sites > 1 MSF” in new Figure 4.15.8 on Page 4.15-49 of the FEIR contains errors and misleads the reader. From the City's September 27, 2013 “Vehicle Mix Assumption for High-Cube Warehouse” Memorandum which summarized vehicle mixes at six sites in the City ranging from 400,000 to 1,800,000 square feet, the following average mix of vehicles was found: Passenger cars: 76.6%, 2-axle trucks: 3.1%; 3-axle trucks: 2.7%; 4+-axle trucks: 17.6%. The graph for the “All City Survey Sites” shows passenger vehicles at about 82% and all trucks at about 18% which does not match the City's recent findings.

While I did not suggest cherry-picking the data from different sources, the “City Sites > 1 MSF” column in the Figure 4.15.8 graph does exactly that by only summarizing sites with more than 1,000,000 square feet. To show the data for just those large facilities is inappropriate as warehouse sizes will not be limited to more than 1,000,000 square feet in the WLC Project.

Finally, there has been no consideration at all by the FEIR of published SCAQMD data which indicates that cold storage warehouses generate significantly higher truck trip percentages than those that do not include cold storage. As long as cold storage facilities are potentially allowed in the WLC Project, then a composite trip rate as recommended by SCAQMD must be used for the traffic and air quality analyses of the WLC Project.

- 5) Comments F-9B-6 and F-9A-9 – Traffic Count Seasonal Variations – “No adjustments were made to remove potentially significant seasonal traffic volume fluctuations among the months of February, March, October, November, and December when the counts were taken.” In response, Page 813 of the FEIR compares directional seasonal volumes on SR-60 at the Day Street Interchange, the Heacock Interchange, and the Perris Interchange, concluding that the monthly variations are inconsistent and show no trends.

In rebuttal to this response, the three interchanges chosen by the FEIR for comparison are on SR-60 between 5 and 8 miles to the west of the WLC site. There are 9 interchanges on SR-60 in the City of Moreno Valley and several will serve the site directly. Why were those three interchanges so far away from WLC chosen for comparison? Why are the traffic volumes shown in Table F-9A.A 25 percent less than those counts published by Caltrans in

Adriano Martinez, Staff Attorney
WLC FEIR – Continuing Traffic and Transportation Issues
May 29, 2015

2011 Traffic Volumes on the California State Highway System (see enclosure)? A more complete analysis of the traffic count data adjacent to the WLC site must be conducted before jumping to the unsupported conclusion that there are no significant seasonal traffic volume variations that require adjustments.

- 6) Comments F-9B-35 – Monitoring of TDM Plans – “To achieve and maintain employee trip reduction goals, individual TDM plans for employers in the World Logistics Center must be developed and then monitored on a regular basis. Further, these plans must also contain penalties for non-compliance.” In response, Pages 849 and 850 do not provide a direct response to this comment.

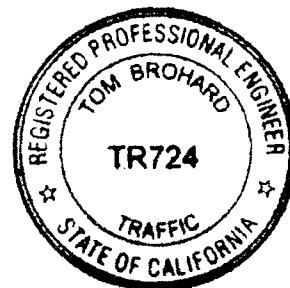
The FEIR must contain provisions for the preparation and monitoring of TDM plans as an enforceable condition of approval for each project in the World Logistics Center.

Additional study of the Proposed Project must be undertaken in the areas of traffic, access, and parking. Each of the various issues and concerns raised throughout this letter must be addressed in detail to properly disclose, analyze, and mitigate the environmental impacts of the Proposed Project. The FEIR must then be revised accordingly and recirculated for further public review and comment. If you have questions regarding these comments, please call me at your convenience.

Respectfully submitted,

Tom Brohard and Associates

Tom Brohard
Tom Brohard, PE
Principal



Enclosure

2011 Traffic Volumes on the California State Highway System

**2011 TRAFFIC VOLUMES
ON THE CALIFORNIA STATE HIGHWAY SYSTEM**

**STATE OF CALIFORNIA
BUSINESS, TRANSPORTATION AND HOUSING AGENCY
DEPARTMENT OF TRANSPORTATION**

DIVISION OF TRAFFIC OPERATIONS

Sacramento, CA 95814
916-654-4578

Prepared in Cooperation with the
U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration

To Purchase This Book
Price \$15.00
Phone: 916-263-0822

2011 Traffic Volumes Book

Dist	Route	CO	Postmil	Description	Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak Month	Ahead AADT
8	60	SBD	R 2.366	CENTRAL AVE	15500	225000	220000	15600	226000	221000
8	60	SBD	R 3.602	MOUNTAIN AVE	15600	226000	221000	15300	223000	218000
8	60	SBD	R 4.58	ONTARIO, JCT. RTE. 83	15300	223000	218000	15700	227000	222000
8	60	SBD	R 5.855	GROVE AVE	15700	227000	222000	15200	220000	215000
8	60	SBD	R 6.856	VINEYARD AVE	15200	220000	215000	15300	221000	216000
8	60	SBD	R 7.873	ARCHIBALD AVE	15300	221000	216000	15000	212000	209000
8	60	SBD	R 8.906	HAVEN AVE	15000	212000	209000	14600	207000	204000
8	60	SBD	R 9.958	SAN BERNARDIN/RIVERSIDE CO LINE	14300	203000	200000			
8	60	RIV	R 0	SAN BERNARDIN/RIVERSIDE CO LINE				13400	190000	187000
8	60	RIV	R 0.491	JCT. RTE. 15	11100	157000	155000	11200	159000	155000
8	60	RIV	R 1.56	VAN BUREN BLVD	12800	169000	165000	10700	142000	138000
8	60	RIV	R 1.993	ETIWANDA AVE	10700	142000	138000	11700	155000	151000
8	60	RIV	R 3.03	MISSION BLVD	11700	155000	151000	10700	142000	138000
8	60	RIV	R 4.548	PEDLEY RD	10700	142000	138000	10800	143000	139000
8	60	RIV	R 5.575	PYRITE ST	10800	143000	139000	10500	140000	136000
8	60	RIV	7.533	VALLEY WAY	10500	140000	136000	11200	149000	145000
8	60	RIV	9.555	RUBIDOUX, RUBIDOUX BLVD	11200	149000	145000	11600	154000	150000
8	60	RIV	11.068	RIVERSIDE, CRESTMORE AVE	11600	154000	150000	11900	158000	154000
8	60	RIV	11.732	RIVERSIDE, MAIN ST	11900	158000	154000	11100	147000	143000
8	60	RIV	11.818	RIVERSIDE, ORANGE ST OC	11100	147000	143000	11100	147000	143000
8	60	RIV	12.212	RIVERSIDE, JCT. RTES. 215/91	11100	147000	143000	10000	140000	130000
8	60	RIV	R 12.064	RIVERSIDE, JCT. RTES. 215/91	10000	140000	130000	10000	140000	130000
8	60	RIV	R 12.212	EAST JCT. RTE. 215	10000	140000	130000	10000	140000	130000
8	60	RIV	13.307	DAY ST	12000	140000	130000	12000	143000	132000
8	60	RIV	14.324	MORENO VALLEY, PIGEON PASS	11900	143000	132000	10600	127000	118000
8	60	RIV	15.338	MORENO VALLEY, HEACOCK	10600	127000	118000	9200	111000	103000
8	60	RIV	16.35	MORENO VALLEY, PERRIS	9200	111000	103000	7100	89000	85000
8	60	RIV	18.37	NASON ST	7100	89000	85000	6100	78000	74000
8	60	RIV	19.2	MORENO BEACH DRIVE	6100	78000	74000	5100	64000	61000
8	60	RIV	20.37	REDLANDS BLVD	5100	64000	61000	4400	56000	53000

2011 Traffic Volumes Book

Dist	Route	CO	Postmile	Description	Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak Month	Ahead AADT
8	60	RIV	21.369	EB ON FRM THEODORE ST	4400	56000	53000	4400	56000	53000
8	60	RIV	22.101	GILMAN SPRINGS RD	4750	56000	53000	4000	46500	44500
8	60	RIV	27.979	JACKRABBIT TRAIL	4000	46500	44500	4000	46500	44500
8	60	RIV	30.495	JCT. RTE. 10	4000	46500	44500			
4	61	ALA	14.8	SAN LEANDRO, JCT. RTE. 112 E				2100	23100	22000
4	61	ALA	16.07	OAKLAND, AIRPORT/HEGENBERGER	1950	21900	20800	2000	22100	21000
4	61	ALA	18.52	ALAMEDA, ISLAND DRIVE	1650	18500	18500	3750	41500	39500
4	61	ALA	18.552	ALAMEDA, SAN LEANDRO BR	3750	41500	39500	3750	41500	39500
4	61	ALA	19.44	ALAMEDA, BROADWAY	2000	23100	22000	900	10500	10000
4	61	ALA	19.84	ALAMEDA, BROADWAY/ENCINAL	990	11600	11000	740	8700	8200
4	61	ALA	21.27	ALAMEDA, CENTRAL/SHERMAN	540	6400	6050	860	10100	9600
4	61	ALA	21.967	JCT. RTE. 260 N	1250	15700	15300			
8	62	RIV	0	JCT. RTE. 10				1750	18300	17500
8	62	RIV	R 3.344	PIERSON BLVD	1750	18300	17500	1600	16700	16000
8	62	RIV	R 6.451	INDIAN AVE	1600	16700	16000	2050	21400	20500
8	62	RIV	9.237	RIVERSIDE/SAN BERNARDINO CO LINE	2050	21400	20500			
8	62	SBD	0	RIVERSIDE/SAN BERNARDINO CO LINE				2050	21400	20500
8	62	SBD	0.845	HESS BLVD	2050	21400	20500	2000	20900	20000
8	62	SBD	1.884	MORONGO VALLEY, PIONEER/EAST	2050	21400	20500	2050	21400	20500
8	62	SBD	9.293	YUCCA VALLEY, CAMINO DEL CIELO	2000	20900	20000	2000	20900	20000
8	62	SBD	10.531	YUCCA VALLEY, PIONEER TOWN	2400	25000	24000	2650	27500	26500
8	62	SBD	12.404	YUCCA VALLEY, JCT. RTE. 247 N	2700	28000	27000	2700	28000	26500
8	62	SBD	15.145	YUCCA MESA RD	2700	28000	26500	1950	20500	19500
8	62	SBD	18.267	JOSHUA TREE, PARK BLVD	1700	17900	17000	1700	17900	17000
8	62	SBD	22.165	SUNFAIR RD	1700	17900	17000	1400	14700	14000
8	62	SBD	31.196	TWENTYNINE PALMS, NAT'L PARK/HATCH	1400	14700	14000	1500	15800	15000
8	62	SBD	33.208	TWENTYNINE PALMS, ADOBE RD	1100	11600	11300	960	10000	9500
8	62	SBD	34.223	29 PALMS/UTAH TRAIL	750	5100	4700	430	2950	2700
8	62	SBD	79.476	SAN BERNARDINO/RIVERSIDE CO LINE	120	850	780			
8	62	RIV	79.476	SAN BERNARDINO/RIVERSIDE CO LINE				120	1100	780

EXHIBIT B



Air Resources Board



Matthew Rodriguez
Secretary for
Environmental Protection

Mary D. Nichols, Chairman
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov

Edmund G. Brown Jr.
Governor

June 8, 2015

Mr. Mark Gross
City of Moreno Valley
Community Development Department
14177 Frederick Street
PO Box 88005
Moreno Valley, California 92552

Re: World Logistics Center Final Environmental Impact Report
SCH# 2012021045

Dear Mr. Gross:

The Air Resources Board (ARB) has received and reviewed the World Logistics Center (WLC or project) Final Environmental Impact Report (FEIR). This project provides an opportunity to create a state-of-the-art facility that promotes the use of the cleanest technologies available and maximizes efficiency improvements during both the construction and operational phases at full build out in 2030.

ARB reviewed the Draft Environmental Impact Report (DEIR) and provided comments to the City of Moreno Valley (City) in a letter dated April 16, 2013. ARB's comment letter expressed concern over the increase in health risk in the immediate area and the significant and unavoidable air quality and greenhouse gas related impacts caused by the proposed WLC. To address those concerns, ARB recommended actions to support the development, demonstration, and deployment of zero and near-zero emission technology at the WLC.

Unfortunately, ARB finds the FEIR to be legally inadequate and unresponsive to the comments ARB provided in its April 16, 2013 letter regarding the DEIR. ARB appreciates the opportunity to comment on the FEIR, as we have significant concerns with the analysis and mitigation currently outlined in the document. We urge the City to revise and recirculate the EIR, to reflect needed changes in mitigation and to bolster the analysis of potential health risks posed by the project, as required by California Environmental Quality Act (CEQA).

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

Mr. Mark Gross
 June 8, 2015
 Page 2

In addition, we are aware of the possibility that the City may opt to move the WLC decision to a ballot measure. Given the potential emissions impacts and increase in health risk associated with project construction and operation, we strongly urge CEQA compliance by the City, irrespective of whether or not this project becomes a ballot measure.

CEQA Background Regarding Responses to Comments and Need for EIR Recirculation

When a significant environmental issue is raised in comments that object to the draft EIR's analysis, the response must be detailed and must provide a reasoned, good faith analysis. (14 CCR § 15088(c).) The responses to comments on a draft EIR must state reasons for rejecting suggestions and objections concerning significant environmental issues. (*City of Maywood v. Los Angeles Unified Sch. Dist.* (2012) 208 Cal.App.4th 362, 391.) The need for a reasoned, factual response is particularly acute when critical comments have been made by other agencies or by experts. (See *Berkeley Keep Jets Over the Bay Comm. v. Board of Port Comm'rs* (2001) 91 Cal.App.4th 1344, 1367,1371.)

If significant new information¹ is added to an Environmental Impact Report (EIR)² after notice of public review has occurred, but before final certification of the EIR, the lead agency must issue a new notice and recirculate the EIR for comments and consultation. (Pub. Res. Code § 21092.1; 14 CCR § 15088.5.) "Significant new information" triggering the need for EIR recirculation includes information showing that (1) a new or more severe environmental impact would result from the project, (2) a feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of a project but the project proponent declines to adopt it, or (3) the draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (14 CCR § 15088.5(a)(1)-(4).)

A decision not to recirculate an EIR must be supported by substantial evidence in the administrative record. (14 CCR § 15088.5(e).)

¹ "Information" triggering recirculation can include additional data or other information. (14 CCR § 15088.5(a).)

² Note that even if new information is not "added to an EIR," it can still trigger the need for recirculation. (See, e.g., *Save Our Peninsula Comm. v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 131 (information on important new mitigation measure, added to record after EIR was completed, should have been included in EIR and circulated for public review and comment given questions raised about its effectiveness and potential impacts).)

Mr. Mark Gross
 June 8, 2015
 Page 3

The Response to Comments Fails to Adequately Address ARB's Comments And Does Not Adopt All Feasible Mitigation Measures

In its previous comment letter, ARB recommended "actions to support the development, demonstration, and deployment of zero and near-zero emission technology to reduce localized health risk and regional emissions. We believe that use of these technologies is feasible within the build-out years of the Center." However, the FEIR discussion (in particular, responses to comment B-5-7 and B-5-8 and Master Response 3) regarding zero emission and hybrid electric trucks, vehicles, and equipment does not evaluate the current feasibility of hybrid technologies, or consider the potential for other zero and near-zero emission technologies to be feasible and commercially available, both at the present date and by project build-out in 2030. These technologies are feasible measures that would lessen the WLC's impacts on criteria and greenhouse gas emissions, as well as air toxics and health risk.³

Because these mitigation measures have not been fully adopted for the proposed project, the EIR must be recirculated to incorporate the feasible mitigation measures, or to make a supportable finding that the measures are infeasible. (See 14 CCR § 15088.5(a)(3).)

The information contained in the FEIR regarding feasibility and availability of these technologies relies largely on information from the Port of Long Beach and Los Angeles, most of which is at least two years old, and is but one source of information regarding the feasibility of zero or near-zero emissions vehicles. Today, zero and near-zero emission technologies are commercially available in vehicle and equipment applications typically used at warehouse and distribution centers. Examples include battery electric and fuel cell electric forklifts, battery electric and hybrid electric medium-duty trucks, and plug-in hybrid electric transportation refrigeration units. For more information, please see ARB's Heavy-Duty Technology and Fuels Assessment: Overview, found at http://www.arb.ca.gov/msprog/tech/techreport/ta_overview_v_4_3_2015_final_pdf.pdf.

However, the FEIR discussion (in particular, responses to comment B-5-7 and B-5-8 and Master Response 3) regarding zero emission and hybrid electric trucks, vehicles, and equipment does not adequately evaluate the current feasibility of hybrid technologies, or consider the potential for other zero and near-zero emission technologies to be feasible and commercially available, both at the present date and by project build-out.

³ For the purposes of CEQA, "feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. (California Code of Regulations, title 14, section 15364)

Mr. Mark Gross
June 8, 2015
Page 4

The response to comment B-5-7 states that “the project will support a variety of future users which are unknown at this time so it is not possible to specify or require future users to have zero emission or alternative fuel fleets since most logistics companies use independent contractors and truck drivers rather than maintain their own fleets.” This response is contradictory and insufficient to show that the proposed mitigation measures are infeasible. This is particularly true given the FEIR’s inclusion of several requirements that are applicable to all future tenants; specifically, that all medium and heavy-duty diesel trucks entering logistics sites shall meet or exceed 2010 engine emission standards and all yard trucks shall be powered by electricity, natural gas, propane, or an equivalent non-diesel fuel. If the mitigation measures can restrict access to the facility by truck engine year, there is no reason the mitigation measures cannot similarly restrict access by allowable technologies.

Furthermore, the response to comments rejected the proposed measure of requiring that trucks travelling between the project and any ports or rail yards within 100 miles use zero or near zero emission technology. The reasons for rejecting this measure are also unclear. The response to comments notes that “the Port of Los Angeles is testing various types of zero-emission technology solutions for heavy-duty vehicles,” which the response to comments explains have a “range of travel between 100 miles and 200 miles per charge.” (WLC Response to Comments at 234.) Therefore, it remains unclear why a measure requiring zero or near zero emission trucks for trips within 100 miles of the project would not be feasible, particularly by project build out in 2030.

With regard to onsite service vehicles and equipment, the response to comment B-5-8 further notes that the only included mitigation measure incorporated into the FEIR is prohibiting the use of diesel-powered onsite vehicles and equipment. (WLC Response to Comments at 185.) Again, the reasons for not including mitigation measures for these onsite vehicles remain unclear, since the response to comments does not clearly address why these types of vehicles and equipment are not available in zero or near-zero emission configurations.

The EIR should therefore be revised and recirculated to do the following:

- Fully evaluate mitigation measures for zero and near-zero emission technologies that are commercially available over the course of project development and by full build-out in 2030.
- Require all feasible mitigation measures and support the development, demonstration, and deployment of zero and near-zero emission technologies including requiring zero emission (such as battery electric or fuel cell electric) forklifts and battery electric and hybrid electric medium-duty trucks. These technologies are commercially available today. Additional advancements,

Mr. Mark Gross
 June 8, 2015
 Page 5

especially for on-road trucks, are expected in the next three to five years; well before project build-out in 2030.

Recirculation Is Required Due To Fundamental Inadequacies in the Project's Health Risk Assessment

Several elements of the health risk assessment section of the FEIR are flawed and inadequate, and require revision and recirculation. As noted above, one of the circumstances triggering the need for EIR recirculation is the addition of information showing that the EIR was fundamentally inadequate and conclusory in nature that meaningful public review and comment were precluded. (14 CCR § 15088.5(a).)

In this case, this recirculation “trigger” is present. The FEIR analysis has been revised since the draft EIR was released to include a new study regarding health impacts from diesel engines, specifically, the Advanced Collaborative Emissions Study (ACES). The FEIR repeatedly references that the ACES study concludes that the “application of new emissions control technology to diesel engines have virtually eliminated the health impacts of diesel exhaust.” First, the use of only one study as the basis for this analysis is not sufficient for the purpose of providing a comprehensive analysis of health risk from project construction and operations. The ACES study is only one of many scientific studies related to health risk and emissions, and therefore, cannot serve as substantial evidence regarding the project impact to human health. In fact, there are many other studies that conclude that diesel particulate matter (PM) is a health hazard. For example, the International Agency for Research on Cancer evaluated the scientific literature as a whole and concluded in 2012 that diesel PM is carcinogenic to humans (class 1). Second, and more importantly, the ACES study’s methodology and findings render it inadequate for inclusion in an environmental document, and cannot serve as substantial evidence supporting a finding that the project will not result in significant cancer risk impacts.⁴ Therefore, use of and reference to the ACES study should be removed throughout the FEIR.⁵

⁴ An EIR’s CEQA significance findings must be supported by substantial evidence. “Substantial evidence” means enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached. (14 CCR § 15384(a).) Notably, argument, speculation, unsubstantiated opinion or narrative, evidence which is clearly erroneous or inaccurate, does not constitute substantial evidence. (*Id.*) In this case, the ACES study should not be used for the purposes of a CEQA analysis, as the exposure levels used in the ACES study were based on diluted NO₂ and not particulate matter and therefore actual exposure of particulate matter in this study is unknown. Additionally, during the lab exposure testing, two 2007 Detroit Diesel engines were used, one for a total of 10,090 hours and one for 4031 hours with oil changes at every 250 hours (250 hours = 5,000 miles). Therefore, the study results are based on the best-case scenario and did not account for potential real world wear and tear on diesel engines, poor maintenance, and failure rates of diesel particulate filters.

Mr. Mark Gross
 June 8, 2015
 Page 6

Further, the air quality and health risk methodology and models used in the FEIR should be fully explained to ensure the information is accessible and understandable to the public. Specifically, the final document should include the presentation of all cancer and non-cancer health risks at the receptor locations of interest for all emissions from construction and operations at the WLC. The methodology should include the use of all the current Office of Environmental Health Hazard Assessment (OEHHA) approved risk assessment methodology contained in the OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines: Guidance Manual for the Preparation of Health Risk Assessments (February 2015).

Furthermore, we recommend the document include an evaluation of the potential health impacts at the major milestones identified for this project (e.g., beginning in 2015, 2022, and 2035) for each receptor of interest and appropriate exposure duration (i.e., resident would be 30 years). This analysis will allow the presentation of potential health impacts at key milestones and how the potential health risk estimates may change as the project is completed and the facility changes to full operation.

Other ARB Recommendations

Attainment of Federal Ambient Air Quality Standards

The FEIR determines that the proposed project would have significant long term air quality impacts. Specifically, the air quality analysis demonstrates that the project's operational nitrogen oxides (NOx) emissions far exceed the South Coast Air Quality Management District's significance threshold of 55 pounds per day. The projected rise in emissions of criteria pollutants may interfere with current strategy to bring the South Coast Air Basin into attainment with federal air quality standards. Given the level of impacts and the location in the South Coast Air Basin, the project needs to be revised to include substantial air quality mitigation by employing effective and feasible zero and near-zero emission technologies.

Use of Future Baseline in the Health Risk and Air Quality Analysis

Should the City re-circulate the EIR, ARB strongly recommends that the health risk and air quality analysis use both the existing conditions baseline (current conditions) and a future conditions baseline (full build out year, without the project.) This analysis will be useful to the public in understanding the full impacts of the project. *Neighbors for Smart Rail v Exposition Metro Line Construction Authority* (2013) 57 C4th 439 confirmed that the lead agency has discretion on how to best define a baseline under the

⁵ For more information regarding diesel engine exhaust health impacts, please see http://oehha.ca.gov/public_info/DEEposter.html.

Mr. Mark Gross
June 8, 2015
Page 7

circumstances of rapidly changing environmental conditions. In this situation, the project site is located in a federal nonattainment area and is adjacent to residences; given the timeframe for full build out, those conditions may be significantly different from current conditions.

Specifically, it is important to analyze whether anticipated regional air quality improvements in future years as the result of State, federal, and local air quality programs, may be reduced or negated as the result of this project. For those reasons, it is important to ensure that the public has a complete understanding of the environmental impacts of the WLC, as compared to both existing conditions and future conditions.

Charging Infrastructure to Support Zero and Near-Zero Emission Technology

Should the City re-circulate the EIR, ARB recommends including mitigation measures that detail more robust plans for charging and fueling infrastructure, which will be necessary to support increased zero emission vehicles and equipment used on the project site. Mitigation measure 4.3.6.3C indicates that one alternative fueling station will be publicly available prior to the issuance of building permits for more than 25 million square feet. This mitigation measure should include a more comprehensive description of the fueling station, including how that fueling station will adequately meet the needs of the zero and near-zero emission equipment used on site.

Furthermore, mitigation measure 4.3.6.4A indicates two electric vehicle-charging stations for automobiles or light duty trucks shall be provided at each building. The project description does not include an estimation of how many buildings are expected to be developed on site. While the FEIR does provide an estimation of the number of daily trips by passenger vehicles and light duty trucks (54,714 and 2,385 daily trips, respectively), mitigation measure 4.3.6.4A and the associated analysis does not contain an estimation of how many of those trips will be made by electric vehicles and does not provide enough information to evaluate whether mitigation measure 4.3.6.4A satisfies potential charging demand. Given Governor's Executive Order B-16-2012 target of reaching 1.5 million zero emission vehicles on California roadways by 2025 and the Governor's goal of cutting petroleum use in half by 2030, mitigation measure 4.3.6.4A should be expanded to ensure that the charging infrastructure required on-site will meet the needs of the growing numbers of zero emission vehicles that will be accessing the project site.

Mr. Mark Gross
June 8, 2015
Page 8

Statewide Air Quality, Climate and Health Drivers to Reduce Emissions from Freight Hubs

To achieve California's air quality, climate and sustainability goals, and to reduce the health risk from diesel PM in communities located near freight hubs, the State, including public and private partners, must take effective action to transition to a zero and near-zero emission freight system. This effort is laid out in ARB's Sustainable Freight Pathways to Zero and Near-Zero Emissions Discussion Draft, which can be found at http://www.arb.ca.gov/gmp/sfti/Sustainable_Freight_Draft_4-3-2015.pdf.

Closing

Given the scale of the project, the substantial increases in criteria pollutants and greenhouse gas emissions, as well as the potential impact to health risk, it is critical that the FEIR require the use of zero and near-zero emission technologies. Furthermore, the health risk analysis must be revised to ensure that the potential impacts are fully analyzed and disclosed. We would be pleased to provide assistance to help develop the analysis and mitigation measures to ensure that this state-of-the-art facility is able to serve the region's distribution needs, while protecting air quality and public health, as well as minimizing the project's contribution to greenhouse gas emissions. Please include ARB on any further notifications related to the WLC.

If you have questions, please contact me at (916) 322-8382 or freight@arb.ca.gov.

Sincerely,



Heather Arias, Chief
Freight Transport Branch
Transportation and Toxics Division

cc: See next page

Mr. Mark Gross
June 8, 2015
Page 9

cc: Honorable Mayor and Council Members- City of Moreno Valley
14177 Frederick Street
Moreno Valley, CA 92552

State Clearinghouse
P.O. Box 3044
Sacramento, CA 95812-3044

Mr. Ian MacMillan
Program Supervisor
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765

Mr. Thomas Jelenic
Vice President of Planning and Program Management
Highland Fairview
14225 Corporate Way
Moreno Valley, CA 92553

EXHIBIT C



Technical Consultation, Data Analysis and
Litigation Support for the Environment

2656 29th Street, Suite 201
Santa Monica, CA 90405

Matt Hagemann, P.G, C.Hg.
(949) 887-9013
mhagemann@swape.com

May 29, 2015

Michael Lozeau
Lozeau | Drury LLP
410 12th Street, Suite 250
Oakland, CA 94607

Subject: Comments on the World Logistics Center, Riverside County, California

Dear Mr. Lozeau:

We have reviewed the May 2015 the World Logistics Center Project (“Project”) Final Environmental Impact Report (FEIR), which includes responses to comments (“Responses”) we made in an April 13, 2013 letter on the 2013 Draft Environmental Impact Report (DEIR).

We have found significant shortcomings in the Responses to the issues identified in the Air Quality analysis. We maintain that the health risks posed to nearby sensitive receptors from the Project’s diesel particulate matter (DPM) emissions are significant. As a result, the FEIR should include the additional mitigation measures identified in the comments to the DEIR to further reduce these health risks. The FEIR should be revised to address our comments and then recirculated to allow for review of the adequacy of the responses and of mitigation that is necessary.

Unsubstantiated Determination of Health Risk Impacts as Less-Than-Significant

In the comments to the DEIR, we suggested mitigation measures to reduce the cumulative impacts of the Project’s diesel particulate matter (DPM) emissions. Specifically, we suggested the installation of Minimum Efficiency Reporting Value (MERV) filters rated at 13 or above at all residential units where incremental cancer risks exceed one in one hundred thousand (FEIR Volume I, p. 665-666). This measure was not incorporated for the following two reasons, according to the Responses: (1) no residences outside the project boundaries would have a cancer risk over the 10 in a million threshold; and (2) the latest research demonstrates that the new technology diesel exhaust does not contribute to cancer (FEIR Volume I, p. 237).

We have two issues with this statement: (1) The cancer risk threshold of 10 in a million is exceeded by residences within the Project boundaries (FEIR Volume I, p. 237; and (2) cited research in the Responses that purportedly demonstrates the non-carcinogenic effects of new technology diesel exhaust (NTDE)

has yet be approved by any regulatory agencies and is not consistent with the conclusions made by OEHHA; therefore, this report alone should not be used as a way exclude the significance of the cancer risks posed to the residences located within the Project boundaries.

The FEIR's "Air Quality, Greenhouse Gas, and Health Risk Assessment Report" (Air Quality Report) discusses the methods used to conduct the updated health risk assessment, and evaluates the significance of the results of this analysis. Table 70, in this report, summarizes the estimated cancer risks based on the "current OEHHA guidance" with mitigation (see excerpt below) (p.272).

Receptor Location	Incremental Project Cancer Risk (risk per million)			SCAQMD Cancer Risk Significance Threshold (risk/million)	Exceeds Threshold?
	Construction	Operation	Total ⁽¹⁾		
Maximum risk anywhere in the modeling domain ⁽²⁾	11.4	5.6	17.0	10	Yes
Existing residences within the project boundaries:					
13100 Theodore St	11.2	4.5	15.7	10	Yes
13200 Theodore St	11.1	4.5	15.6	10	Yes
13241 Theodore St	11.4	5.6	17.0	10	Yes
30220 Dracaea Ave	5.0	3.6	8.6	10	No
30240 Dracaea Ave	5.0	3.6	8.6	10	No
29080 Dracaea Ave	3.0	1.5	4.5	10	No
29140 Dracaea Ave	4.8	1.7	6.5	10	No
Maximum risk at any existing residential area outside of the project boundaries ⁽³⁾	2.7	1.6	4.3	10	No
Maximum risk at any undeveloped residentially zoned property outside of the project boundaries ⁽⁴⁾	2.1	1.9	4.0	10	No

The cancer risks to three existing residences within the project boundaries exceed the 10 in one million threshold. As a result, the Project's cancer-related impacts should be deemed as significant and all feasible mitigation measures should be implemented to reduce these risks to less-than-significant levels. The FEIR acknowledges that "there is still a significant impact after mitigation at three existing sensitive/residential receptors located within the project boundary," but ultimately concludes that the Project's cancer-related impact are less than significant (Air Quality Report, p. 270).

The FEIR attempts to justify this conclusion by referring to the *Advanced Collaborative Emissions Study (ACES): Lifetime Cancer and Non-Cancer Assessment in Rats Exposed to New Technology Diesel Exhaust*, conducted by the Health Effects Institute (HEI), which states that new technology diesel exhaust does not contribute to cancer.¹ The FEIR states that "the cancer risk quantification using the current OEHHA guidance is provided for informational purposes only. It is to document the cancer-related impacts of the project given the assumption that new technology diesel exhaust causes cancer, which is contrary to the results in the HEI study (Air Quality Report, p. 270)." This conclusion, however, contradicts what is recommended by the California Office of Environmental Health Hazard Assessment (OEHHA) with regard to the cancer risk from new technology diesel exhaust (NTDE) compared to the cancer risk from traditional technology diesel exhaust (TDE).

¹ <http://pubs.healtheffects.org/getfile.php?u=1039>

OEHHA conducted a “Risk Assessment Evaluation of New Technology Diesel Engine Exhaust Composition,” and came to an entirely different conclusion.² OEHHA acknowledged that in diesel engine manufacturers have developed NTDE, which produce substantially lower exhaust levels of diesel exhaust particulates (DEP) and air toxics compared to older engines. However, “experimental data from several NTE engine emissions studies indicate that the reductions of some air toxics such as polycyclic aromatic hydrocarbons, benzene and 1,3- butadiene in NTE exhaust (often 80 – 90%) are not as great as the corresponding reductions in DEP (often 95 – 99%).” The resulting air toxics/DEP ratios for NTE exhaust may be greater than or equal to similar ratios found in exhaust from older diesel engines. An analysis of data from one published review indicated that the average 3-ring PAH, 1,3-butadiene and benzene/DEP ratios increased in NTE exhaust compared to older DEE by 2-, 10- and 4-fold, respectively.³ These data suggest that while the absolute amount of DEP (and thus estimated cancer risk) and air toxics is much reduced in NTE exhaust, the exhaust composition has not necessarily become less hazardous. Thus, the available data do not indicate that NTE exhaust should be considered to be fundamentally different in kind compared to older DEE for risk assessment purposes, and suggests that the TAC cancer unit risk value for DEP be used.⁴

OEHHA maintains that NTDE has the same carcinogenic effects as TDE, and should be treated as such when conducting a health risk assessment. Furthermore, neither the United States Environmental Protection Agency (USEPA) nor the California Air Resources Board (CARB) has accepted the conclusions made within HEI’s report, nor have they adjusted their stance on the cancer risk associated with NTDE. Until an authoritative body adopts and integrates HEI’s findings into applicable regulations, HEI’s report should not be used as a way to deem the cancer risks from this Project as insignificant. Furthermore all feasible mitigation measures, as suggested in our comments (to include use of Minimum Efficiency Reporting Value (MERV) filters), should be implemented in order to reduce the cancer risk to these onsite residences to less-than-significant levels.

Sincerely,



Matt Hagemann, P.G., C.Hg.



² http://www.oehha.ca.gov/public_info/DEEposter.html

³ http://www.oehha.ca.gov/public_info/pdf/SOT2012dieselRA.pdf

⁴ http://www.oehha.ca.gov/public_info/DEEposter.html

Jessie Jaeger

EXHIBIT D

Shawn Smallwood, PhD
3108 Finch Street
Davis, CA 95616

Richard Sandzimier, Planning Official
and
Mark Gross, Senior Planner
14177 Frederick Street
Post Office Box 88005
Moreno Valley, California 92552

8 June 2015

Dear Mr. Sandzimier and Mr. Gross,

I write to comment on the Final Environmental Impact Report (FEIR) prepared for the World Logistic Center Specific Plan (WLCSP). I reviewed the FEIRS and associated appendices and other documents.

My qualifications for preparing expert comments are the following. I earned a Ph.D. degree in Ecology from the University of California at Davis in 1990, where I subsequently worked for four years as a post-graduate researcher in the Department of Agronomy and Range Sciences. My research has been on animal density and distribution, habitat selection, habitat restoration, interactions between wildlife and human infrastructure and activities, conservation of rare and endangered species, and on the ecology of invading species. I have authored numerous papers on special-status species issues, including “Using the best scientific data for endangered species conservation,” published in *Environmental Management* (Smallwood et al. 1999), and “Suggested standards for science applied to conservation issues” published in the *Transactions of the Western Section of The Wildlife Society* (Smallwood et al. 2001). I served as Chair of the Conservation Affairs Committee for The Wildlife Society – Western Section. I am a member of The Wildlife Society and the Raptor Research Foundation, and I’ve been a part-time lecturer at California State University, Sacramento. I was also Associate Editor of wildlife biology’s premier scientific journal, *The Journal of Wildlife Management*, as well as of *Biological Conservation*, and I was on the Editorial Board of *Environmental Management*.

I have performed wildlife surveys in California for twenty-five years (Smallwood 1997, Smallwood et al. 1996, Smallwood and Nakamoto 2009). Over these years, I studied the impacts of human activities and human infrastructure on wildlife, including on golden eagle, Swainson's hawk, burrowing owl, and other species. I studied fossorial animals (i.e., animals that burrow into soil, where they live much of their lives), including pocket gophers, ground squirrels, kangaroo rats, pocket mice, voles, harvester ants, and many other functionally similar groups. I performed focused studies of how wildlife interact with agricultural fields and associated cultural practices, especially with alfalfa production. I have also performed wildlife surveys at many proposed project sites, including at a proposed large solar thermal project in the Mojave Desert. I performed mountain lion track surveys throughout the WLCSP area since 1985. I also collaborate with colleagues worldwide on the underlying science and policy issues related to anthropogenic impacts on wildlife. My CV is attached.

BIOLOGICAL IMPACTS ASSESSMENT

Under CEQA,¹ “[A] paramount consideration is the right of the public to be informed in such a way that it can intelligently weigh the environmental consequences of any contemplated action and have an appropriate voice in the formulation of any decision.” The public needs information that is thorough, relevant, unbiased, and honest; the public needs full disclosure of the environmental setting and possible cumulative impacts. Documents presenting information from a biased perspective will tend to include omissions, logical fallacies, internal contradictions, and unfounded responses to substantial issues. Therefore, my assessment of the EIR and also considers omissions and bias, which bear on the sufficiency of the EIR.

I found many examples of bias in favor of the project. For example, according to FirstCarbon Solutions and Michael Brandman Associates (2013:15), “*Upon further inspection of the berm and burrow locations, no signs of active [burrowing owl] nesting or nestlings was observed, indicating that the pair is not currently nesting within the survey area.*” Later, FirstCarbon Solutions and Michael Brandman Associates (2014a:50), wrote of this pair, “*Evidence of burrowing owl predation was observed during the surveys. It is assumed that a juvenile burrowing owl was predated after fledging from the nest.*” The report of the burrowing owl survey claimed that the pair was not nesting, but later it turned out that they had nested. Inconsistencies like this raise doubts about the trustworthiness of the reporting throughout the FEIR.

Exemplifying a biased perspective, the FEIR (1-38) reported the existing agricultural lands are of low value to the 17 special-status species that occur in the area. This conclusion might be correct for some of these species, but not for all. Swainson’s hawk persists in California largely due to agriculture and the prey that agricultural practices provide through irrigation, mowing, and harvest (Smallwood 2005). Burrowing owls also thrive along the margins of cultivated fields. The largest, densest population of burrowing owls in California occurs within a valley dominated by intensive agriculture (DeSante et al. 2007).

According to the FEIR (4.4-42), “*There is little to no nesting habitat within the WLCSP for Swainson’s hawk and marginally quality foraging habitat. This species is known to occur with the adjacent SJWA and has a low potential to occur within the WLCSP project site.*” However, nesting habitat is not the only habitat that matters to the significance of the project’s impacts on a species listed as Threatened by California. The loss of several thousand acres of foraging habitat would be significant. Swainson’s hawks are opportunists, flying high over the terrain while searching for disturbances that flush out prey items, such as mowing or flood irrigation of alfalfa hay, burning of rice stubble, and disking (Bechard 1982, Estep 1989, 2008; Babcock 1995, Smallwood 1995, Smallwood and Geng 1993a,b). What is important is that sufficient patches of foraging habitat are available to Swainson’s hawks that are nesting on nearby properties, as the farther the hawks must travel from the nests to forage, the more likely the nest will be permanently abandoned (England et al. 1995). Swainson’s hawks attempting to remain on their old nesting territories in the face of foraging habitat loss will run the increased risk of brood

¹ Environmental Planning and Information Council vs. County of El Dorado (1982) 131 Cal. App. 3d 350, 354.

reduction through starvation or fracticide directed against the youngest nestling (Bechard 1983), or nest abandonment, which can leave eggs unhatched or nestlings to starvation or predation (CDFG Staff Report of 1994).

The FEIR's Figure 4.4.5 depicting burrowing owl habitat quality was ill-based and misleading. The FEIR failed to define "habitat quality," which in the field of wildlife biology would be quantified by the species' response to the environment in terms of productivity, survivorship and other metrics. Here, there was nothing measured about local burrowing owls that would expressed habitat quality. The map of habitat quality appears to have been derived by an undisclosed method that has no basis in science.

The FEIR characterized the burrowing owl surveys as "protocol" surveys, but they were not. Effort levels varied from year to year, but none of the years achieved the standards recommended by professionals. For example, the 2007 surveys were performed over 4 consecutive days rather than spread over the breeding season with an interval of at least two weeks (Table 1). Nesting is usually completed by late June, so surveys were performed too late in 2006, 2010, 2012, and 2013. By the time these surveys had been initiated, nesting pairs might have already produced chicks and the chicks fledged. The surveys in 2005 and 2007 began early enough to detect most nesting owls, but these were inconsistent with the temporal separation of surveys that was recommended by CBOC (1992) and CDFG (2012). Furthermore, the survey effort was too cursory, involving 57 seconds per acre in 2005, 2 minutes and 40 seconds per acre in 2007, 1 minute and 28 seconds per acre in 2010, and 15 seconds per acre in 2013. Whereas the 2007 and 2010 surveys exceeded 1 minute per acre of survey effort, which was still exceedingly cursory, the areas surveyed were very small (Figure 1). The years that burrowing owls were detected were in 2005 and 2013 when survey areas were much larger proportions of the project area. Passing these surveys off as protocol surveys was misleading and gave a false impression of the value of the project site to burrowing owls.

The number of burrowing owl pairs occurring on the project site matters because three or more pairs would trigger the requirement for onsite conservation under the MSHCP. However, not only were the burrowing owl surveys too cursory for estimating burrowing owl numbers across the site, but the survey objective was to determine presence/absence. The surveys were not intended for enumerating burrowing owl pairs, and should not have been characterized as protocol surveys. Furthermore, the 2013 survey included the strange restriction of recording only those burrowing owl observations that were made within 2 hours after sunrise. I don't know the origin of this restriction, but it has no basis in science or in common practice when it comes to burrowing owl surveys. How many burrowing owls were seen but omitted as a result of this restriction?

This strange survey restriction might be explained by the lack of experience of those performing the surveys. According to FirstCarbon Solutions and Michael Brandman Associates (2013:7), "*Burrowing owls are crepuscular owls, being most active during the early morning or evening hours.*" In fact, burrowing owls are most active at night. Burrowing owl surveys should be performed on the project site by professionals with more experience with burrowing owls, and the surveys should follow the guidelines of CBOC 2013 and CDFG (2012).

Table 1. *Burrowing owl survey efforts, according to Michael Brandman Associates (2005, 2008, 2010), FirstCarbon Solutions and Michael Brandman Associates (2013), and FirstCarbon Solutions and Michael Brandman Associates (2014). Note that dates did not always match between the documents cited, and no reports were available for surveys in 2006, one of the surveys in 2007.*

Year	Hours	Acres surveyed	Detected	Survey dates	Property
2005	28	1778	Yes	May 10, 20, 23; Aug 29	Bel Lago
2006	??	??	??	Aug 16, 17, 19, 22	Bel Lago South
2006				Aug 15, 16, 22, 23	398-acre Anderson Property
2007	11.83	264.7	No	May 1, 2, 3, 4	Highland Fairview Corporate Park
2007	??	??	??	May-July	Highland Fairview
2010	7	285	No	June 9 through 24; area 1 surveyed over first 3 days and area 2 over last 3 days	Highland Specific Plan
2012	??	??	Incidental	June 28. July 5, 6, 9	WLCSP
2013	14.58	3436	Yes	June 13, 20, 21, 25, July 3, 9	WLCSP

The Los Angeles pocket mouse surveys were also inadequate for determining absence, as the FEIR did. The trapping efforts for Los Angeles pocket mouse amounted to placing 1 trap for every 36 acres of the project area, and only over 1.3% of a year. Erring on the side of caution is the standard of risk assessment when addressing rare biological resources in the face of high uncertainty (National Research Council 1986, Shrader-Frechette and McCoy 1992, O'Brien 2000). An absence determination was unwarranted. More trapping should have been performed, or alternatively the species should have been assumed to be present and impacts mitigated accordingly.

Stop-over Habitat

The FEIR made no mention of the project impacts on migratory birds. Most migratory species must make stops to rest during migration. Where these birds stop is referred to as “stop-over habitat.” As stop-over habitat is converted to anthropogenic uses, migratory birds face higher energy costs trying to find alternative stop-over habitat or they might not even be able to complete their migrations. The FEIR should be revised to address this impact.

Wildlife Movement

In FirstCarbon Solutions and Michael Brandman Associates (2014a), the entire paragraph on wildlife movement corridors was incorrect. Definitions were incorrect for habitat fragmentation, corridors, and metapopulation (see Smallwood 2015). The second paragraph on corridors was more accurate, but the rest of the discussion on wildlife movement was inaccurate and misleading. According to FirstCarbon Solutions and Michael Brandman Associates (2014a:76),

“Because of the location of WLCSP there is a potential to impede daily activity of local wildlife species traveling from the adjacent Badlands south toward Mystic Lake within Drainage 9. This is more appropriately referred to as a travel path and not a wildlife movement corridor.” The FEIR’s focus on wildlife movement corridors was misleading as a CEQA standard because CEQA’s standard is whether a project will interfere with wildlife movement in the region; corridors are not required for an impact to be significant. The loss of capacity of wildlife to be able to rely on “trails” will be just as devastating as any loss of corridors.

According to the FEIR (1-38), the project will not restrict the movement of wildlife between the Badlands and the SWAN and Mystic Lake areas. This conclusion was incorrect. Constructing several thousands of acres of warehouses and trucking infrastructure between the Badlands and Mount Russell will most definitely restrict wildlife movement across the valley (Figure 1). Animal species that have for thousands of years been capable of crossing the valley between the Badlands and Mount Russell will no longer be able to do so. The Mount Russell range will be isolated from the Badlands for the first time, and so the project’s impacts will fragment habitat in the region.



Figure 1. Likely movement trajectories of wildlife across the project area (red boundary), including avian flights along the valley (blue arrows) and avian and terrestrial wildlife movements between the Badlands and Mount Russell and Lake Perris (yellow arrows).

CUMULATIVE IMPACTS

According to the FEIR (1-47), no significant cumulative impacts will occur to biological resources following implementation of the proposed mitigation measures and payment of fees into the habitat conservation plans (HCPs). This conclusion was way off base. Constructing several thousand acres of warehouses for a trucking operation is going to add to the biological impacts of ongoing and likely future projects in the area, above and beyond the mitigation that will be implemented in the form of fees paid to HCPs. It is doubtful that the HCPs receiving the mitigation fees anticipated the drought that California is facing, nor did they anticipate the proliferation of renewable energy development.

Changed Circumstances

Cumulative impacts analysis was based on City of Moreno Valley's growth projections, so impacts of the WLCSP were compared to those of this projected growth in the absence of the WLCSP. However, the City of Moreno Valley's growth projections could be wrong. It is difficult to imagine the city growing in the face of a diminishing freshwater supply. It is fine to speculate in an EIR, but speculation should lean toward erring on the side of caution rather than on the side of desired outcomes, consistent with the precautionary principle in risk assessment (O'Brien 2000). The FEIR (pages 2-24 and 2-25) claims that speculating on cumulative impacts must rely on current growth projections in available planning documents, but doing so would be inconsistent with the intent of CEQA. A CEQA analysis need not be constrained to local or regional growth projections; it can and should rely on a range of possible growth futures. California has been experiencing a serious drought, and so one should not expect that the local or regional growth projections remain trustworthy.

In fact, the drought has changed the circumstances around the project's likely impacts on special-status species, whether these impacts will be direct, indirect or cumulative. The circumstances have probably changed the most around cumulative impacts. For example, I have been monitoring the burrowing owl population in the Altamont Pass Wind Resource Area for five years, and this year the breeding population has declined to 19% of the breeding population I measured in 2011. The burrowing owls in Yolo County dropped to 25% of the number of breeding pairs counted in Yolo County in 2007. These population declines were likely experienced throughout California, yet the FEIR assesses project impacts as if these impacts of the drought have not been occurring.

The circumstances around cumulative impacts have also changed for other species, if one cares to look. Chicks were produced in only 2 of 54 golden eagle nests in California's Diablo Range last year, and this year appears to be headed toward the same outcome. Just last week one of our telemetered golden eagles turned up emaciated and dead. Last year my colleague collected a white-tailed kite and delivered it to a rehabilitation facility where it was treated for dehydration and malnourishment. Of the hundreds of euthanized birds I received from rehabilitation centers for use in my carcass persistence trials in the Altamont Pass Wind Resource Area, almost all were emaciated. Most of these bird carcasses, as well as most of the bat carcasses I routinely

place for persistence trials, have remained in place over the last year because the avian and mammalian scavenger communities have largely died off.

As part of my research, I have also used a thermal camera to survey for wildlife at night in many survey plots. I have documented substantial declines in activity levels of owls and mammalian carnivores. The numbers of American badgers have plummeted, and so have bobcats, coyotes, foxes, and striped skunks. As part of another of my research efforts, I have been counting ground squirrels on many sampling plots across the Altamont Pass Wind Resource Area. Ground squirrels, which are prey species of golden eagle and other large raptors, have declined in numbers by 90% to 95%. The circumstances around biological resources have changed due to the ongoing, serious drought. These changes need to be addressed in a revised EIR.

Another changed circumstance is the Desert Renewable Energy and Conservation Plan (DRECP), which was recently circulated to address the ongoing proliferation of industrial wind and solar development in the desert regions of California.

Habitat loss will be Cumulative to that caused by Industrial-scale Photovoltaic Projects

The FEIR failed to address the cumulative impacts of renewable energy development in the region resulting from the DRECP. Based on the average nesting density in the DRECP area, the planned loss of 123,000 acres (49,777 ha, or 497.8 km²) of burrowing owl habitat would likely result in the destruction of 4,216 pairs of burrowing owls (Table 2). *This number of pairs would mean that the DRECP would take more than half of California's remaining burrow owls.* The loss of burrowing owls on the WLCSP site would therefore be cumulatively considerable.

Table 2. Nesting densities of burrowing owls at proposed project sites within the DRECP.

Source	Site	Ha	Pairs	Nest density, pairs/km ²
Cornett 2012	Imperial Valley Solar Company 2	64	4	6.25
Ecology and Environment 2012	Hudson Ranch Power II Geothermal Project	99	13	13.13
Ecology and Environment 2012	McDonald Road portion of Hudson Ranch	78	13	16.67
HDR 2011	Mt. Signal	1,711	72	4.21
BLM 2012	Ocotillo Sol	46	5	8.58
Imperial County 2012	Solar Gen II	813	56	5.61
Heritage Environmental Consultants, LLC. 2012	Campo Verde	1,338	65	4.86
Average				8.47

Project Impacts will be Cumulative to those of Planned Wind Turbine Impacts

Again, the WLCSP impacts need to be considered in the context of cumulative impacts that will be caused by renewable energy development. The recently circulated DRECP includes thousands of acres of wind energy development. Wind turbines cause collision bird and bat collision fatalities, which can be estimated for use in cumulative impacts analysis. Basing fatality rate projections on national averages (Smallwood 2013), bat fatalities per megawatt (MW)/year would be predicted at 17.2 (90% CI = 7.45 – 26.95). These rates applied to 3,070 MW in the preferred alternative of the DRECP would translate to 52,804 bats per year (90% CI = 22,871 - 82,736). Basing fatality rate projections on national averages (Smallwood 2013), bird fatalities per MW/year would be predicted at 11.1 (90% CI = 9.05 – 13.15). These rates applied to 3,070 MW in the preferred alternative of the DRECP would translate to 34,077 birds per year (90% CI = 27,774 – 40,397). The FEIR prepared for the WLCSP did not consider these impacts.

Project Impacts will be Cumulative to those caused by Fatalities at Solar Thermal Projects

The recently circulated DRECP also included projections for the development of solar thermal projects in the region. The fatality rates caused by solar thermal can be estimated for use in cumulative impacts analysis. If the fatality rates already experienced at existing or decommissioned solar thermal projects were extended to all of the planned 12,036 MW of solar capacity, then the DRECP could result in the deaths of 887,187 avian fatalities per year (19,902 fatalities at Ivanpah ÷ 270 MW and multiplied by 12,036 MW of solar planned in the DRECP), not counting the range of possibilities between this number and a 90% upper bound of an estimated confidence range (not done yet). Hummingbirds alone would amount to 70,896 fatalities per year at the solar thermal planned in the preferred alternative, and to 337,543 fatalities per year should all solar consist of solar thermal. In either event, the impact of this toll on flowering plants would be potentially devastating, and should be considered in the WLCSP FEIR.

ALTERNATIVES ANALYSIS

A revised EIR should be prepared to compare the impacts of project alternatives, including an alternative that includes a much larger commitment of solar photovoltaic panels atop all warehouses and asphalt surfaces. According to the Specific Plan (page 12-2), “*All logistics buildings within the LD and LL categories shall provide rooftop solar energy systems sized to offset the power demands of office space contained in the building.*” By adding solar power to the project so that surplus energy is transmitted to the grid, an equivalent capacity of renewable energy development could be avoided in wildlife habitat, thereby offsetting the impacts that would be caused by covering desert soils with PV. Assuming 2,000 acres (8.09 km²) of the project’s rooftop and blacktop could be fitted with PV panels, 282 MW of emission-free renewable energy could be generated from the WLC, and this 282 MW could be traded for what would have destroyed desert habitat. In fact, this amount of saved habitat would on average conserve 68 pairs of burrowing owls in the regions of California where the DRECP has targeted the development of PV (8.47 pairs/km² × 8.09 km²). Not adding such an alternative would qualify as a frivolous waste of biological resources and renewable energy resource.

MITIGATION

The FEIR (2-20) promises that a Mitigation Monitoring and Reporting Program (MMRP) will be prepared, but it provided no timeline for its preparation. In effect, the FEIR deferred the formulation of the MMRP to an unspecified, later date, thereby preventing the public from commenting on it. The FEIR need not include all the details of the MMRP, but its framework should be described, at minimum.

The FEIR (4.4-100) claimed that burrowing owls were not detected within the project's area of disturbance. The proposed mitigation measure is to construct berms around the planned detention basins anticipated to provide sufficient foraging habitat for one pair of owls. However, the mitigation made no mention of needing ground squirrel burrows along with the berm. Without squirrel burrows, burrowing owls would be unable to nest in the berm. Also, one pair of owls will not persist. Nesting burrowing owls require other nesting pairs nesting nearby, typically numbering at least 10 to 12 pairs. Burrowing owls require other burrowing owls as well as ground squirrels to help call alarms to incoming predators.

Thank you for your attention,



Shawn Smallwood, Ph.D.

REFERENCES CITED

Babcock, K. W. 1995. Home range and habitat use of breeding Swainson's hawks in the Sacramento Valley of California. *J. Raptor Research* 29:193-197.

Bechard, M. J. 1983. Food supply and the occurrence of brood reduction in Swainson's hawk. *Wilson Bulletin* 95:233-242.

BLM (Bureau of Land Management). 2012. El Centro Office Draft Environmental Impact Statement / Draft CDCA Plan Amendment Ocotillo Sol Project. U.S. Department of the Interior, BLM/CA/ES-2012-009+1793, DES 20-12, DOI-BLM-CA-D000-2012-0005-EIS. El Centro, California.

California Department of Fish and Game. 1994. State Fish and Game Staff Report Regarding Mitigation for Impacts to Swainson's Hawks in the Central Valley of California. California Department of Fish and Game, Sacramento.

California Energy Commission, California Department of Fish and Wildlife, U.S. Bureau of Land Management, U.S. Fish and Wildlife Service (CEC et al.). 2014. Draft Desert Renewable Energy Conservation Plan (DRECP) and Environmental Impact Report/Environmental Impact Statement, SCH No. 2011071092, BLM/CA/PL-2014/025+1793, FWS-R8-ES-2014-N165. <http://www.drecp.org/>

CDFG (California Department of Fish and Game). 2012. Staff Report on Burrowing Owl Mitigation. Sacramento, California.

Cornett, J. W. 2012. Biological Resources Assessment, Imperial Valley Solar Company 2, LLC, located within Section 34, Range 14 East, Township 10 South, Parcels 003-240-009 and 003-240-029, Imperial County, California. Unpublished report to MSA Consulting, Inc., Rancho Mirage, California.

DeSante, D. F., E. D. Ruhlen, and R. Scalf. 2007. The distribution and relative abundance of burrowing owls in California during 1991-1993: Evidence for a declining population and thoughts on its conservation. In Barclay, J. H., K. W. Hunting; J. L. Lincer, J. Linthicum, and T. A. Roberts, Eds.; Proceedings of the California Burrowing Owl Symposium, November 2003. Bird Populations Monographs No. 1. The Institute for Bird Populations and Albion Environmental, Inc.: Point Reyes Station, CA, USA.

Ecology and Environment, Inc. 2012. Hudson Ranch Power II CUP #G10-0002/Simbol II CUP #12-0005 Draft Environmental Impact Report, Volume I. County of Imperial, Department of Planning and Development Services, El Centro, CA.

England, A. S., J. A. Estep, and W. R. Holt. 1995. Nest-site selection and reproductive performance of urban-nesting Swainson's Hawks in the Central Valley of California. *Journal of Raptor Research* 29:179-186.

Estep, J. A. 1989. Biology, movements, and habitat relationships of the Swainson's hawk in the Central Valley of California, 1986-1987. California Department of Fish and Game, Nongame Bird and Mammal Sec. Rep., Sacramento, CA, U.S.A.

Estep, J. A. 2008. The Distribution, Abundance, and Habitat Associations of the Swainson's Hawk (*Buteo swainsoni*) in Yolo County. Report to Yolo Natural Heritage Program, Woodland, California.

Michael Brandman Associates. 2005. Focused Burrowing Owl Survey Report for the 1,778-Acre Bel Lago Property City of Moreno Valley Riverside County, California. Report to Highland Fairview Properties, Moreno Valley, California.

Michael Brandman Associates. 2008. Focused burrowing owl survey, Highland Fairview Corporate Park, City of Moreno Valley, Riverside County, California. Report to Highland Fairview Operating Company, Costa Mesa, California.

Michael Brandman Associates. 2010. Focused burrowing owl survey, Highlands Specific Plan, City of Moreno Valley, Riverside County, California. Report to Highland Fairview Operating Company, Costa Mesa, California.

FirstCarbon Solutions and Michael Brandman Associates. 2013. Burrowing owl focused survey World Logistics Center Specific Plan, City of Moreno Valley, Riverside County, California. Report to Highland Fairview Operating Company, Moreno Valley, California.

FirstCarbon Solutions and Michael Brandman Associates. 2014a. Habitat Assessment and MSHCP consistency analysis, World Logistics Center Specific Plan, City of Moreno Valley, Riverside County, California. Report to Highland Fairview Operating Company, Moreno Valley, California.

FirstCarbon Solutions and Michael Brandman Associates. 2014b. Burrowing owl relocation plan, World Logistics Center Specific Plan, City of Moreno Valley, Riverside County, California. Report to Highland Fairview Operating Company, Moreno Valley, California.

HDR (Engineering, Inc.) 2011. Draft Environmental Impact Report Mount Signal and Calexico Solar Farm Projects, Imperial County, California. County of Imperial, El Centro, California.

Heritage Environmental Consultants, LLC. 2012. Campo Verde Solar Energy Project Protocol Burrowing Owl Survey Report: Phase I, II and III Survey Report (2012 Breeding season). Report prepared for First Solar, LLC, Oakland, California.

H. T. Harvey & Associates. 2014a. Ivanpah Solar Electric Generating System avian and bat monitoring plan: 2014 spring report (revised) (23 March 2014 – 22 May 2014). Report to Solar Partners I, II, and VIII, Nipton, California.

H. T. Harvey & Associates. 2014b. Ivanpah Solar Electric Generating System avian and bat monitoring plan: 2014 spring report (revised) (23 May 2014 – 17 August 2014). Report to Solar Partners I, II, and VIII, Nipton, California.

Imperial County. 2012. Draft Environmental Impact Report: Solar Gen 2 Solar Array Power Project. Imperial County Planning & Development Services Department, El Centro, California.

National Research Council. 1986. Ecological knowledge and environmental problem-solving: concepts and case studies. National Academy Press, Washington, D.C.

O'Brien, M. 2000. Making better environmental decisions: an alternative to risk management. The MIT Press, Cambridge, Massachusetts.

Shrader-Frechette, K. S., and E. D. McCoy. 1992. Statistics, costs and rationality in ecological inference. *Tree* 7: 96-99.

Smallwood, K.S. 1995. Scaling Swainson's hawk population density for assessing habitat-use across an agricultural landscape. *J. Raptor Research* 29:172-178.

Smallwood, K.S. and S. Geng. 1993a. Alfalfa as wildlife habitat. *California Alfalfa Symposium* 23:105-8.

Smallwood, K.S. and S. Geng. 1993b. Management of pocket gophers in Sacramento Valley alfalfa. *California Alfalfa Symposium* 23:86-89.

Smallwood, K.S., J. Beyea and M. Morrison. 1999. Using the best scientific data for endangered species conservation. *Environmental Management* 24:421-435.

Smallwood, K. S., L. Neher, and D. A. Bell. 2009b. Map-based repowering and reorganization of a wind resource area to minimize burrowing owl and other bird fatalities. *Energies* 2009(2):915-943. <http://www.mdpi.com/1996-1073/2/4/915>

Smallwood, K. S., L. Neher, J. Mount, and R. C. E. Culver. 2013. Nesting Burrowing Owl Abundance in the Altamont Pass Wind Resource Area, California. *Wildlife Society Bulletin*: 37:9 pp.

Smallwood, K. S., L. Neher, D. Bell, J. DiDonato, B. Karas, S. Snyder, and S. Lopez. 2009b. Range Management Practices to Reduce Wind Turbine Impacts on Burrowing Owls and Other Raptors in the Altamont Pass Wind Resource Area, California. Final Report to the California Energy Commission, Public Interest Energy Research – Environmental Area, Contract No. CEC-500-2008-080. Sacramento, California. 183 pp. <http://www.energy.ca.gov/2008publications/CEC-500-2008-080/CEC-500-2008-080.PDF>

Smallwood, K.S., A. Gonzales, T. Smith, E. West, C. Hawkins, E. Stitt, C. Keckler, C. Bailey, and K. Brown. 2001. Suggested standards for science applied to conservation issues. *Transactions of the Western Section of the Wildlife Society* 36:40-49.

EXHIBIT E

Memorandum

Date: June 9, 2015

To: Richard Drury
From: Gregory House

Re: World Logistics Center Final Environmental Impact Report

I write this memorandum in response to your request for comments on the World Logistics Center FEIR, especially its handling of the agricultural resources of the Project site.

I have examined the FEIR, especially Appendix C concerning the agricultural analyses. I also reviewed the Response to Comments Vol 1. concerning agricultural issues raised.

In my examination I paid particular attention to the most recent (September 2014) Agricultural Resources Assessment by Parsons-Brinckerhoff, which evaluates the agricultural resources of the Project based on the California Land Evaluation and Site Assessment Model (LESA) designed by the California Department of Conservation.

Parsons-Brinckerhoff's assessment resulted in a LESA score of 60.4, which the report states, in accordance with the LESA Guidelines, *would have been a significant impact* except that the Site Assessment portion of the cumulative score is less than 20 (by Parsons-Brinckerhoff's measure it is 19.5).

The Site Assessment's contribution to the LESA total score is 50%, consisting of four factors, Project Size, Water Resource Availability, Surrounding Agricultural Lands, and Protected Resource Lands.

In the Water Resource Availability sub-portion of the Site Assessment, Parsons-Brinckerhoff has arrived at a final sub-score or contributory value of 4.5, based on its analysis of the water resource. In so doing, Parsons-Brinckerhoff has assumed that recycled water from Eastern Municipal Water District (EMWD) is available for the Project but rejects its use on the Project site for agricultural purposes (see page 6 of the Parsons-Brinckerhoff study) because 1) the cost of the recycled water, which Parsons-Binckerhoff estimates at well over \$100 per acre-foot, could exceed expected revenues from irrigated crops, and 2) there are strict regulations

regarding the use of recycled water to food crops which might limit its use on the Project site.

Neither of these assertions are well supported, nor do they hold up when examined carefully.

The current cost of the EMWD recycled water is \$97 per acre-foot in the summer time, according to Parsons-Brinckerhoff's report, page 6. On page 8, Parsons-Brinckerhoff estimates the cost to service the Project site with recycled water at "well over \$100 per acre-foot." For purposes of analysis I will assume a \$199 per acre-foot cost for the recycled water, double the current rate..

The Parsons-Brinckerhoff reports notes (pages 5-6) that irrigated citrus crops were once the most abundant and important crop in the area in which the Project lies, but that production gradually moved to Central California.

The University of California Cooperative Extension has recently published cost studies of various crops produced in California including three citrus crops: oranges, lemons, and mandarins. The following table is derived from these studies:

- 2015 Sample Costs to Establish an Orchard and Produce Lemons, San Joaquin Valley South, Low Volume Irrigation
- 2015 Sample Costs to Establish an Orange Orchard and Produce Oranges, Navels and Valencias, San Joaquin Valley South, Low Volume Irrigation
- 2011 Sample Costs to Establish a Citrus Orchard and Produce Mandarins, Tango, San Joaquin Valley South, Low Volume Irrigation

The table lists the total irrigation water applied per year, the price of the water per acre-foot, the total cost of the water, the total gross revenue of the crop, total costs to produce, and net profit, all per acre.

University Study Costs and Returns for Citrus Crops:

Crop	Water Applied in acre-feet per year	Water Price per acre-foot	Total Water Cost per year	Total Crop Revenue per Year	Total Crop Costs per Year	Net Profit per Acre per Year
Lemons	2.75	\$114	\$314	\$13,905	\$11,190	\$2,715
Mandarins	2.5	\$129	\$323	\$18,913	\$14,613	\$4,300
Oranges	2.5	\$114	\$285	\$6,600	\$8,526	<\$1,925>

This table, based on information provided by the University of California Cooperative Extension, demonstrates that there are currently profitable citrus crops grown in the southern San Joaquin Valley, namely lemons and mandarins. The loss noted for oranges reflects changing consumer preferences and consequent lower prices received. Obviously, potential citrus growers in Moreno Valley would be well advised to plant mandarins or lemons as opposed to oranges at the present time.

Parsons-Brinckerhoff has noted that citrus orchards are an appropriate crop for the Moreno Valley. It also notes on page 6 that area crops typically use 3 acre-feet per year for irrigation purposes. Using this water usage figure which is 10% to 20% higher than that estimated in the University studies, and calculating the price at \$199 per acre-foot for EMWD recycled water, which is double the current rate, both lemons and mandarins would be profitable crops on the Project site. Applying these higher water usage and cost figures, the total annual water cost rises to \$597 per acre for lemons and mandarins, resulting in an increase per acre growing cost for lemons of \$283, and \$274 for mandarins over the University studies' water costs.

For lemons and mandarins the net profit based on these University studies is tabulated below as \$2,432 per acre for lemons and \$4,026 per acre for mandarins.

Net Profit Potential on Lemons and Mandarins in Moreno Valley:

Crop	Net profit – San Joaquin Valley, per acre	Less increased cost of water per acre in Moreno Valley	Net Profit – Moreno Valley per acre
Lemons	\$2,715	\$283	\$2,432
Mandarins	\$4,300	\$274	\$4,026

Even at double the current \$97/acre-foot cost of EMWD recycled water, lemons and mandarins are profitable at levels well above the \$0-500 per acre profit margins discussed by Parsons-Brinckerhoff on page 6 of its assessment report.

Regarding the propriety of using these University cost studies of southern San Joaquin Valley production costs to compare to those in Moreno Valley, although the costs may be expected to vary somewhat, there is no major cost item other than water which would conflict with a direct comparison of the two areas except land prices. Land prices, when based on urban development speculation rather than agricultural potential, have typically eliminated agricultural land uses over time throughout California. It is developments projects such as the instant case presents, however, that cause these land speculations, and the argument thus becomes circular.

I have also examined the total amount of water that the putative lemons or mandarins would use on the Project site, and whether EMWD has enough recycled water now or in the future to provide it. EMWD's web site states that typical daily flows for its recycled water are 11.6 million gallons per day (mgd), its capacity is 16 mgd, and in ultimate expansion its flow of recycled water will extend to 41 mgd (from <http://www.emwd.org/home/showdocument?id=1423>). Note that of the 11.6 mgd, 0.4 mgd are sold to the City of Perris, leaving 11.2 mgd for Moreno Valley.

If the entire approximately 2,157 acres of class 2 soils on the Project site (see Parsons and Brinckerhoff, page 9 and also Table 2, page 11) were to be irrigated for lemons or mandarins and use 3 acre-feet per year of water, these crops would require a total of 2,108.6 million gallons, which applied regularly over a nine-month period from March through November (270 days), would calculate to 7.8 mgd. The full calculation is as follows:

3 acre-feet water per year times 2,157 acres = 6,471 acre feet total per year.

6,471 acre-feet times 325,851 gallons per acre-foot = 2,108,581,821 gallons total per year.

2,108,581,821 divided by 1,000,000 gallons = 2,108.6 million gallons

2,108.6 million gallons divided by 270 days = 7.8 mgd.

Parsons-Brinckerhoff's report notes on page 7 that 35% of EMWD water supply is from recycling, and that 9% of the total water delivered is used for landscaping; from this I calculate that, assuming it only uses recycled water, at present landscaping uses approximately 2.9 mgd of recycled EMWD water. Current agriculture apparently uses 2%, thus another approximately 0.7 mgd is already accounted for. Subtracting these usages and the 0.4 mgd sold to Perris from the total capacity of 16 mgd, this leaves 12.0 mgd for other uses, which are limited to non-human consumption.

Thus EMWD appears to have capacity to deliver the 7.8 mgd water to the Project site needed to permit citrus growing on the 2,157 acres of class 2 soils.

Another issue raised by Parsons-Brinckerhoff is whether recycled water can be legally used on crops, in this case, citrus crops, for food safety reasons. The California Department of Water Resources (DWR) says it is. In a table entitled *Suitable Uses of Recycled Water* (see copy, attached), DWR lists "orchards w/ no contact with edible portion and recl. water" as an allowed use for tertiary and secondary recycled water. Current irrigation techniques as described in the University cost studies cited above use micro-sprinklers, a kind of drip irrigation technology which apply irrigation water low to the ground, not sprinkled up onto the tree foliage nor close to the fruit producing areas of the citrus trees.

Based on this analysis of water cost, usage and availability, I have re-calculated Parsons-Brinckerhoff's final LESA score for the Project site, using the same method described in the LESA Guidelines.

Instead of finding, as Parsons-Brinckerhoff does, that the Water Resource Availability score should be based on option 11 in the Guidelines, Table 3, which answers yes to the three questions of 1) Is irrigated production feasible? 2) Is there a physical restriction to the water? and 3) Is there an economic restriction to the water?, this new information I have presented indicates that option 8, which answers yes to 1) but no to 2) and 3) is applicable to the Project site. Even if the recycled water supply is not at present fully available due to pipeline considerations (as noted by Parsons-Brinckerhoff on page 9), at very least, option 10 is certainly applicable, which answers yes to 1), yes to 2), and no to 3), that is, that irrigated production is feasible, and that irrigation water to the Project site is physically restricted, but not economically restricted.

In the Parsons-Brinckerhoff assessment, a change from option 11 to option 10 for the 2,157 acres of class 2 soils on the Project site (this class 2 soil is suitable for citrus plantings), raises the weighted average for the Water Resource Availability score from 4.5 to 5.1, and thus raises the subtotal of the Site Assessment (SA) portion of the overall LESA score from 19.5 to 20.1, which is above the threshold of 20 first noted above. This in turn, kicks the entire score up to 61.0 with 20.1 for the SA portion. The Project has now entered the category *Considered Significant*.

If, on the other hand the Water Resource Availability for the 2,157 acres is rated as option 8, then the Water Resource Availability score calculates to 7.0, which increases the final LESA score to 71.9 with a SA sub-score of 22.0, again placing the Project in the category *Considered Significant* for agricultural impact.

Because the Project has a *Considered Significant* effect on the agricultural resource, the Project should be required to mitigate for the entire loss of 2,610 acres of agricultural land.

In answer to a question that may arise, if citrus growing is profitable then why aren't there citrus farmers in Moreno Valley now? The answer appears one of historical accident: this recycled water was not available earlier; farmers gave up and left earlier when land prices began their speculative rise.

Below are two tables which illustrate the changes to the Parsons-Brinckerhoff LESA assessment.

Calculation of Water Resource Availability sub-score based on option 10 from Table 3, LESA Guidelines:

Acres	Portion	Water Source	Proportion of Project Area	Water Availability Score	Weighted Average Score
2,157 to be irrigated	Class 2 soils	EMWD recycled	.83	35	29.1
519 dry farmed	All other land	none	.17	30	5.1
Water factor					34.2

Final LESA Score based on above.

Factor Name	Factor Rating	Factor Weighting	Weighted Factor Rating
Land Capability Classification	83.89	.25	21.0
Storie Index Rating	79.49	.25	19.9
Subtotal LE portion			40.9
Project Size	100	.15	15
Water Resource Availability	34.2	.15	5.1
Surrounding Agricultural Lands	0	.15	0
Protected Resource Lands	0	.05	0
Subtotal SA Portion			20.1
Grand Total			61.0

This completes my review.

Sincerely,



Gregory A. House, AFM, ARA, CCA, CPAg

Enclosure: Suitable Uses of Recycled Water

Greg House memo re: World Logistics FEIR, 2015-Jun-09, page 6

Suitable Uses* of Recycled Water

Use of Recycled Water	Treatment Level		
	Tertiary Recycled Water	Secondary-2.2 Recycled Water	Secondary-23 Recycled Water
Irrigation of:			
Food crops—contact with edible portion of crop	Allowed	Not Allowed	Not Allowed
Parks and playgrounds	Allowed	Not Allowed	Not Allowed
School yards	Allowed	Not Allowed	Not Allowed
Residential landscaping	Allowed	Not Allowed	Not Allowed
Unrestricted access golf courses	Allowed	Not Allowed	Not Allowed
Any other irrigation uses not prohib. by other prov. of CCR	Allowed	Not Allowed	Not Allowed
Food crops—edible portion above gd/not in contact w/ recl. Water	Allowed	Allowed	Not Allowed
Cemetaries	Allowed	Allowed	Allowed
Freeway landscaping	Allowed	Allowed	Allowed
Restricted access golf courses	Allowed	Allowed	Allowed
Ornamental nursery stock and sod farms	Allowed	Allowed	Allowed
Pasture for milk animals	Allowed	Allowed	Allowed
Any nonedible vegetation with access control to prevent use as if it were a park, playground or school yard.	Allowed	Allowed	Allowed
Orchards w/ no contact between edible portion and recl. water.	Allowed	Allowed	Allowed
Vineyards w/ no contact between edible portion and recl. water	Allowed	Allowed	Allowed
Non food-bearing trees not irrigated <14 days of harvest	Allowed	Allowed	Allowed
Fodder crops (e.g. alfalfa) and fiber crops (e.g. cotton)	Allowed	Allowed	Allowed
Seed crops not eaten by humans	Allowed	Allowed	Allowed
Food crops that undergo commercial pathogen-destroying processing before human consumption (e.g. sugar beets)	Allowed	Allowed	Allowed
Supply for impoundments:			
Nonrestricted rec. impound., w/ suppl. monit. for path. org.	Allowed**	Not Allowed	Not Allowed
Restricted rec. impound. and fish hatcheries	Allowed	Allowed	Not Allowed
Landscape impound. w/o decorative fountains	Allowed	Allowed	Allowed
Supply for cooling or air cond.:			
Ind. or comm. cooling or air cond. with cooling tower, evaporative condenser, or spraying that creates a mist	Allowed***	Not Allowed	Not Allowed
Ind. or comm. cooling or air cond. w/o cooling tower, evaporative condenser, or spraying that creates a mist	Allowed	Allowed	Allowed
Other uses:			
Flushing toilets and urinals	Allowed	Not Allowed	Not Allowed
Priming drain traps	Allowed	Not Allowed	Not Allowed
Industrial process water that may contact workers	Allowed	Not Allowed	Not Allowed
Structural fire fighting	Allowed	Not Allowed	Not Allowed
Decorative fountains	Allowed	Not Allowed	Not Allowed
Commercial laundries	Allowed	Not Allowed	Not Allowed
Consol. of backfill material around potable water pipelines	Allowed	Not Allowed	Not Allowed
Artificial snow making for commercial outdoor uses	Allowed	Not Allowed	Not Allowed
Industrial boiler feed	Allowed	Allowed	Allowed
Nonstructural fire fighting	Allowed	Allowed	Allowed
Backfill consol. around nonpotable piping	Allowed	Allowed	Allowed
Soil compaction	Allowed	Allowed	Allowed
Mixing concrete	Allowed	Allowed	Allowed
Dust control on roads and streets	Allowed	Allowed	Allowed
Cleaning roads, sidewalks and outdoor work areas	Allowed	Allowed	Allowed
Flushing sanitary sewers	Allowed	Allowed	Allowed

* Refer to the full text of the latest version of Title-22

** With "conventional tertiary treatment" additional monitoring may be necessary

*** Drift eliminators and/or biocides are required if public or employees can be exposed to mist

Grace Espino-Salcedo

Subject: RE: REQUEST FOR THE PLANNING COMMISSION TO DENY THE GENERAL PLAN AMENDMENT, ANY ZONE CHANGES, AND VOTE NO ON THE WORLD LOGISTICS CENTER

From: Marcia Amino [<mailto:tmamino@aol.com>]

Sent: Thursday, June 11, 2015 5:20 PM

To: Allen D. Brock, CBO; Brian Lowell; George Price; Jeffrey J. Giba; Jesse L. Molina; D. LaDonna Jempson; Michelle Dawson; Richard Sandzimier; yxstuabg@moval.org; Mark Gross; Mike Lee; City Clerk

Subject: REQUEST FOR THE PLANNING COMMISSION TO DENY THE GENERAL PLAN AMENDMENT, ANY ZONE CHANGES, AND VOTE NO ON THE WORLD LOGISTICS CENTER

6/11/15

Planning Commissioners:

I am writing this e-mail to each of you asking that you vote no on the World Logistics Center project. I am unable to attend tonight's meeting, but feel very strongly that this project is a bad move for our city. Some of the issues I have concerns with are:

(1) the property rights of the homeowners who live in the sphere of the WLC and who DO NOT WANT this project and its accompanying "sound walls", visual pollution, denigration of our air quality, and an over all lack of fitting into the general plan and what was to have been in that area of our city. I find it indefensible that our city could and would take the property rights of residents (and that includes the families who live just outside the city limits in the unincorporated county area) and give them to the project owner (Highland Fairview) WITHOUT their consent. I refer to the Development Agreement for the WLC wherein it states, "...including all real estate properties held by legal or equitable interest by the applicant, Highland Fairview ...". This should be criminal in my opinion.

(2) the Development Agreement, which pretty much mirrors that of Aquabella is contrary to the bests interests of Moreno Valley and its residents, in my opinion. I base this belief on the fact that our city did the infrastructure improvements around the Aquabella land, which leaves this developer once again off the hook and the city with less DIF from this project, if it ever gets off the ground. For that reason, I see the same pattern here with the WLC, and believe that the Development Agreement should go back to the drawing board and more specific safeguards and protection for our city and its tax money should be included in this legal document.

(3) The fact that the Air Resources Board, in their letter of June 8, 2015 to Lead Planner, Mark Gross, cites legal concerns with the FEIR for this project, is troublesome, in that if you vote for this WLC, it will possibly end up costing the taxpayers of Moreno Valley more money due to possible litigation from the ARB in order to mandate our city to comply with their legal concerns.

(4) There are additional concerns from Riverside Agencies, and I would hope that as good neighbors to our other regional partners, you will vote this project down or in the

alternative table it until the issues they have cited are mitigated.

(5) There is also the issue of the promise of jobs. I would remind you that this developer promised a number jobs for Sketchers which did not materialize, and in fact that total project is not in its next phase or anywhere near completion, so I find it unbelievable that our city would allow Overriding Considerations for this project in order for it to pass. If this developer is so desirous for jobs in our community, I would ask that a contract addendum be included wherein if the number of jobs did not materialize, this developer would be required to pay \$1,000,000 to the City of Moreno Valley for each job that does not come to fruition. I for one am tired of talk and false promises, and am asking that you as the first part of this project going forward, do the right thing and just Vote No for the WLC.

I have other concerns but this will suffice for the present time. I am hopeful that this Planning Commission members are honest and want what is best for Moreno Valley, and if that is so, you have no other choice but to vote no on this project and not grant the General Plan Amendment nor approve any zone changes for that project.

With Kind Regard,

Marcia Amino
tmamino@aol.com
 951-892-5399

Mark Gross
 Senior Planner
 Community & Economic Development
 City of Moreno Valley
 p: 951.413.3215 | e: markg@moval.org W: www.moval.org
 14177 Frederick St., Moreno Valley, CA 92553

Grace Espino-Salcedo

Subject: RE: World Logistics Center

-----Original Message-----

From: Marian Bailey [<mailto:marian1602@att.net>]

Sent: Monday, June 15, 2015 9:15 AM

To: Mark Gross

Subject: World Logistics Center

Dear Sir,

I live in Riverside within earshot of the grade that climbs from Riverside up to Moreno Valley, so naturally I am concerned about the addition of many big rigs to the 60 freeway, since I can hear every single one of them.

It seems to me that the strongest argument in favor of the World Logistics Center (WLC) is the employment it would provide to residents of Moreno Valley, Riverside, Redlands, and other local communities. However, I think this idea should be evaluated, and to do this, I suggest that the types and numbers of positions the WLC would provide be compared with the types and numbers of positions currently occupied by local residents. My guess is that there would be a considerable mismatch--that is, that the local population could not supply a substantial proportion of the positions offered by the WLC.

As I understand it, the WLC itself will rely largely on computerized robotic operations, so the positions it offers will have to do with servicing and otherwise maintaining the computers and the robots, with a relatively small number of administrative positions for support. I think Census data and possibly the Economic Development Department could be consulted to find out about how many computer programmers and robot technicians currently live in Moreno Valley and the rest of the local area; if there is a shortfall, people will have to commute, putting more traffic on the roads, or move into Moreno Valley itself, adding to congestion.

Of course, the WLC will employ a lot of truck drivers, and this occupation might absorb some of those who are currently unemployed. My question is, what kind of work force does Moreno Valley want to attract--a less, or a more well educated one?

In addition, the WLC will lock Moreno Valley into what would be referred to in biology as a monoculture ... square miles devoted to warehouses that would never be used for anything else. I would hope for better for Moreno Valley ... I would hope for a diverse set of companies that employ white-collar workers. They might be more difficult to attract originally, but ultimately they would provide the community with a better way of life.

Sincerely,

Marian Bailey
Riverside

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Grace Espino-Salcedo

Subject: RE: WLC Comments

From: mbreitkreuz@aol.com [<mailto:mbreitkreuz@aol.com>]

Sent: Tuesday, June 09, 2015 3:36 PM

To: George Price; Dr. Yxstian A. Gutierrez; D. LaDonna Jempson; Michelle Dawson; mike1@moval.org; richards@moval.org; Mark Gross; brian1@moval.org; Jesse L. Molina; Jeffrey J. Giba

Subject: WLC Comments

Dear City Council Members, Planning Commissioners, and City Staff:

I strongly oppose the proposed World Logistics Center.

Why should Moreno Valley bolster our logistics capacity beyond the level needed to meet our local needs in light of few jobs and low paying salaries. The strains on our infrastructure, tax revenues, schools, highways, and general well being of our residents would out weigh the meager benefits of the WLC.

Warehouses neither provide upward mobility or at least middle-class salaries for our residents. The majority of warehouse salaries are below poverty levels.

In an article by Jock O'Connell, who is regarded as one of California's foremost authorities on world trade, global economy trends, and the internationalization of California's economy, he states that "our analysis finds that studies contending that the logistics sector is replacing manufacturing as a primary source of jobs for the state's blue collar workforce are, at best, misleading. And contrary to the claims of some economists, there is scant evidence that the logistics sector offers marginally-educated, unskilled workers a broad pathway for career advancement into positions paying a middle-class income."

Logistics/warehouses are a poor investment for our community. Too much of Moreno Valley is being designated for warehouses. We are putting our future economic opportunities in jeopardy.

In his report summary Mr. O'Connell states that the consensus is that logistics/warehouses provide a relatively poor return on public investment and generally do not represent the highest and best use of which real-estate should be devoted. He further states that the logistics/warehouse sector is no panacea for communities seeking to create large numbers of jobs paying middle-class wages for those lacking the kinds of skills that are increasingly demanded of workers in today's economy.

Traffic and Circulation

The proposed location of WLC does not make sense. Highway 60 is already overburdened (with no monies available for improvements) and does not have the capacity for the amount of truck traffic that will be generated by this warehouse project. There is no appropriate rail access for warehouse transport in this area.

Residents should not have to face additional burdens such as safety, infrastructure debt and freeway congestion for this project. In addition, freeway ingress and egress is not suited for heavy truck traffic. Improvements are needed to adequately handle **current** usage.

Residents' Investment in Community

The recent city council recalls and the amount of financial investment the WLC developer had to expend to attain election results speak to the dissatisfaction residents have with the proposed WLC and change to the general plan land use. A great deal of time, expense and community input went into developing the city's general plan. The WLC drastically changes the quality of life for all residents. It is unfair subject residents to a project the magnitude the WLC.

The WLC is counter to the type of community residents thought they were investing in when purchasing homes and raising families in Moreno Valley. This isn't just an "east end" issue. I have personally talked to hundreds of residents who live in all areas of Moreno Valley, friends who live in Mira Loma, etc. Warehouses and truck traffic do not make for a livable/sustainable community. People want better paying jobs for our residents and future generations. They do not want to be a city surrounded by warehouses.

The city's focus should be to ensure that Moreno Valley is a vibrant community that is both sustainable and livable. In order to do this we need to attract cutting-edge industries that provide *good jobs*, occupations that attract and maintain community members, safe streets, educational opportunities, places to recreate, open space, housing alternatives, and clean air.

Warehouse Automation

In addition to meager salaries, a recent public radio broadcast interviewee indicated that warehouse jobs provide a poor square footage/employee ratio due to automation. A "60 Minutes" program also covered the issue of job loss through automation. Warehouses do not offer a vital economy, nor will it meet the occupational needs of future generations. Contrary to information being provided, warehouse jobs do not lead to career advancement for the majority of workers. A high percent of these jobs are temporary. Employees usually do not have sick pay, retirement benefits, family necessity leave, etc. Childcare is often unaffordable to these families. These conditions erode communities and families. The WLC is a deadend for Moreno Valley.

Again, I am opposed to the WLC for these and many other issues with the project. No mitigation can change the impact the WLC will have on Moreno Valley.

Margie Breitzkreuz
Resident

Mark Gross

Senior Planner
Community & Economic Development
City of Moreno Valley

p: 951.413.3215 | e: markg@moval.org W: www.moval.org

14177 Frederick St., Moreno Valley, CA 92553

Grace Espino-Salcedo

Subject: RE: WLC FEIR Comments

From: malardner@aol.com [<mailto:malardner@aol.com>]

Sent: Thursday, June 11, 2015 2:01 PM

To: Jane Halstead, CMC; Ewa Lopez, CMC; Kathy Gross

Subject: WLC FEIR Comments

I am submitting my comments and a photo regarding the WLC FEIR in order to be considered by the city before any approval of the WLC proposal. Please make sure these get to the appropriate staff, planning commissioners and city council members.

Thank you,
Melody Lardner

Kathy Gross

Executive Assistant I

City Clerk's Office

City of Moreno Valley

p: 951.413.3001 | e: kathyg@moval.org w: www.moval.org

14177 Frederick St., Moreno Valley, CA 92553

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

To the City of Moreno Valley Re: World Logistics Center Final EIR

June 11, 2015

I am writing to express my concern over the potential approval of the rezoning of a large area of our city for the World Logistics Center. I live on the east end of Moreno Valley not far from the proposed rezoning and future projects. When I purchased my home, I did my due diligence and checked out what was around me and how land was zoned. This area under the general plan was zoned for a large master planned community with various lot sizes ranging from RA2 to some areas of dense housing (R5/R10), but also golf courses, parks, open space, small business centers, and some commercial but not warehouses over the most of the area! I bought my home to live in and retire in and I am not one of those people referred to as the rich horse owners of the east end. We worked hard to buy our home and had a vision of what the area would look like in the future based on the general plan and master plan for this area. I now see my home value decreasing and my quality of life being affected (breathing, traffic, noise, aesthetics, etc.). This change is huge! And the developer purchased their land knowing what it was zoned as well.

Traffic: I have concerns over traffic. Traffic on the freeway is congested already and on and off ramps such as Moreno Beach and Redlands Blvd. area already very busy. CalTrans has not announced any plans to widen the 60 freeway through Moreno Valley. The overpasses are small at Moreno Beach, Redlands and Theodore and it is not clear when these will be widened in most cases. The ramps are also small in most places. And Gilman Springs is a two lane county road that is already hazardous and heavily used by commuters and there have been no plans to widen this road and I worry about increasing fatalities on this road. In addition, in areas of warehousing or logistics, the traffic at shift changes can be a huge impact to the surrounding roads and freeways. I work near warehouses and logistics in another city and the traffic can be heavy at intersections and accidents occur between trucks and cars, with cars getting the worst of it in an accident. It was stated in the documentation that the planning commission has that Highland Fairview will be responsible to contribute \$500,000 to freeway improvements. That is nothing compared to what it will cost to actually improve the freeway to what is needed. Just repairs to the damaged Theodore Street bridge are more than that!

Pollution and air quality: I have concerns over the impacts to air quality. I already have breathing issues as it is and adding more diesel pollutants to the air will significantly deteriorate the air in our area. I am enclosing a photo of one truck and how much it smokes just travelling down a freeway to give you a visual of what they put into the air. There will be a lot of trucks on the east end as well as on our roads and freeways all around the city with this project. While the city can regulate idling times, it does not help with start ups, accelerations and driving to and from the warehouses and these activities will contribute a lot of diesel exhaust into the air.

Noise: Industrial noise is much different than the noise that might come from a master planned community that was supposed to be here. I did not move to the east end to be in an industrial area with those noises and I feel that is a significant impact to the area and the FEIR states this as well.

Impacts to Roads: I am concerned that the city will not be able to maintain our roads properly. Trucks are very damaging to roads and already our roads on the east end are in poor shape. I work in an area of

warehouses and logistics buildings and see the damage to the roads everyday from this newer development.

Trail System: I am sad about the loss of the full multiple use trail system that was envisioned for the east end including a viable connection to the north side of the freeway. This was another part of what I thought was a great vision for the east end of the city that may be gone with this development.

Impacts to surrounding communities and areas: This project has potential to have impacts to other cities and communities in the area that may or may not be aware of what this proposal might do to them. And I was very unclear as to how this project may impact areas that were set aside to protect species as a way to mitigate development in the city but this proposal if built would have the potential to impact those areas set aside to protect species so then is it really still a protected area and is the development adequately mitigated? The pollution, noise and traffic may impact these areas now since they are in the San Jacinto Wildlife area and the surrounding badlands that are close to this center.

Development Agreement: I do not understand how the city can enter into a development agreement with the developer prior to this even being an approved project. It makes it appear the city is putting the cart before the horse and agreeing to development arrangements before the development is even approved. And does not leave any openings to seriously consider any alternatives to the proposed development. It makes me wonder if my input even counts for anything.

Landscaping: The document mentions the dense landscaping that will help hide this development and mitigate some of the noise. That was what was also promised for Skechers and that landscaping is not dense nor does it hide the development. The tree species selected are not known to be dense species as they note some of the trees to be used such as Palo Verde, Acacia and palms which are not necessarily dense canopies.

Significant Impacts: I am concerned with the number of significant impacts with this development. I think the city really needs to consider that word "Significant." That is a big deal. The significant impacts are air quality, noise, traffic, land use, and aesthetics. These are big deals and matter to the quality of life of the citizens of this city and to our family. I think the city needs to move slowly on this and not re-zone such a large area to open the door for development that will have very significant impacts. I think more consideration needs to be given to moving slower and not blanket approving such a large land area in our city for a significant impact use.

Current Approved Re-zoned areas not even built out yet: I am concerned that there area has already approved for this type of development that have not been built out. The Skechers location is not built to what was approved, and the newer re-zoning between the Auto Mall and the Aldi warehouse are not built yet. Maybe we need to see how that pans out and what it is like to live with those first before approving such a large area of re-zoning.

Buffer Zones: I am not sure how closely everyone looked at those buffer areas next to residential areas. The proposed buffer is only 250 feet and that is 250 feet from the centerline of Redlands Blvd for instance. So from a backyard along Redlands Blvd. that is not very far - maybe a little over 300 feet from

the backyard of residences to the back of a warehouse development. That is not much of a buffer between homes and a large warehouse building and truck loading docks.

Project Objective of Good Freeway Access: The EIR mentions an objective of good freeway access. The access from Theodore, Gilman and Redlands Blvd are not good access to handle the traffic and trucks from these warehouses. As stated before the ramps and bridges are small and the roadways are not large. And the freeway is already heavily congested at times and is not proposed for any lane additions. How does this re-zoning meet project objectives then?

East End Residents: I am really concerned that those of us who live on the east end are not being given enough consideration in this process. We have been portrayed as rich snobs and rich horse people that only care about ourselves. Well many of us are not rich nor own horses but we moved to this area as we saw a future of a nice life in a nice area of the city and invested our lives and savings here and we are not all rich by any means. Not all of us live in big new houses and we have worked hard to have what we do have now. We are the ones that will have to live closest to this massive change to what we thought we bought into that is very different than what is currently in the city general plan.

Please take time to consider the significant impacts this proposed re-zoning will have on the community and maybe take a step back and consider other options. Thank you.

Melody Lardner
28201 War Admiral St.
Moreno Valley, CA 92555



Grace Espino-Salcedo

Subject: RE: World Logistics Center Specific Plan - Scoping Comments

From: malardner@aol.com [<mailto:malardner@aol.com>]
Sent: Thursday, June 11, 2015 1:45 PM
To: Jane Halstead, CMC; Ewa Lopez, CMC; Kathy Gross
Subject: Fwd: World Logistics Center Specific Plan - Scoping Comments

Here was the reply that the city had received my initial comments for the scoping for the World Logistics center (see my last e-mail) but I did not see my letter in the DEIR while reviewing all of the documents for the WLC proposal.

Kathy Gross

**Executive Assistant I
 City Clerk's Office
 City of Moreno Valley**

p: 951.413.3001 | e: kathyg@moval.org w: www.moval.org

14177 Frederick St., Moreno Valley, CA 92553

-----Original Message-----

From: John Terell <JohnT@moval.org>
 To: 'malardner@aol.com' <malardner@aol.com>
 Sent: Mon, Mar 26, 2012 5:17 pm
 Subject: RE: World Logistics Center Specific Plan - Scoping Comments

Ms. Lardner:

Thank you for your comments. They will be forwarded to the EIR consultant and copied to the case file.

Sincerely,

John C. Terell, AICP
 Planning Official
 City of Moreno Valley
 P.O. Box 88005
 Moreno Valley, CA 92552
 T: 951.413.3238

From: malardner@aol.com [<mailto:malardner@aol.com>]
Sent: Monday, March 26, 2012 4:27 PM
To: John Terell
Subject: World Logistics Center Specific Plan - Scoping Comments

Attached are my comments for the World Logisitcs Center scoping.

Melody Lardner
 28201 War Admiral St.
 Moreno Valley, CA 92555
 951-247-1965
malardner@aol.com

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

I am concerned that this process is flawed as it is obvious the city has already decided what they plan to do so there is no room for selecting not to do this project. The city is already on record as promoting the World Logistic Center and advertising it as such despite the conflicts with the general plan yet the project is just now going through the public EIR process. This tells me the city has already made their decision on the project before ever going to the public and going through the EIR process or changing the general plan through any public process.

I am concerned with the changes to the general plan that are so different than what was planned for this area and the reason many of us located on the east end. They need to address the impacts to citizens on the east end that moved here thinking this was going to be a master planned community (and other plans in the current general plan) and not a sea of warehouses and diesel trucks. The quality of life on the east end will change with this drastic change to the general plan.

The impacts of the diesel emissions need to be analyzed. How will it compare to a place like Mira Loma that has overall less warehouse space than this will be yet there they have serious health issues now. I am very concerned with this issue and the health implications of this industry coming in such a concentrated way.

The true number of jobs not only coming to Moreno Valley need to be analyzed but also the bigger picture of the impact to the Inland Empire as a whole as we saw that Skechers actually reduced jobs overall in the Inland Empire and did not bring hardly any new jobs (or not nearly what was promised) to Moreno Valley itself. Also need to analyze the true number of jobs in light of logistics centers springing up all over the inland area. By the time this is built will it all really happen? Some experts have said that this industry is not going to boom much longer, that the boom/growth of this is passing. Also need to be honest about the types of jobs and the education required and the income one might earn. I have heard what the city presented at their presentation several weeks ago was inflated from what the job picture might really look like. Also the city made it sound like many of the jobs would be unskilled jobs yet other experts and articles have said that work in logistics centers now is very specialized and does require training beyond a high school education. Do not lead people to believe the jobs can go to high school dropouts and uneducated people which is what was presented by the city if that is not really the case.

And with this realistic picture of what will really happen out on the east end, we need a true picture of traffic impacts not only heading back and forth to the LA area but also eastbound as well through the badlands on Hwy 60 as well as use of adjacent canyons such as San Timoteo which will most certainly occur. All of this needs to be factored in with Caltrans true plans for the area and any freeway expansion or overpass replacements. Skechers already is using Theodore which is small and in need of replacement with no plans for its replacement. Many of these new warehouses may use those same tiny on and off ramps and the small bridge. And what will be done about trucks using Redland Blvd anyway despite the recent truck ban which does still occur now even with the ban in place and the lack of access to Skechers - truck drivers do try to find shortcuts or get lost. How will they ensure trucks use the routes they are supposed to? How will they ensure they do not use Alessandro through neighborhoods? What about the impacts to Gilman Springs road which is already dangerous and heavily used by commuters?

I am also concerned with the lights and the noise from this proposed project during construction as well as during operations. Light impacts not only to adjacent wildlife areas but light impacts to the residents on the east end. Also do not overdo streetlights as they did in some areas like the east end of Cottonwood just west of Redlands where they had the residential developer put in so many lights that it is the most lit up portion of Cottonwood in the entire length of it though the city! Especially in light of the city not being able to pay for street lights – less is better and most areas of our cities have less lights anyway so be consistent. Keep light levels low and direct downward.

World Logistics Center Scoping Comments
From Melody Lardner

March 26, 2012

I am concerned with dust impacts during construction.

I am concerned with the impacts to adjacent wildlife conservation areas such as the San Jacinto Wildlife area as well as Riverside MSHCP conservation areas to the north of this area.

I am concerned with the scenic views this center will destroy.

I am concerned as to what landscaping will be used if this project were to be built, that the industrial look be screened as well as possible, that there be large parkways that are landscaped (Redlands has done some nice jobs with this although landscaping around the buildings could be much better).

Each large building should be required to have solar panels installed not just for their use but to give back to the utility system of the city - make this more than just about jobs but something that will help the struggling utility company and make the entire city a greener place. That much rooftop solar electricity generation could make the city a leader in green energy. Do not make it like Skechers where they only are installing enough to run their offices. Do not miss such an opportunity.

Melody Lardner
28201 War Admiral St.
Moreno Valley, CA 92555
951-247-1965
malardner@aol.com

Grace Espino-Salcedo

Subject: RE: World Logistics Center

-----Original Message-----

From: Marilyn Pearson [mailto:meepear@hotmail.com]

Sent: Wednesday, June 10, 2015 1:47 PM

To: Jesse L. Molina

Cc: Jeffrey J. Giba; George Price; Dr. Yxstian A. Gutierrez; ladonna@moval.org

Subject: World Logistics Center

Dear Mr. Molina,

As a 29 year resident in District 1 and home owner in Moreno Valley, I have very serious concerns regarding the development of the World Logistics Center. We left the Jurupa area and moved to Moreno Valley in 1986 mainly because of the very poor air quality issues generated from the Mira Loma/Ontario area and its severe affects on our young son's asthma. The air quality was horrible with the constant haze and diesel odor in the air. We had exhaust soot sticking to everything and we were having to breath that air. Although it wasn't completely remedied, our son did not have the severe asthma issues after we moved. Moving to Moreno Valley had made a huge difference in his health and wellbeing.

I realize that there have been substantial exhaust improvements in the trucking industry, but not enough considering there is the potential of adding thousands of additional trucks moving goods in and out of that condensed area with only Redlands Blvd or Theodore Ave which are relatively narrow roads accessing the 60 freeway in an area where it is only 2 lanes in each direction. I have worked part-time for 9 years with varying shifts at Lake Perris and have traveled the 60 freeway at all different hours ranging from early mornings to late at night and the truck traffic has increased exponentially just since Sketchers opened and with the development of more industry in the Beaumont and Banning areas. Getting on to the 60 from Redlands or Moreno Beach Boulevards is getting to be a dangerous challenge at times because the freeway just doesn't have the capacity to handle it. At least the 60/15/10 freeways have several more lanes as well as several more access points to freeways to share the load in the Mira Loma /Ontario/Jurupa areas where there is substantially more truck traffic merging in comparison.

I understand that there is a potential for many jobs, but are those warehouse/distribution center jobs truly going to pay a living wage with benefits to support the primarily (hopefully) resident families? The whole point of "logistics" is automation, downsizing costs and efficiency. I remember the promises of having over a couple thousand jobs when Sketchers was developed and that was not a reality. I have serious doubts that the many promised jobs are even possible in this economy or in the future. No companies hire many full-time positions within the logistics industry or any other business anymore to avoid paying the high cost of providing benefits. What will the trickle down effects be for our schools, police, fire, neighborhoods, hospitals, health and infrastructure when our air is filled with smog and warehouses where few can make a sustainable living?

I agree that we need more real jobs in our area, but with having only the narrow 60 freeway being the only corridor with no real plans to widen it and with the majority of jobs being lower wage potentially part-time jobs, will only be a detriment to our City and of no real future benefit. We could use more manufacturing and higher paying business headquarters here too, but there is little or no effort in that direction, just distribution centers.

Please do not move forward with the approval of the World Logistics Center at this time. We just don't have enough infrastructure nor real employment opportunities to support it without causing a tremendous negative impact. Much more effort must be made by our Counsel and City to be sure this huge development is taking us in the right direction to improve our way of life and standing as one of the largest cities in the Inland Empire. As you well know, it is common knowledge that Moreno Valley has a pretty low reputation in general around Southern California. Substantially more concern needs to be made in consideration of the long term impacts on resident's health, property values, traffic and

with the desperate need to grow our city in a much more positive and productive direction and to make Moreno Valley a much more desirable city in which to live and work (such as Irvine has done). Please take great care with your decisions so that Moreno Valley doesn't become another ugly, smoggy, congested "logistics center" such as the Mira Loma/Jurupa areas have become.

As Our Council, you were elected and more importantly, entrusted to represent and make decisions for the well being and betterment of Moreno Valley. I'm truly concerned and disappointed as I watch some of the televised Council meetings and have seen the attitudes some of you have displayed towards this project, as well as towards the public concern and even towards each other at times. It's common knowledge that Highland Fairview has spent millions in their development efforts and made large contributions to some select political campaigns, but please, please, please, don't let their desires and dollars unethically influence and over shadow decisions for the greater good, resident health and needs for Moreno Valley.

Thank you for your consideration,

Marilyn Pearson
11574 Kasba Circle
Moreno Valley, Ca 92557

Sent from my iPad

Grace Espino-Salcedo

Subject: RE: World Logistics Center FEIR

-----Original Message-----

From: Martin Sarafa [<mailto:msarafa@cpclp.com>]

Sent: Thursday, June 11, 2015 12:42 PM

To: Mark Gross

Subject: World Logistics Center FEIR

Mark,

I am a frequent visitor to the San Jacinto Wildlife refuge and spend time in Moreno Valley with thousands of other sportsmen that enjoy the open space and natural beauty of the area. We spend time there and spend money there, and we have a reason to be there. I am entirely opposed to the proposed project as it would interfere with the enjoyment of the valley for those that live there and visit there. I am also a landowner in the area. If the natural surroundings are compromised and the migratory pathway of waterfowl are disrupted by this major project, I would no longer have any reason to be a landowner or visitor to the vicinity. I certainly wouldn't be coming out to spend time and money to view warehouses.

Martin Sarafa
Century Park Capital Partners
2101 Rosecrans Ave, Suite 4275
El Segundo, CA 90245
310-867-2210
Sent from my iPhone

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

P.O. Box 1627
Laguna Beach, CA 92652

RECEIVED

JUN 10 2015

CITY OF MORENO VALLEY
Planning Division

sent via email to CityClerk@moval.org and Fedex

June 9, 2015

Planning Commission and
Richard J. Sandzimier, Planning Official
City of Moreno Valley
14177 Frederick Street
Moreno Valley, 92552

Re: Revised World Logistics Center EIR and Specific Plan,
planning case numbers: PA 12-0010 through PA 12-0016

Dear Mr. Sandzimier,

We have reviewed the documents for the above referenced project as shown on the City of Moreno Valley's website. Since the project Draft EIR was first circulated last year, we have found that the project has been redesigned in such a way as to mitigate our concerns about having such a large project in close proximity to our residential properties. The heavy use of landscape and wall screening, the use of cutoff luminaires for onsite lighting, the elimination of truck traffic on Redlands Blvd and Cactus Ave., as well as the 250 foot setbacks of buildings from existing residential areas, demonstrate that City staff and World Logistics Center have put a lot of effort into redesigning the project and eliminating most, if not all, of the concerns that we had about this project.

We want to express our support for the project and thank staff for the efforts put into this project.

Sincerely,

Multivac, Inc.

Charles F. Moothart, CFO



Board of Education
 Gary E. Baugh, Ed.S., President
 Cleveland Johnson, Vice President
 Jesus M. Holguin, Clerk
 Denise Fleming, Ed.D.
 Patrick W. Kelleher

Superintendent of Schools
 Judy D. White, Ed.D.

Moreno Valley Unified School District

25634 Alessandro Boulevard
 Moreno Valley, California 92553
 951-571-7500
 www.mvusd.net

The mission of Moreno Valley Unified School District is to ensure all students graduate high school prepared to successfully enter into higher education and/or pursue a viable career path.

May 28, 2015

Mark Gross, AICP
 Senior Planner
 Community and Economic Development Department
 City of Moreno Valley
 14177 Frederick Street
 Moreno Valley, CA 92552

Subject: Comments on Final Environmental Impact Report for World Logistics Center Project

Dear Mr. Gross:

We at Moreno Valley Unified School District (MVUSD) welcome and appreciate the opportunity to provide comment on the Final Environmental Impact Report (FEIR) for the proposed World Logistics Center project. Our mission is to ensure all students graduate high school prepared to successfully enter into higher education and/or pursue a viable career path. So job creation in our community is especially important to us, and we take very seriously our consideration of potential job-creating projects, to the point of enlisting the help of experts to analyze details in an objective manner. As you know, MVUSD does not take a stand in favor or in opposition to this project. We do, however, have similar concerns about the project's impact on air quality and the potential effects on student and staff health that we expressed in our comments on the Draft Environmental Impact Report (DEIR). As outlined in this letter, the FEIR is flawed and should be revised and recirculated before any action is taken concerning the approval of this project.

FEIR Air Quality and Community Risk and Hazards Comments

Most of the comments provided by MVUSD on the DEIR have been addressed in the revised Air Quality Study and revisions to the FEIR, including:

- » assessment of acute non-cancer hazards
- » discussion on ultrafine particles
- » use of the new OEHHA guidance for a school-based health risk assessment
- » evaluation of potential risks to 36 schools located within Moreno Valley

The conclusions of the FEIR are that there would be no excess cancer risk or acute/chronic hazards to occupants of the MVUSD schools with implementation of the proposed project. However, we feel that the assertion in the FEIR that the proposed project would not result in any cancer risks from diesel emissions is overstating the results of the Advanced Collaborative Emissions Study (ACES), as described in more detail in the following paragraphs.

Master Response-2: Health Effects of Diesel Particulate Matter. Page 233 of the FEIR (also identified in Master Response-1 on page 221). This response does not correctly apply the findings of the new technology diesel exhaust (NTDE) in the ACES to the proposed project. The Master Response states that the proposed project would not result in any cancer risk from diesel emissions.

Mr. Mark Gross
 May 28, 2015
 Page 2

Although the results of the ACES report are encouraging, the conclusion reported in the FEIR that there is no cancer risk from "new technology trucks" is premature. In addition, "older" diesel trucks on the roads will continue to pose risks. The responses to comments made throughout the FEIR compare the reduction in risks from "older" trucks to "newer" trucks as the reason for rejecting additional mitigation.

The ACES report showed that rats and mice exposed to emissions from the new diesel engine exhaust did not develop lung tumors or toxic health impacts, although there were some minor physiological effects. There were small decreases in respiratory function and some signs of lung inflammation in the rats exposed to the highest DPM concentrations, but the effects were not severe. However, the study only looked at tissues and pulmonary function; other endpoints won't be evaluated until after the rodents are euthanized. Although the results are promising, it's premature to say the new NTDE engines eliminated all health impacts from diesel exhaust and there is no cancer risk. Furthermore, these findings are not consistent with the Office of Environmental Health Hazards Assessment (OEHHA) updated guidelines on health risk, which show an increased lifetime risk for early childhood exposure.¹ The conclusion that "diesel exhaust does not contribute to cancer" (see also page 237) is not factual.

Master Response-5: Air Filtration Systems for Residences. Page 237 of the FEIR. The conclusion of the health risk assessment was that operation of the project would not significantly contribute to health risk impacts outside the project site boundaries; therefore, the students and staff at MVUSD schools would not be adversely impacted by the project. However, the conclusion that "diesel exhaust does not contribute to cancer" is not factual (see our comments on Master Response-2).

Response to Comment E-3-6. Page 325 of the FEIR. This response does not respond to the comment that the Reference Exposure Level (REL) does not account for all of the known health effects from diesel particulate matter, especially in children. The limitations of the methodology must be disclosed in the FEIR.

Recirculation of the DEIR is Required. The FEIR adds significant new information to the DEIR, requiring recirculation pursuant to CEQA Guidelines Section 15088.5. The project description has changed significantly since circulation of the DEIR, including but not limited to a change in boundary, a change in project buildout by eight years, and a reduction in one million square feet of development. This resulted in substantial changes throughout the DEIR; without recirculation the public is deprived of a meaningful opportunity to comment. Further, a significant number of new mitigation measures have been added, the environmental effects of which have not been evaluated. Additionally, Mitigation Measure 4.5.6.1B impermissibly defers analysis to a future project-level EIR. The revised DEIR must be recirculated for public review taking into account the above comments.

Draft Facts, Findings and Statement of Overriding Considerations

Page 225 through page 226. The District takes issue with the statement of overriding consideration, which states:

"Approval of the Project Will Ensure that the Health of Residents, School Children and Workers, both Within and Outside of the Project Area, Will Not Be Adversely Affected by the Construction and Operation of the Project"

¹ The OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines (2015) incorporate new scientific information that has shown that early-life exposures to air toxics contribute to an increased lifetime risk of developing cancer and other adverse health effects, compared to exposures that occur in adulthood. As result, OEHHA has identified different breathing rates and age-sensitivity factors for different age groups, including school-aged children.

Mr. Mark Gross
May 28, 2015
Page 3

While the project has reduced health risks to sensitive receptors in the area, "approval of the project" will result in a significant increase in air pollutant emissions and health risk from the substantial increase in diesel truck traffic. This discussion goes on to say that:

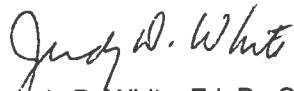
"...diesel trucks which comply with stringent USEPA and CARB 2010 standard do not cause cancer or adverse health effect." And

"As a result, the city will enjoy the numerous benefits which will flow from the construction and operation of the project without subjecting anyone to the risk of cancer and other adverse health effects which result from the use of older diesel trucks." (underline added)

These statements are misquoted, because diesel particulate matter (DPM) is an air toxic contaminant (TAC). In fact, as identified in the latest Multiple Air Toxics Exposure Study (MATES-IV) conducted by the South Coast Air Quality Management District, DPM is still the primary driver of cancer risk in the air basin. Unless 2010 trucks are mandated to not use diesel fuel, this statement of overriding considerations should be removed because it mischaracterizes risks (see comments on the FEIR Master Response-2, above). Impacts of the project may be minimized and/or less than 10 in a million cancer risk; but it does not mean there is "no risk" and "no health impacts." These statements contradict the significant unavoidable impact for localized construction and operational criteria air pollutant emissions identified in the EIR.

Thank you for considering our comments. Should you have any questions, please contact me at (951) 571-7500, or Sergio San Martin Director, Facilities at (951) 571-7692.

Sincerely,



Judy D. White, Ed. D., Superintendent

CC: Mays Kakish, Chief Business Official
Sergio San Martin, Director, Facilities

Grace Espino-Salcedo

Subject: RE: FEIR-RTC: World Logistics Center Project

From: Martinez, Lilia I [<mailto:limartinez@mwdh2o.com>]

Sent: Thursday, June 11, 2015 3:32 PM

To: Mark Gross

Subject: FEIR-RTC: World Logistics Center Project

Importance: High

Hi Mark,

Please find attached Metropolitan's comments (with enclosures) in response to the Final Environmental Impact Report for the World Logistics Center Project (SCH No. 201205303). The original will follow via Federal Express.

If you have any question, please contact me at the number and/or email noted below.

Thank you.

Lilia I. Martínez

Environmental Specialist

The Metropolitan Water District of Southern California

700 North Alameda Street | Los Angeles, CA 90012

Phone: (213) 217-5656 | E-Fax: (213) 576-5260 | EMail: limartinez@mwdh2o.com



This communication, together with any attachments or embedded links, is for the sole use of the intended recipient(s) and may contain information that is confidential or legally protected. If you are not the intended recipient, you are hereby notified that any review, disclosure, copying, dissemination, distribution or use of this communication is strictly prohibited. If you have received this communication in error, please notify the sender immediately by return e-mail message and delete the original and all copies of the communication, along with any attachments or embedded links, from your system.

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Office of the General Manager

RECEIVED

JUN 15 2015

CITY OF MORENO VALLEY
Planning Division

June 11, 2015

Via E-Mail and Federal Express

Mr. Mark Gross
Senior Planner
City of Moreno Valley
Community & Economic Development Department, Planning Division
14177 Frederick Street
Moreno Valley, California 92552-0805

Dear Mr. Gross:

Final Environmental Impact Report for the World Logistics Center Project (SCH #2012021045)

The Metropolitan Water District of Southern California (Metropolitan) has reviewed the Final Environmental Impact Report (FEIR) for the World Logistics Center Project (WLC). The proposed project is approximately 3,818 acres in eastern Moreno Valley generally located east of Redlands Boulevard, south of State Route 60, west of Gilman Springs Road, and north of San Jacinto Wildlife Area. The proposed project includes a new 2,610 acre Specific Plan area envisioned to accommodate up to 40.6 million square feet of high cube industrial warehouse distribution development and related uses. A General Plan Amendment to Business Park/Light industrial (BP) for warehouse logistics and Opens Space (OS) and various related amendments to General Plan Elements for Community Development, Parks, Recreation and Open Space, Circulation, Safety and Conservation are also proposed. Approval of the project will result in a full repeal of the current Moreno Highlands Specific Plan No. 212-1, will provide a Change of Zone to Logistics Development (LD), Light Logistics (LL) and Open Space (OS) for areas within the proposed WLC Specific Plan boundary, and will provide a Change of Zone to Open Space (OS) for those project areas outside and southerly of the new WLC Specific Plan boundary. Eighty-five (85) acres of land at the northwest corner of Alessandro Boulevard and Gilman Springs Road is being pre-zoned and intended for a subsequent annexation to the City.

Metropolitan owns property and owns and operates facilities on and adjacent to the site of the proposed project. As shown on the attached map, Metropolitan's irregularly shaped fee-owned property (APN 422-040-009 and 422-040-015), Inland Feeder Tunnel, and appurtenant tunnel access structure are located within the proposed specific plan area.

Metropolitan has reviewed the FEIR Responses to Letter C-2 (Page 205) and would like to again respectfully request that its fee-owned property be excluded from the Specific Plan. Additionally, Response to Comment C-2-4 states that Metropolitan's fee-owned property is

Mr. Mark Gross
Page 2
April 8, 2013

“...not located adjacent to Theodore Street and several intervening properties between the Metropolitan property and access to the SR-60 Freeway.” Please clarify Response to Comment C-2-4 to note that Metropolitan’s irregularly shaped fee-owned property is located adjacent to Theodore Street and Gilman Springs Road, and access to State Route 60 Freeway.

We appreciate the opportunity to provide input to your planning process and we look forward to receiving future environmental documentation regarding this proposed project. If you have any questions, please contact Ms. Lilia I. Martínez at (213) 217-5656.

Very truly yours,



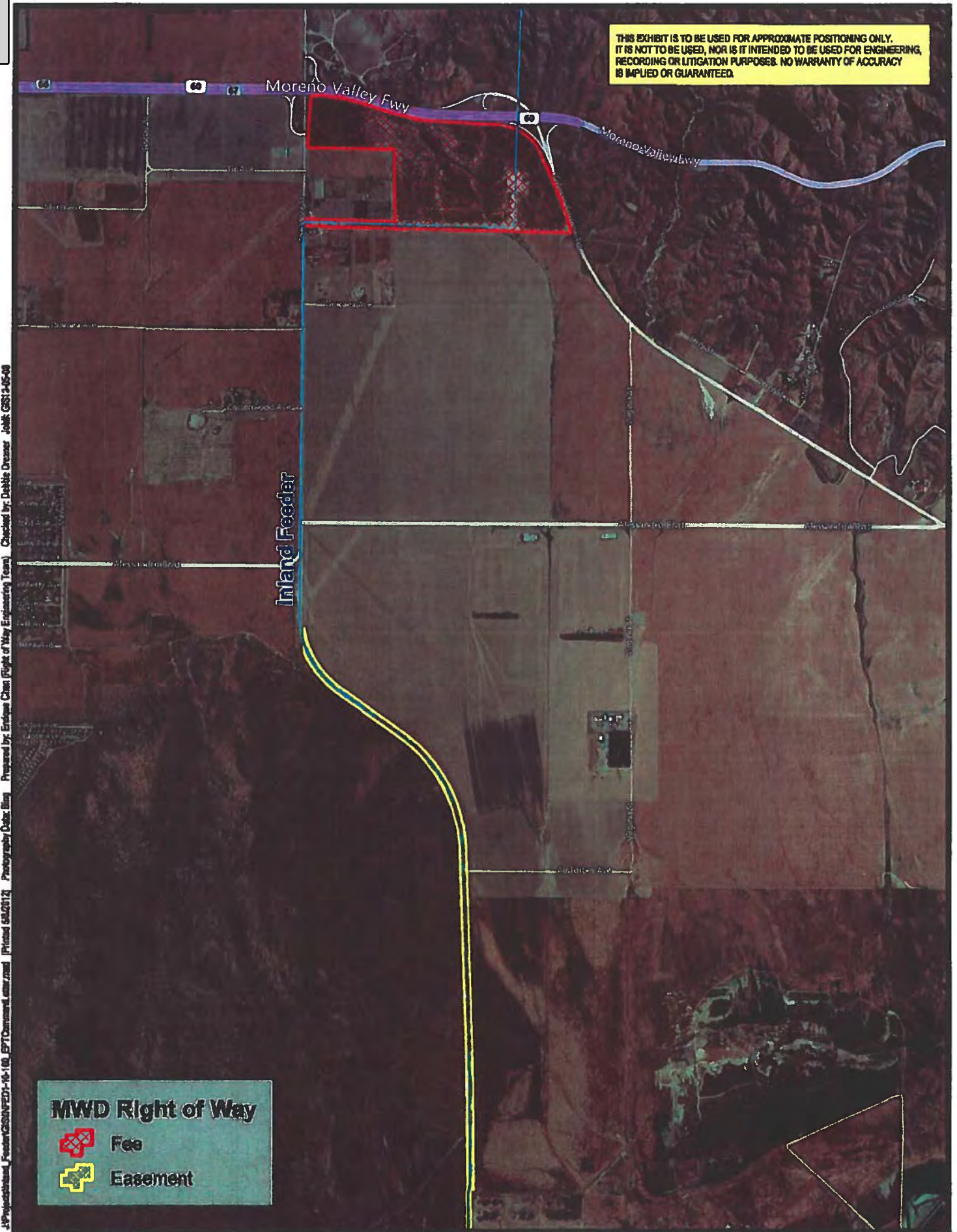
for Deborah Drezner
Interim Manager, Environmental Planning Team

LIM/lim
(J:\Environmental-Planning & Compliance\COMPLETED JOBS\2012\Folders\May 2012\Job No. 2012050303 \World Logistics Center Letter.docx)

Enclosures:

- 1) Map of Metropolitan’s Fee Property and Inland Feeder Alignment
- 2) Final Programmatic EIR Volume 1 – Response to Comments World Logistics Center Project, Page 205

THIS EXHIBIT IS TO BE USED FOR APPROXIMATE POSITIONING ONLY. IT IS NOT TO BE USED, NOR IS IT INTENDED TO BE USED FOR ENGINEERING, RECORDING OR LITIGATION PURPOSES. NO WARRANTY OF ACCURACY IS IMPLIED OR GUARANTEED.



J:\Projects\Inland_Feeder\GIS\Map\1549-16-100_EPT\Comments\latter.mxd [Printed 6/8/2012] Prepared by: Enrique Chao (Flight of Way Engineering Team) Checked by: Debbie Dreaser Job# G0512-05-08

**Final Programmatic Environmental Impact Report
Volume 1 – Response to Comments
World Logistics Center Project**

RESPONSES TO LETTER C-2

Metropolitan Water District of Southern California

Response to Comment C-2-1. The commenter has accurately summarized the project information presented in the Draft Environmental Impact Report (DEIR). It should be noted the Specific Plan area has been reduced from 2,710 acres to 2,610 acres (3.7 percent reduction) due to the removal of 100 acres in the southwest corner of the Specific Plan. This results in a reduction of 1 million square feet of logistics warehousing which is now 40.6 million square feet down 2.4 percent from the original 41.6 million square feet.

Response to Comment C-2-2. The commenter has accurately summarized the relevant Metropolitan Water District of Southern California (Metropolitan) property information to the proposed project, and the information provided by the commenter relative to the Inland Feeder will be added to Sections 3.3.1 and 4.4.1 of the DEIR. The Inland Feeder will be protected during project construction and occupancy by the presence of various roads and easements in the southern portion of the site, as shown on Figure 3.4A in Chapter 3 Project Description of the Final (F)EIR Volume 2. In addition, Appendix A to Comment Letter C-2 provided by MWD shows the general boundaries of its property in the northeast corner of the World Logistics Center Specific Plan (WLCSP) site.

Response to Comment C-2-3. This commenter expresses the Metropolitan's concern with the potential impacts to its fee property, the Inland Feeder pipeline. Development of the Metropolitan's property within the WLCSP would not occur without the express permission and approval of the District (i.e., no other entity could propose or process any development proposals on the Metropolitan property without Metropolitan's express consent). Development of surrounding properties within the WLCSP are not expected to cause physical or environmental impacts on the Metropolitan property, and all improvements and facilities owned by Metropolitan would be protected in place during development of the WLCSP.

Response to Comment C-2-4. The commenter states Metropolitan requires detailed design plans for any activities within the vicinity of their facilities, fee property, or rights-of way be submitted prior to construction for review and written approval. The goal of the WLC project is to create a regional logistics center on the entire WLCSP property. The Metropolitan property is located in the far northeast corner of the WLCSP site, and it is not located adjacent to Theodore Street and several intervening properties between the Metropolitan property and access to the SR-60 Freeway. In addition, the placement of the Metropolitan's existing facilities on its site would limit the placement of other land uses on this property. Therefore, it would be difficult to designate the Metropolitan property for a largely different land use compared to the rest of the WLC property.

Response to Appendix C-2-1. Appendix 1 was reviewed to address Response to Comment C-2-3.

Grace Espino-Salcedo

Subject: RE: NO

From: Allen D. Brock, CBO
Sent: Monday, June 08, 2015 9:03 AM
To: Mark Gross
Cc: Richard Sandzimier
Subject: FW: NO

Additional comments from Ms. Culpepper.

From: Peg Culpepper [<mailto:pearlenec@aol.com>]
Sent: Monday, June 08, 2015 9:00 AM
To: Allen D. Brock, CBO
Subject: Re: NO

PLEASE ADD THESE THOUGHTS TO YOUR MEMO FROM AN OLD LADY:

I AM OLD AND CANNOT BREATHE WELL WITH THE AIR QUALITY IN MORENO VALLEY RIGHT NOW, AND I KNOW I WILL HAVE GREATER BREATHING PROBLEMS IF MORE LARGE TRUCKS ARE ADDED AND ARE BELCHING MORE GASSES INTO THE AIR.

I HAVE WORKED FOR RIGHT OF WAY AT CAL TRANS AND KNOW HOW THESE LARGE TRUCKS ARE TEARING UP OUR STATE HIGHWAYS NOW.

THE STATE OF CALIFORNIA DOESN'T HAVE THE FUNDS, MAN POWER AND TIME NEEDED TO KEEP OUR ROADS IN FAIR CONDITION AS IS, LET ALONE ADDING MORE OF A BURDEN FOR THE UPKEEP.

THIS PLAN IS ECONOMIC SUICIDE FOR OUR HEALTH IN MORENO VALLEY AND FOR THE HIGHWAYS IN RIVERSIDE COUNTY AND THE STATE OF CALIFORNIA.

Allen D. Brock, CBO
Building & Neighborhood Services Division Manager
Community & Economic Development
City of Moreno Valley

p: 951.413.3354 | e: allenb@moval.org W: www.moval.org

14177 Frederick St., Moreno Valley, CA 92553

-----Original Message-----

From: Allen D. Brock, CBO <allenb@moval.org>
To: 'Peg Culpepper' <pearlenec@aol.com>
Sent: Mon, Jun 8, 2015 8:41 am
Subject: RE: NO

Thank you for your comment.

I have forwarded your message to my Planning staff so that it can become part of the project file.

Sincerely,
Allen

From: Peg Culpepper [<mailto:pearlenec@aol.com>]
Sent: Monday, June 08, 2015 8:28 AM
To: Allen D. Brock, CBO
Subject: NO

I oppose this rezoning of the east portion of Moreno Valley for this warehouse.

We live in Moreno Valley and don't want to see this ruin our city and air quality.

Allen D. Brock, CBO
Building & Neighborhood Services Division Manager
Community & Economic Development
City of Moreno Valley
p: 951.413.3354 | e: allenb@moval.org w: www.moval.org
14177 Frederick St., Moreno Valley, CA 92553



Grace Espino-Salcedo

Subject: RE: Peggy Holmes 951.242.3605

From: Juliene Clay
Sent: Wednesday, June 10, 2015 4:26 PM
To: Jeffrey J. Giba
Cc: Jane Halstead, CMC; Cindy Miller; Juliene Clay
Subject: Peggy Holmes 951.242.3605

Council Member Giba,

Ms. Holmes stated she would like you to vote No on the WLC.

Juliene Clay
Administrative Assistant
City Council Office
City of Moreno Valley
p: 951.413.3008 | e: julienec@moval.org w: www.moval.org
14177 Frederick St., Moreno Valley, CA 92553

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Grace Espino-Salcedo

Subject: RE: Message from WLC Link

-----Original Message-----

From: Peggy Holmes [<mailto:prubin41@aol.com>]

Sent: Wednesday, June 10, 2015 4:16 PM

To: Jane Halstead, CMC; Ewa Lopez, CMC; Kathy Gross

Subject: Message from WLC Link

As a 30 year resident of Moreno Valley, I'm begging you to deny the WLC! It's not fair to change the city's general plan to fit HF's plan for the massive warehouses! We have plenty of them in this city already. The location is wrong ... The south/west part of the city is a much more suitable location! Please restore my faith in our icy officials; show us that Moreno Valley can't be bought! Listen to the people, not a developer who had paid people to get his way!

Sent from my iPhone

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Grace Espino-Salcedo

Subject: RE: WLC

From: mjp562@aol.com [<mailto:mjp562@aol.com>]

Sent: Thursday, June 11, 2015 1:53 PM

To: Mark Gross

Subject: WLC

Hi I,m writing to let you know I am not at all happy with all the warehouses popping up all over Moreno Valley and the WLC project I keep hearing about. My husband and I have lived here in Moreno Valley since 1986, and until the last few years have been fine without the need for all these warehouses. They do not benefit our community in any way there are not a lot of jobs created for our own citizens and also all the extra traffic it creates and all the trucks to and from the warehouses.

The Purcell Family of district 4

Mark Gross

Senior Planner

Community & Economic Development

City of Moreno Valley

p: 951.413.3215 | e: markg@moval.org w: www.moval.org

14177 Frederick St., Moreno Valley, CA 92553

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Grace Espino-Salcedo

Subject: RE: Public Comment Sought Regarding Proposed World Logistics Center Project

From: Randall Sohn [<mailto:sohnrandall@gmail.com>]

Sent: Monday, June 08, 2015 11:12 PM

To: Jane Halstead, CMC; Ewa Lopez, CMC; Kathy Gross

Subject: Public Comment Sought Regarding Proposed World Logistics Center Project

Dear Clerk,

My questions are as follows:

How can the current 60 freeway support the proposed 11,000 or more semi-trucks carrying tens of thousands of loads daily?

The 60 is jammed packed during rush hour times even with the updated 60 freeway lanes. How can it be possible that there will not be even more traffic, pot holes, smog from cars and trucks waiting in traffic, trash, etc. to our freeways and city?

Why is this proposed World Logistics Center Project even being considered when Iddo Benzeevi is asking the tax payers to foot the bill for the streets, sewer systems, fire department, etc. for this area for 100 million dollars?

How are we to know if this project will actually produce the real revenue that it proposes?

The Sketchers development brought its own workers from outside our city, how is the city to know if the proposed logistic center will truly benefit Moreno Valley residents seeking work?

Why is the city not looking into recruiting tech companies instead of warehousing?

Thank you for your time.

Sincerely,

Randy Sohn
24570 Moonlight Dr.
Moreno Valley, CA 92551

Kathy Gross

Executive Assistant I

City Clerk's Office

City of Moreno Valley

p: 951.413.3001 | e: kathyg@moval.org w: www.moval.org

14177 Frederick St., Moreno Valley, CA 92553

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Grace Espino-Salcedo

Subject: RE: Moreno Valley Homeowner favoring development

From: Edd.Williams@mvc.edu [<mailto:Edd.Williams@mvc.edu>]

Sent: Thursday, May 28, 2015 12:30 PM

To: Mark Gross

Subject: Moreno Valley Homeowner favoring development

Mr. Gross:

I am a college professor here at Moreno Valley College on Iris and Lasselle and have been here since January 1994 – more than 21 years. I thus have seen a considerable amount of new construction, from tract homes to business centers and recent projects like the large tilt-up manufacturing-type / storage-type buildings on Iris near March Air Force Base and those along the 60FWY corridor. I have seen the steady increase of cars, traffic lights, road and freeway congestion, and the inevitable smog that comes with industry and growth.

I think the word “inevitable” deserves special attention. New development is indeed inevitable, and if it doesn’t occur in the greater Moreno Valley area, it will take place somewhere else nearby like Beaumont or Banning or other areas. Yes, I understand the environmental concerns; I have plenty of colleagues who frantically criticize recent close-by developments like the one you are overseeing.

But I must take this time to voice my support of your development and eagerly await the outcome of the public hearings.

I realize recent public hearings have somewhat reduced local long-term development plans, so whatever plans might have happened in Moreno Valley will – it is inevitable – end up in a close-by town, and Moreno Valley will have lost many jobs and future homeowners and renters who will buy their homes or rent their houses and apartments in some other town. How a city like Moreno Valley grows – indeed that’s important and deserves careful scrutiny. But growth is going to happen; otherwise, stagnation will settle in like a bad odor in a lifeless canyon. Our area needs and deserves more industry, more technology, more manufacturing – in short, more jobs that will help our local residents improve their lives and way of living. Those who are willing to work may very well find jobs close to home, that is, if our local residents are willing to invest in our local area.

Best wishes to you in your endeavors,
Edd Williams
Professor of English
Moreno Valley College.
Riverside Community College District

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)



RIVERSIDE COUNTY
SUPERINTENDENT OF SCHOOLS

KENNETH M. YOUNG

OFFICE OF THE COUNTY SUPERINTENDENT

June 9, 2015

RECEIVED

JUN 10 2015

CITY OF MORENO VALLEY
Planning Division

3939 THIRTEENTH STREET
P.O. BOX 868
RIVERSIDE, CALIFORNIA
92502-0868
(951) 826-6530

Attn: Moreno Valley Planning Commission
RE: Proposed World Logistics Center
14117 Fredrick St.
Moreno Valley, CA 92553

47-110 CALHOUN STREET
INDIO, CALIFORNIA
92201-4779
(760) 863-3000

To Whom It May Concern:

Between May and June of this year, Riverside County will graduate over 33,000 high school students from 23 school districts. Approximately 55%, or 18,200 of those students will be entering post-secondary education—both public and private, in-state and out of state community colleges and universities, the military and a variety of trade and technical schools. The vast majority of the remaining 14,800 students will go directly into the workforce. For those workforce-bound students, and for approximately 12,700 who are completing their post-secondary education this year and are also seeking gainful employment, our county's current commerce simply does not have the capacity to offer sufficient livable wage jobs for them—not by a long shot. And this is just for 2015. This significant workforce imbalance is increasing each year!

24980 LAS BRISAS ROAD
MURRIETA, CALIFORNIA
92562-4008
(951) 600-5651

As the Riverside County Superintendent of Schools, I am very concerned about the quality of life our students will experience in the future following high school and post-secondary education. They need good paying jobs. They need jobs they can access. They need jobs that match their skills and creativity. They need careers.

With this in mind, the World Logistics Center proposed for eastern Moreno Valley, incorporating as an example of the recently completed Skechers facility certainly has the potential to become one of the largest sources of the types of employment our county's students, especially those from the Moreno Valley region, are in need of. It presents, especially when combined with the County of Riverside's envolving plans for expanding the much-in-

demand health-care service industry in Moreno valley, the opportunity to possibly create a regional center of commerce that can serve our emerging, educated, and skilled workforce. It could help create the environment needed for many of our students to be able to live *and* work in our region—close to home.

As the City of Moreno Valley makes its decisions related to the project, I would strongly encourage them to take into account the significant employment needs of the region, and the contribution the proposed center could make in addressing those needs.

Respectfully,



Kenneth M. Young
Riverside County Superintendent of Schools



Riverside County Transportation Commission

June 9, 2015

Mr. Mark Gross, AICP, Senior Planner
Community and Economic Development Department
Planning Division
City of Moreno Valley
14177 Frederick Street
P.O. Box 88005
Moreno Valley, CA 92553

Subject: World Logistics Center Final Environmental Impact Report

Dear Mr. Gross:

The Riverside County Transportation Commission (Commission) has closely monitored the city of Moreno Valley's (City) California Environmental Quality Act (CEQA) process related to the proposed World Logistics Center project (Project). As the public agency charged with planning and implementing region-wide transportation projects, the Commission is particularly interested in the Project's potential traffic impacts and corresponding mitigation measures. After reviewing the Project's recently released Final Environmental Impact Report (FEIR), the Commission is concerned the Project's significant traffic impacts have not been adequately addressed or mitigated.

The FEIR demonstrates that the Project's traffic impact to State Route 60 will be significant. Here, the proposed fair share payment mitigation is not only inadequate to mitigate for the Project's interim traffic impacts that will occur until improvements are constructed but fair share payments are not even possible for improvements to SR-60. This is because a fair share program *does not exist*. The Commission believes it is insufficient for the FEIR to simply conclude "[i]f no fair share program exists or if the existing programs are not consistent with the requirements below, then no payment of fees shall be required." (FEIR at 4.15-235.) A more proactive approach is warranted and feasible under these circumstances so the Project's significant impacts do not go unmitigated.

Furthermore, although the FEIR does call for widening of Gilman Springs Road to up to six lanes, there do not appear to be any plans to make adequate improvements to SR-79, a four-lane road, to handle the influx of traffic that will enter SR-79 from Gilman Springs Road. In short, the approval of the proposed Project would result in far-reaching traffic impacts to surrounding local and regional transportation corridors. It is for these

Mark Gross, AICP, Senior Planner
June 9, 2015
Page 2

reasons the Commission strongly urges the City to work with regional and state partners to develop an appropriate fair share program that would mitigate for the Project's proportional impacts to SR-60 and SR-79, as well as other nearby regional road networks that will be impacted by the Project.

The FEIR also makes clear the Project's traffic impacts to Gilman Springs Road would be significant. As you are aware, Gilman Springs Road is a narrow two-lane road, such that extensive improvements will be needed for it to adequately handle the truck traffic that is anticipated by the Project. To mitigate for the Project's impacts, the FEIR indicates the Project developer will be required to pay the Project's fair share for improvements to Gilman Springs Road. Unfortunately, a fair share payment does not ensure adequate mitigation of the Project's impacts because there is no assurance of when the necessary improvement will be built, if ever.

More specifically, the Commission is concerned about the interim traffic impacts that will occur until such time as the improvements required to adequately mitigate the Project's impacts are actually completed. Because the Project will cause a significant increase in traffic, and because there is no assurance the Project's traffic impacts will be adequately mitigated prior to Project construction, the Commission urges the City to restrict Project construction approvals until such time as the City and Project developer can demonstrate all traffic improvements necessary to fully mitigate the impacts related to any particular building's construction or occupancy are completed. Such assurance might be achieved through the imposition of a mitigation measure restricting the approval of any site-specific plans or the issuance of any construction permits until the physical improvements necessary to mitigate for the development's proportionate impacts are *actually constructed*. Although the Commission understands the construction of transportation improvements may need to occur on a phased basis, the mere payment of the Project's fair share toward traffic improvements is meaningless mitigation if improvements are not built concurrently with the development that merits them.

Finally, the Commission has concerns regarding the FEIR's analysis of the Project's long-term traffic impacts. Although traffic impacts to SR-60 and Gilman Springs Road are considered significant and unavoidable, this conclusion is based solely on the City's lack of authority to implement improvements to these roadways. That is, the FEIR indicates all traffic impacts would be fully mitigated, but for this lack of authority.

The Commission greatly appreciates the City's thoughtful consideration of its comments and concerns, and we would be pleased to meet with you to further discuss our comments. We respectfully request:

- The City require the development of a fair share contribution plan for SR-60, SR-79, and Gilman Springs Road, as a mitigation measure for any Project approval.
- The City impose a mitigation measure requiring the City and the applicant to work with the Commission, Caltrans, the county of Riverside, and other local and regional stakeholders to develop a regional transportation improvement plan for the area encompassing SR-60, SR-79, and Gilman Springs Road.

Mark Gross, AICP, Senior Planner

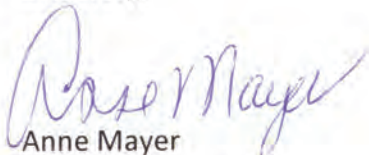
June 9, 2015

Page 3

- The City add the Commission to the City's notification list for all Brown Act and CEQA notices related to the World Logistics Center, including any hearing notices and any Notice of Determination.

Thank you again for your consideration.

Sincerely,



Anne Mayer

Executive Director

By email: markg@moval.org

- c: Mayor Jesse L. Molina, City of Moreno Valley
Mayor Pro Tem Dr. Yxstian Gutierrez, City of Moreno Valley
Councilmember Jeffrey J. Giba, City of Moreno Valley
Councilmember D. LaDonna Jempson, City of Moreno Valley
Councilmember George E. Price, City of Moreno Valley
John Bulinski, Caltrans Interim District 8 Director
Juan C. Perez, Director, County of Riverside, Transportation and Land Management

Grace Espino-Salcedo

Subject: RE: World Logistics Center Final EIR

From: Robertson, Glenn@Waterboards [<mailto:Glenn.Robertson@waterboards.ca.gov>]

Sent: Wednesday, June 03, 2015 6:41 PM

To: Mark Gross

Cc: Robertson, Glenn@Waterboards

Subject: World Logistics Center Final EIR

To Mark Gross- Mark, I have seen no notice of the City of Moreno Valley receiving comment on the Final EIR of the World Logistics Center before your June 11 Planning Commission hearing, but I have received public inquiry as to whether you still may be taking reactions into the meeting. I reread our Regional Board staff's April 25, 2013 letter for the DEIR, compared with answers by Final EIR Response to Comments (RTC), for any discrepancies on BMPs leading up to adoption of the project. We do have one concern that for us has always been unclear.....

Aside from those RTC answers that essentially state that site BMPs are detailed in the Water Quality Management Plan, and that bioretention areas may be used in conjunction with detention/infiltration basins to capture and treat runoff from this large warehouse and transport project, Board staff do suggest inclusion of distinct plans for a structural BMP with absorbant material or other means to capture/separate oil and other automotive fluids that are likely to be carried toward the basins. We suggest that the first BMP that runoff enters may separate hydrocarbons from the water, and that characteristics of the bio-retention areas may designed to only subsequently "polish" the flows. This can be discussed between your staff and our Inland Stormwater staff as final design moves forward.

Thank you for your consideration Mark.

Glenn S. Robertson
Engineering Geologist, M.S., PG
Regional Planning Programs Section, CEQA Coordinator
Santa Ana Regional Water Quality Control Board
3737 Main Street, Suite 500
Riverside, CA 92501
Phone: 951-782-3259
Fax: 951-781-6288
Email: Glenn.Robertson@waterboards.ca.gov

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Grace Espino-Salcedo

Subject: RE: World Logistics Center

From: Stan Perry [<mailto:dljs308@gmail.com>]
Sent: Thursday, June 11, 2015 12:28 PM
To: Mark Gross
Subject: World Logistics Center

Mr. Gross.

This contact is to express my strong opposition to the World Logistics Center. The negative environmental impact to the area would be a disaster for the residents of Moreno Valley and it's neighbors. I am a frequent visitor to the SJWA and am convinced that this development would have a huge negative impact if built

Please consider my thoughts, Thank you.

Stan Perry
2673 Narcissus Drive
San Diego, CA 92106

619-990-0163

Mark Gross
Senior Planner
Community & Economic Development
City of Moreno Valley
p: 951.413.3215 | e: markg@moval.org W: www.moval.org
14177 Frederick St., Moreno Valley, CA 92553

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)



South Coast
 Air Quality Management District
 21865 Copley Drive, Diamond Bar, CA 91765-4182
 (909) 396-2000 • www.aqmd.gov

E-Mailed: June 11, 2015
CityClerk@moval.org

June 11, 2015

Mr. Jeffrey Sims, Chairperson
 Planning Commission
 14177 Frederick Street
 Moreno Valley, CA 92553

Final Program Environmental Impact Report (Final PEIR)
for the Proposed World Logistics Center (WLC) Project

Dear Mr. Sims,

The South Coast Air Quality Management District (SCAQMD) staff continues to have very strong concerns about the significant air quality impacts from this project and the lack of adequate mitigation to reduce these impacts. As we have identified in previous comment letters, there are many options available to the lead agency to address these impacts prior to project approval. In addition, the Health Effects Institute study on diesel exhaust is being misinterpreted, used inappropriately, and should not be relied upon in the PEIR.

We want to let the Planning Commission know that the concerns identified in our comment letter on the PEIR have not been adequately addressed, and that SCAQMD staff is willing to work with the lead agency in developing strategies that can be implemented to reduce the air quality impacts of the WLC project. A detailed comment letter will be sent next week providing specific recommendations to address the inadequate mitigation of significant air quality impacts. If you have any questions, please contact me at (909) 396-3244.

Sincerely,

A handwritten signature in blue ink that reads "I. V. MacMillan".

Ian MacMillan
 Planning & Rules Manager

cc: Planning Commission
 Mr. Mark Gross, City of Moreno Valley, Community & Economic Development
 Department

June 7, 2015

RECEIVED
JUN 09 2015
CITY OF MORENO VALLEY
Planning Division

To the Planning Commission of Moreno Valley,

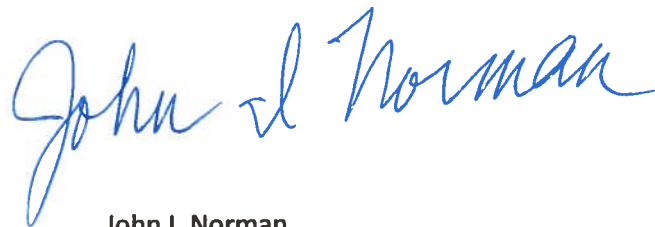
I write you this letter today to congratulate you for looking after the future of Moreno Valley and the surrounding region by considering the World Logistics Center as a reality in your city. The overall impact to your city will be immeasurable due to the job creation, increased productivity of your local population and workers, as well as placing Moreno Valley on the map as a destination place to both work and live.

This prosperous future will assist school districts in training and educating children to becoming productive citizens and workers who actually have jobs available that will keep them around instead of leaving for larger job markets found abroad. Having been a board member for over 15 years now, I have seen too often the most talented and brightest students graduate and not return to their community, mainly due to the lack of job opportunities available.

We often state that our communities will strengthen and flourish if we can have a hand in procuring their future with education and jobs. The education that will take place, integrating highly skilled and trained positions in the WLC, will continue to expand and grow as the venue becomes more and more successful. The success of the WLC will generate tax revenue, create more opportunities for residence within the community, create a more educated population, and eventually lower crime because of all of these things. All of these things are positive for the future of the region, which will include San Jacinto as well.

I applaud you for being risk takers, for the greatest risks usually generate the greatest rewards. The WLC is the way future business will take place, and Moreno Valley is poised to be one of the leaders in that aspect. I implore you to consider the WLC and recommend its completion as you forward your decision to your city council. A region's future hangs in the balance and your decision can make it a reality. Thank you for that consideration.

Yours in gratitude,



John I. Norman

Board President, SJUSD

951 212 8940
jnorman629@yahoo.com



District Superintendent
Diane Perez

District Administrative Office
2045 South San Jacinto Avenue
San Jacinto, California 92583
(951) 929-7700
www.sanjacinto.k12.ca.us

Board of Trustees
John I. Norman, President
Willie Hamilton, Clerk
Deborah Rex, Board Member
Jasmin Rubio, Board Member
Vacant, Board Member

Interim CBO
Business Services
Michael Bishop

Assistant Superintendent
Personnel Services
Matthew Hixson

Assistant Superintendent
Educational Services
Sherry Smith

Head Start/State Preschool

Megan Cope Elementary

De Anza Elementary

Jose Antonio Estudillo Elementary

Edward Hyatt Elementary

Park Hill Elementary

Clayton A. Record Jr. Elementary

San Jacinto Elementary

North Mountain Middle School

Monte Vista Middle School

San Jacinto Leadership Academy

Mountain View High School /
Mountain Heights Academy

San Jacinto High School

June 7, 2015

To the City of Moreno Valley,

I am writing in regard to the proposed \$3 billion World Logistics Center that is currently planned for eastern Moreno Valley. I am in support of this project because not only will it be a tremendous boost to our valley's economy, it will also generate millions in dependable funding. This is funding that will help improve our public safety, build schools, streets, fire stations and other much needed public facilities. Furthermore, as the Assistant Superintendent of Educational Services for the San Jacinto Unified School District, I am excited about the opportunities this proposed development will generate for our valley's youth as they prepare for college and/or careers.

A development such as the World Logistics Center would most certainly have a positive economic impact for neighboring communities, such as San Jacinto, but more importantly it would create an advantageous environment for our graduating students from both high school and college programs. A development center such as this one has great potential to bring our graduates back to the valley, where they will live and work and ultimately invest in our local communities. Many wonderful educational initiatives are already underway in our San Jacinto schools that incorporate *cutting-edge, rigorous and relevant career and technical education (CTE) pathways, which prepare our students for a wide range of high-wage, high-skill and high-demand careers.* The proposed World Logistics Center will no doubt generate thousands of jobs, and give Riverside County the opportunity to retain our workforce, instead of losing graduates to neighboring counties.

I am very pleased with the direction that Moreno Valley is moving in regarding the World Logistics Center project because of the tremendous potential it has to bring industry to Riverside County, and to create jobs and skilled labor, which ultimately improve the quality of life for the community. Moreover, the educational opportunities are exciting to envision and if this proposed World Logistics Center was to become a reality, the collaboration, partnerships and integration of college and career readiness opportunities are endless! Career Technical Education pathways, such as robotics, computer graphic design, manufacturing, architectural engineering, and environmental awareness, that are currently underway in San Jacinto, would be excellent springboards for jumpstarting our economy within the context of the World Logistics Center.

The World Logistics Center proposal has the capability to retain and employ our students and improve the overall quality of life within our valley, and therefore is something that I wholeheartedly endorse! Thank you for your consideration of this letter.

Respectfully,

Sherry Smith
Assistant Superintendent.
Educational Services
San Jacinto Unified School District



June 7, 2015

District Superintendent
Diane Perez

Moreno Valley Planning Commission

District Administrative Office
2045 South San Jacinto Avenue
San Jacinto, California 92583
951 929-7000
www.sanjacinto.k12.ca.us

To Whom it May Concern:

Board of Trustees
John J. Norman, President
William Hamilton, Clerk
Deborah Rex, Board Member
Jasmine Rubio, Board Member
Vacant, Board Member

As a community member and employee of the neighboring San Jacinto Valley, I am pleased to support the Highland Fairview and the World Logistics Center (WLC) in Moreno Valley. The proposed development would provide vital support to local communities, businesses, and families. Partnerships developed between businesses and schools would contribute positively to long-term economic improvements.

Interim CBO
Business Services
Michael Bishop

The WLC can greatly influence the quality of life in the region by employing citizens near their homes and greatly reducing commuting times. The WLC employment opportunities could provide a better quality of life by providing more family time, including more involvement with children and the community. This, in turn, would improve not only Moreno Valley, but also neighboring cities such as San Jacinto, which is minutes away.

Assistant Superintendent
Personnel Services
Matthew Hixson

The prospect of offering internships for students as they train for future jobs in technology that are located in neighboring communities would allow them to remain in the valley and utilize their skills here, rather than having to relocate to larger cities. This will, in turn, raise the standard of living in the valley and bring more businesses to support a skilled population that is ready for the workforce.

Assistant Superintendent
Educational Services
Sherry Smith

I am in strong support of the strength and stability the WLC would provide as part of the community and as a contributor to Southern California's economic growth. Without forward thinking developers such as Highland Fairview and the City of Moreno Valley, our children will be forced to move farther away to seek the opportunities of tomorrow. We have to embrace the future and not be afraid or find excuses to maintain the status quo while others pass us up.

Head Start/State Preschool

Highland Fairview is offering an opportunity for economic growth. For this reason and the reasons cited above, it is critical the World Logistics Center becomes a reality in our community.

Megan Cope Elementary

Thank you for your time and consideration.

De Anza Elementary

Sincerely,

Jose Antonio Estudillo Elementary

Edward Hyatt Elementary

Gale Hill
Executive Assistant
San Jacinto Unified School District

Park Hill Elementary

Clayton A. Record Jr. Elementary

San Jacinto Elementary

North Mountain Middle School

Monte Vista Middle School

San Jacinto Leadership Academy

Mountain View High School/
Mountain Heights Academy

San Jacinto High School



District Superintendent
Diane Perez

District Administrative Office
2045 South San Jacinto Avenue
San Jacinto, California 92583
(951) 929-7700
www.sanjacinto.k12 ca us

Board of Trustees
John I. Norman, President
Willie Hamilton, Clerk
Deborah Rex, Board Member
Jasmin Rublo, Board Member
Rose Saigado, Board Member

Assistant Superintendent
Business Services

Assistant Superintendent
Personnel Services
Matthew Hixson

Assistant Superintendent
Educational Services
Sherry Smith

Head Start/State Preschool

Megan Cope Elementary

De Anza Elementary

Jose Antonio Estudillo
Elementary

Edward Hyatt Elementary

Park Hill Elementary

Clayton A. Record Jr.
Elementary

San Jacinto Elementary

North Mountain Middle
School

Monte Vista Middle School

San Jacinto Leadership
Academy

Mountain View High
School/Mountain Heights
Academy

San Jacinto High School

June 6, 2015

Moreno Valley Planning Commission

To Whom It May Concern:

I would like to express my support for the future creation of the World Logistics Center in eastern Moreno Valley. As school superintendent of neighboring San Jacinto Unified School District (SJUSD), our mission is to ensure all students graduate prepared to enter post-secondary education and/or the workforce with the ultimate vision of our students realizing a high quality of life, preferably in our local community.

SJUSD is preparing student for their future in unprecedented numbers and the results are astounding, but to turn our economy around, we must have businesses who invest in our community; this will only occur when there is an educated workforce to support industry. The World Logistics Center presents the opportunity to create a center of commerce that can influence neighboring cities, such as ours, and help create a lucrative environment for our college graduates to return to and an attractive area for families to live and work.

We envision a high quality of life happening right here in our communities, but that will require livable wages to prevent the mass exodus to Los Angeles and Orange County and San Diego that happens on a daily basis. The movement underway in Moreno Valley, which is being lead by Highland Fairview, has tremendous potential to address much of the community's imbalance in their workforce. What is being planned and what has actually taken place to date certainly has my attention as we continue to find ways to bring industry to Riverside County.

We applaud Moreno Valley for their desire and capability, by way of the World Logistics Center, to take responsibility in building the kind of future they want for their future citizens; we know job creation and skilled labor to support these jobs increases the economic vitality of a community thus making a community a destination place. We share in this vision for the future of Moreno Valley and believe this synergy could be extended to communities such as ours. Robotics, 3-D printing, STEAM and medical career pathways are being implemented in our future-ready school district, and we welcome the opportunity to support local industry that has the capability to retain and employ our students, thus making our communities safer and desirable for all of us.

Thank you for the opportunity to express my support of this incredible educational and economic endeavor.

Sincerely,

Diane Perez, Superintendent
San Jacinto Unified School District



June 11, 2015

VIA US MAIL & EMAIL

City Planning Commission & City Council
City of Moreno Valley 14177 Frederick St.
P.O. Box 88005
Moreno Valley, CA 92552 cityclerk@moval.org

SUBJECT: COMMENTS ON WORLD LOGISTIC CENTER

To Whom It May Concern:

Thank you for the opportunity to comment on the EIR prepared for The World Logistic Center. Please accept these comments on behalf of SoCal Environmental Justice Alliance.

The proposed World Logistics Center project (WLC) site covers 3,918 acres in eastern Moreno Valley. A General Plan Amendment is proposed to designate 2,635 acres for logistics warehousing including up to a maximum of 41.4 million sf of "Logistics Development" and 200,000 sf of warehousing-related uses classified as "Light Logistics." The remaining 1,104 acres will be designated for permanent open space and public facilities. The following elements of the General Plan are included in the proposed Amendment: Community Development (land use); Circulation; Parks, Recreation, and Open Space; Safety; Conservation; and the General Plan Goals and Objectives. The site is just north of the San Jacinto Wildlife Area and includes 7 rural residential properties. A new Specific Plan will be adopted to govern development of the 2,635 acres, and a separate zoning amendment will also be processed to rezone 1,104 acres for open space and public facilities uses.

At present there are a large number of logistics warehouse buildings approved, built, and proposed in Moreno Valley. In fact, the City has just approved the 2,000, 000 SF ProLogis Project and is in the process of approving the World Logistic Center (WLC) which is a 42,000,000 SF logistics facility.

There are a number of studies that have reported increased sensitivity to pollution, for communities with low income levels, low education levels, and other biological and social factors. This combination of multiple pollutants and increased sensitivity in these communities can result in a higher cumulative pollution impact."¹

Moreno Valley has one of the highest minority population, unemployment, education and health statistics in the county.

Any EIR prepared for this Project should address potential blighting effects from an oversupply of logistics warehousing in the City from development of this Project, as well as impacts from failing to maintain a mix of industry in the City. As the site stands as one of the remaining non logistics industrial uses in the City, the EIR should evaluate impacts from eliminating this remaining beacon of diversity within the industrial land use classification.

If it is the City's decision to move forward with the Proposed Project, the Alliance urges the City Council to adopt, wherever possible, to address the Environmental Justice issues that the Project's approval will create. This, even if the alternative would impede to some degree the attainment of the project objectives, or would be more costly.

The Alliance believes the EIR for the Proposed Project fails to comply with CEQA and must be substantially supplemented, amended, and recirculated before the City Council makes its decision on the Proposed Project. The

¹ Office of Environmental Health Hazard Assessment, Cumulative Impacts: Building a Scientific Foundation (Dec. 2010), Exec. Summary, p. ix, available at <http://oehha.ca.gov/ej/cipa123110.html>.

Alliance encourages the city to require the recirculated EIR address the Environmental Justice Element as outlined in the California General Plan Guidelines and give the Element the same weight as the mandatory elements of the general plan.

Because the EIR has completely failed to address these issues the Alliance believes the EIR for the Proposed Project fails to comply with CEQA and must be substantially supplemented, amended, and recirculated before the City Council makes its decision on the Proposed Project. The Alliance encourages the city to require the recirculated EIR to address the Environmental Justice Element as outlined in the California General Plan Guidelines and give the Element the same weight as the mandatory elements of the general plan.

Cities have an important role to play in ensuring environmental justice (EJ) for all of California's residents under state law: "Environmental Justice" means the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies. (Gov. Code, § 65040.12, subd. (e).) Fairness in this context means that the benefits of a healthy environment should be available to everyone, and the burdens of pollution should not be focused on sensitive populations or on communities that already are experiencing its adverse effects.

Moreno Valley must begin to recognize its obligation to consider EJ in the CEQA process and the advantages of EJ; these include healthier children, fewer school days lost to illness and asthma, a more productive workforce, and a cleaner and more sustainable environment. Environmental justice cannot be achieved, however, simply by adopting generalized policies and goals. Instead, EJ requires an ongoing commitment to identifying existing and potential problems, and to finding and applying solutions, both in approving specific projects and planning for future development. Moreno Valley has two environmental justice-related responsibilities, which are contained in the Government Code and in the California Environmental Quality Act (CEQA).

First, Government Code section 11135, subdivision (a) provides in relevant part: No person in the State of California shall, on the basis of race, national origin, ethnic group identification, religion, age, sex, sexual orientation, color, or disability, be unlawfully denied full and equal access to the benefits of, or be unlawfully subjected to discrimination under, any program or activity that is conducted, operated, or administered by the state or by any state agency, is funded directly by the state, or receives any financial assistance from the state.

While this provision does not include the words "environmental justice," it can require local agencies to undertake the same consideration of fairness in the distribution of environmental benefits and burdens discussed above. For example, a general plan update is funded by or receives financial assistance from the state or a state agency the local government should take special care to ensure that the plan's goals, objectives, adhere to the Office of the California Attorney General's Environmental Justice policies (Updated: 07/10/12 Page 2 of 6 and implementation measures) and provide for the following: (a) foster equal access to a clean environment and public health benefits (such as parks, sidewalks, and public transportation); and (b) do not result in the unmitigated concentration of polluting activities near communities that fall into the categories defined in Government Code section 11135. In addition, in formulating its public outreach for the general plan update, the local agency should evaluate whether regulations governing equal "opportunity to participate" and requiring "alternative communication services" (e.g., translations) apply. (See Cal. Code Regs., tit. 22, §§ 98101, 98211.)

Government Code section 11136 provides for an administrative hearing by a state agency to decide whether a violation of Government Code section 11135 has occurred. If the state agency determines that the local government has violated the statute, it is required to take action to "curtail" state funding in whole or in part to the local agency. (Gov. Code, § 11137.) In addition, a civil action may be brought in state court to enforce section 11135. (Gov. Code, § 11139.)

Second, under CEQA, "public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects" (Pub. Res. Code, § 21002.) Human beings are an integral part of the "environment." An agency is required to find that a "project may have a 'significant effect on the environment'" if, among other things, "[t]he environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly." (Pub. Res. Code, § 21083, subd. (b)(3); see also CEQA Guidelines, § 15126.2 that notes "that a project may cause a significant effect by bringing people to hazards.")

CEQA does not use the terms "fair treatment" or "environmental justice." Rather, CEQA centers on whether a project may have a significant effect on the physical environment. Still, as set out below, by following well-established CEQA principles, local governments can further environmental justice. CEQA's purpose the importance of a healthy

environment for all of California’s residents is reflected in CEQA’s purposes. In passing CEQA, the Legislature determined:

1. The maintenance of a quality environment for the people of this state now and in the future is a matter of statewide concern. (Pub. Res. Code, § 21000, subd. (a).)
2. We must “identify any critical thresholds for the health and safety of the people of the state and take all coordinated actions necessary to prevent such thresholds from being reached.” (Id. at subd. (d).)
3. Major consideration must be given to preventing environmental damage, while providing a decent home and satisfying living environment for every Californian.” (Id. at subd. (g).)
4. We must “take all action necessary to provide the people of this state with clean air and water, enjoyment of aesthetic, natural, scenic, and historic environmental qualities, and freedom from excessive noise.” (Pub. Res. Code, § 21001, subd. (b).)

There are a number of different types of projects that have the potential to cause physical impacts to low-income communities and communities of color. One example is a project that will emit pollution. Where a project will cause pollution, the relevant question under CEQA is whether the environmental effect of the pollution is significant. In making this determination, two longstanding CEQA considerations that may relate to environmental justice are relevant – setting and cumulative impacts.

It is well established that “the significance of an activity depends upon the setting.” (Kings County Farm Bureau v. City of Hanford (1990) 221 Cal.App.3d 692, 718 [citing CEQA Guidelines, § 15064, subd. (b)]; see also id. at 721; CEQA Guidelines, § 15300.2, subd. (a) [noting that availability of listed CEQA exceptions “are qualified by consideration of where the project is to be located – a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant.”]) For example, a proposed project’s particulate emissions might not be significant if the project will be located far from populated areas, but may be significant if the project will be located in the air shed of a community whose residents may be particularly sensitive to this type of pollution, or already are experiencing higher-than-average asthma rates. A lead agency therefore should take special care to determine whether the project will expose “sensitive receptors” to pollution (see, e.g., CEQA Guidelines, App. G); if it will, the impacts of that pollution are more likely to be significant.

In addition, CEQA requires a lead agency to consider whether a project’s effects, while they might appear limited on their own, are “cumulatively considerable” and therefore significant. (Pub. Res. Code, § 21083, subd. (b)(3).) “‘Cumulatively considerable’ means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.” (Id.) This requires a local lead agency to determine whether pollution from a proposed project will have significant effects on any nearby communities, when considered together with any pollution burdens those communities already are bearing, or may bear from probable future projects. Accordingly, the fact that an area already is polluted makes it more likely that any additional, unmitigated pollution will be significant. Where there already is a high pollution burden on a community, the “relevant question” is “whether any additional amount” of pollution “should be considered significant in light of the serious nature” of the existing problem. (*Hanford, supra*, 221 Cal.App.3d at 661; see also *Los Angeles Unified School Dist. v. City of Los Angeles* (1997) 58 Cal.App.4th 1019, 1025 [holding that “the relevant issue ... is not the relative amount of traffic noise resulting from the project when compared to existing traffic noise, but whether any additional amount of traffic noise should be considered significant in light of the serious nature of the traffic noise problem already existing around the schools.”])

Although CEQA focuses on impacts to the physical environment, economic and social effects may be relevant in determining significance under CEQA in two ways. (See CEQA Guidelines, §§ 15064, subd. (e), 15131.) First, as the CEQA Guidelines note, social or economic impacts may lead to physical changes to the environment that are significant. (Id. at §§ 15064, subd. (e), 15131, subd. (a).) To illustrate, if a proposed development project may cause economic harm to a community’s existing businesses, and if that could in turn “result in business closures and physical deterioration” of that community, then the agency “should consider these problems to the extent that potential is demonstrated to be an indirect environmental effect of the proposed project.” (See *Citizens for Quality Growth v. City of Mt. Shasta* (1988) 198 Cal.App.3d 433, 446.)

Second, the economic and social effects of a physical change to the environment may be considered in determining whether that physical change is significant. (Id. at §§ 15064, subd. (e), 15131, subd. (b).) The CEQA Guidelines illustrate: “For example, if the construction of a new freeway or rail line divides an existing community, the

construction would be the physical change, but the social effect on the community would be the basis for determining that the effect would be significant.” (Id. at § 15131, subd. (b); see also id. at § 15382 [“A social or economic change related to a physical change may be considered in determining whether the physical change is significant.”])

CEQA’s “substantive mandate” prohibits agencies from approving projects with significant environmental effects if there are feasible alternatives or mitigation measures that would substantially lessen or avoid those effects. (*Mountain Lion Foundation v. Fish and Game Commission* (1997) 16 Cal.4th 105, 134.) Where a local agency has determined that a project may cause significant impacts to a particular community or sensitive subgroup, the alternative and mitigation analyses should address ways to reduce or eliminate the project’s impacts to that community or subgroup. (See CEQA Guidelines, § 15041, subd. (a) [noting need for “nexus” between required changes and project’s impacts].)

Depending on the circumstances of the project, the local agency may be required to consider alternative project locations (see *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 404) or alternative project designs (see *Citizens of Goleta Valley v. Board of Supervisors* (1988) 197 Cal.App.3d 1167, 1183) that could reduce or eliminate the effects of the project on the affected community.

The lead agency should discuss and develop mitigation in a process that is accessible to the public and the affected community. “Fundamentally, the development of mitigation measures, as envisioned by CEQA, is not meant to be a bilateral negotiation between a project proponent and the lead agency after project approval; but rather, an open process that also involves other interested agencies and the public.” (*Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 93.) Further, “mitigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments.” (CEQA Guidelines, § 15126.4, subd. (a)(2).)

As part of the enforcement process, “in order to ensure that the mitigation measures and project revisions identified in the EIR or negative declaration are implemented,” the local agency must also adopt a program for mitigation monitoring or reporting. (CEQA Guidelines, § 15097, subd. (a).) “The purpose of these [monitoring and reporting] requirements is to ensure that feasible mitigation measures will actually be implemented as a condition of development, and not merely adopted and then neglected or disregarded.” (*Federation of Hillside and Canyon Assns. v. City of Los Angeles* (2000) 83 Cal.App.4th 1252, 1261.) Where a local agency adopts a monitoring or reporting program related to the mitigation of impacts to a particular community or sensitive subgroup, its monitoring and reporting necessarily should focus on data from that community or subgroup.

Under CEQA, a local government is charged with the important task of “determining whether and how a project should be approved,” and must exercise its own best judgment to “balance a variety of public objectives, including economic, environmental, and social factors and in particular the goal of providing a decent home and satisfying living environment for every Californian.” (CEQA Guidelines, § 15021, subd. (d).)

A local agency has discretion to approve a project even where, after application of all feasible mitigation, the project will have unavoidable adverse environmental impacts. (Id. at § 15093.) When the agency does so, however, it must be clear and transparent about the balance it has struck.

To satisfy CEQA’s public information and informed decision making purposes, in making a statement of overriding considerations, the agency should clearly state not only the “specific economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits” that, in its view, warrant approval of the project, but also the project’s “unavoidable adverse environmental effects[.]” (Id. at subd. (a).) If, for example, the benefits of the project will be enjoyed widely, but the environmental burdens of a project will be felt particularly by the neighboring communities, this should be set out plainly in the statement of overriding considerations.

The Project has numerous impacts to the neighborhood, the most important are (1) Air Quality, (2) Cumulative Effects, (3) Growth Inducing and (4) GHG: Aesthetic/Visual

- Air Quality
- Archaeologic-Historic
- Biological Resources
- Geologic/Seismic
- Noise
- Soil Erosion/Compaction/Grading
- Toxic/Hazardous
- Traffic/Circulation
- Vegetation
- Growth Inducing
- Cumulative Effects

In a Tuesday letter to city planning officials, Riverside County Transportation Commission Executive Director Anne Mayer said the report for the proposed 40.6-million square foot complex does not properly address how needed improvements on Highway 60, Highway 79 and Gilman Springs Road would be made. Mayer stated, “The approval

of the proposed project would result in far-reaching impacts to surrounding local and regional transportation corridors.” The environmental study has no plans on how to pay for upgrades to those highways or roads.

In a letter Monday, Riverside County Transportation and Land Management Agency – a separate entity – also raised concerns about whether the 60 and Gilman Springs could handle the additional traffic, which it stated would be “highly detrimental to traffic safety and mobility.” Gilman Springs – a two-lane county road – is already handling as much traffic as it can and that the project could add 6,019 cars and 420 trucks a day.

Road and freeway improvements should be built before approving the project and before building permits are issued because a traffic study that is part of the report estimates the complex would generate about 68,000 vehicle trips a day, around 14,000 of which would come from trucks.

This does not address whether the \$34.1 million in fees that will be paid by the developer through a regional program to pay for transportation projects adequately compensates for regional impacts. Additionally, the proposed project will change the land use designation of thousands of acres from residential to a business park designation allowing for large warehouse distribution facilities which will result in a substantial increase in truck trips beyond what is currently anticipated in the Moreno Valley General Plan .

Additionally, the Proposed Project application in its present form should be denied because the Proposed Project undermines the General Plan. The proposed General Plan Amendments and zoning changes will irreparably change the well thought out dynamic of the City’s General Plan by replacing the City’s diverse land use mix with logistics and distribution centers for short-term economic gain over the long-term healthy and successful development of the City.

This is illustrated by the EIR’s failure to accurately identify the Proposed Project’s impacts on the City’s housing element (the Proposed Project will eliminate 6000 homes from the City’s housing element) especially with respect to affordable housing and the Social Justice Element. The Proposed Project’s complete failure to offer any meaningful mitigation must also be noted as a major failure of the Proposed Project’s EIR.

The County Transportation Uniform Mitigation Fee (TUMF) model is based on the existing Moreno Valley General Plan and as such did not account for this major change to distribution warehousing facilities. As a result, payment of TUMF will not sufficiently mitigate traffic impacts of the proposed project.

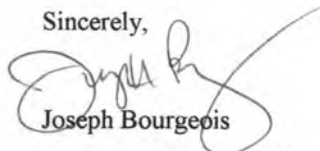
The issues raised by these transportation agencies highlight the inadequacy with the final environmental impact report not to mention the California Air Resources Board stated the study did not properly address the potential health risks of air pollution or explore measures to reduce pollution through zero or near-zero emission machinery, which raises serious legal issues that the city should address in a supplemental analysis. The health risk analysis must be revised to ensure that the potential impacts are fully analyzed and disclosed.

Even the city’s environmental report stated the project’s local and regional air quality impacts would be “significant and unavoidable” as a result of the center’s estimated 14,000 truck trips a day. The city is relying in its analysis on a study published this year by the Boston-based Health Effects Institute that found that rats exposed in a laboratory to the exhaust of newer diesel engines did not develop cancer. The fact is the City has overstated the study’s findings and ignored other studies that show the opposite result.

These comments hereby incorporate the extensive commentary previously made by current members of the SoCal Environmental Justice Alliance. We reserve the right to supplement these comments at later hearings and proceedings for this Project.

For these reasons and those previously articulated, I respectfully request you deny this Project in its entirety and decline to certify the EIR.

Sincerely,



Joseph Bourgeois

Chairman of the Board

RECEIVED

JUN 09 2015

CITY OF MORENO VALLEY
Planning DivisionTom Paulek and Susan Nash
P.O. Box 4036
Idyllwild, CA 92549

June 9, 2015

Planning Commission
City of Moreno Valley
14177 Frederick Street
Moreno Valley CA 92552**Re: June 11, 2015 – Moreno Valley Planning Commission - World Logistics Center Final Environmental Impact Report (SCH#2012021045)**

The Attachments to our April 5, 2013 Draft EIR comment letter (FEIR letter G-89) were wrongly detached and excluded from the Final EIR. These attachments were obtained as a result of our citizen Public Records Act request to the state Wildlife Conservation Board (WCB) and the western Riverside County Regional Conservation Authority (RCA) [Responsible for MSHCP Implementation].

The attachments are once again being submitted to project decision makers to disclose the fraudulent project description of the public lands of the San Jacinto Wildlife Area (SJWA) immediately south of the World Logistics Center Specific Plan as the “CDFW Conservation Buffer Area”. The attachments appended include:

ATTACHMENT #1: State Wildlife Conservation Board (WCB) minutes of May 18, 2001 Agenda Item 31 – San Jacinto Wildlife Area Expansions 15 through 19.

ATTACHMENT #2: Excerpts from text of Proposition 12 approved by the voters in 2000 indicating the subject land was purchased by the public “ **for the restoration or acquisition from a willing seller, of habitat for threatened and endangered species or for the purpose of promoting, the recovery of those species.**”

ATTACHMENT #3,4,5, and 6: documents the SJWA public lands erroneously designated “CDFW Conservation Buffer Area” were included in the 2004 MSHCP Conservation Area and counted toward Additional Reserve lands by the Regional Conservation Authority (RCA) [see Attachment #6].

ATTACHMENT #7: The Department of Fish and Game **Management Authorization** (May 6, 1996) implementing the Stephens' Kangaroo Rat Habitat Conservation Plan (SKRHCP). Both the SKRHCP as well as the subsequent MSHCP issued under the Natural Community Conservation Planning Act (NCCP Act). The NCCP Act does not exempt a project in a natural community conservation planning area from the California Environmental Quality Act or alters or affects the applicability of CEQA (see Fish and Game Code: 2826).

The City's change of the land use designation on the public lands of the San Jacinto Wildlife Area to “Open Space” does not obviate the need to analyze and mitigate the impacts of the World Logistics Center on these MSHCP designated wildlife conservation lands. In addition, we object to the fraudulent project description and the improper use of a Program EIR for this Project. The City's consideration of the Project must be deferred pending public review of a legally adequate environmental document.


Tom Paulek, Wildlife Biologist


Susan Nash, Attorney at Law

1 a

DEPARTMENT OF FISH AND GAME

WILDLIFE CONSERVATION BOARD

107 13TH STREET, SUITE 103
SACRAMENTO, CALIFORNIA 95814
(916) 445-8448
FAX (916) 323-0280



ATTACHMENT #1

Page 1 of 8

Packet Pg. 557

State of California
The Resources Agency
Department of Fish and Game
WILDLIFE CONSERVATION BOARD

Minutes
May 18, 2001

<u>ITEM NO.</u>	<u>PAGE</u>
1. <u>Roll Call</u>	1
2. <u>Funding Status-Informational</u>	3
3. <u>Special Project Planning Account-Informational</u>	6
4. <u>PROPOSED CONSENT CALENDAR (Items 5-19 and 21-28)</u>	7
*5. <u>Approval of Minutes - February 23, 2001 Meeting</u>	7
*6. <u>Recovery of Funds</u>	8
*7. <u>Lakeside Linkages, Expansion 5, San Diego County</u>	10
*8. <u>San Joaquin River Restoration Augmentation</u> <u>(Parkways Exotics Removal), Fresno and Madera Counties</u>	12
*9. <u>Wetland Habitat Restoration, South Grasslands (Britto Land Co.,</u> <u>E.T.N., Inc. and Riverfield Cattle Co.), Merced County</u>	15
*10. <u>Suisun Marsh Waterfowl Production and Enhancement, Phase 2,</u> <u>Solano County</u>	17
*11. <u>Napa-Sonoma Wildlife Area, Solano County</u>	19
*12. <u>Leek Springs Valley Ecological Reserve, El Dorado County</u>	19
*13. <u>Wohler Bridge Public Access Improvements, Sonoma County</u>	21
*14. <u>Hudeman Slough Public Fishing Access Improvements, Sonoma County</u>	22
*15. <u>Bear River Fishing Access Improvements, Placer County</u>	24
*16. <u>Wetland Habitat Restoration, 2017 Ranch, Colusa County</u>	26
*17. <u>Sacramento Valley Refuge, Glenn County</u>	28
*18. <u>Wetland Habitat Restoration, Honcut Creek (McCorkle Ranch), Butte County</u>	29
*19. <u>RHR Upper Butte Basin Wildlife Area, Howard Slough Unit, Glenn County</u>	31
20. <u>Big Chico Creek, Expansion 1, Butte County</u>	33
*21. <u>Wetland Conservation Easement Program, Cherokee Farms, Butte County</u>	37

Page 2 of 2

*22.	<u>Musty Buck Ridge Conservation Easement, Butte County</u>	39
*23.	<u>Sacramento River Conservation Area, Expansions 2 and 3, Butte County</u>	40
*24.	<u>Daugherty Hill Wildlife Area, Expansion 8, Yuba County</u>	42
*25.	<u>Woodson Bridge Fishing Access, Tehama County</u>	44
*26.	<u>Mill Creek Fishing Access Improvements, Tehama County</u>	46
*27.	<u>Hamilton Branch Fishing Access, Plumas County</u>	48
*28.	<u>Lassen Foothills, Expansion 1 (Eagle Canyon Ranch Conservation Easement), Shasta and Tehama Counties</u>	49
29.	<u>San Bernardino Mountains Wildlife Corridor, San Bernardino County</u>	51
30.	<u>San Jacinto Wildlife Area, Expansion 14, Riverside County</u>	53
31.	<u>San Jacinto Wildlife Area, Expansions 15 through 19, Riverside County</u>	55
32.	<u>Coachella Valley Ecological Reserve, Expansions 12 and 13, Riverside County</u>	58
33.	<u>French Valley Wildlife Area, Riverside County</u>	60
34.	<u>Mid-State Bank Donation, San Luis Obispo County</u>	63
35.	<u>San Joaquin River Parkway Interpretive Center, Fresno County</u>	65
36.	<u>Wetland Habitat Restoration, East Grasslands (Duck Slough), Merced County</u>	67
37.	<u>Wetland Habitat Restoration, North Grasslands Wildlife Area, Gadwall Unit, Merced County</u>	69
38.	<u>Riparian Habitat Restoration, Sacramento River Wildlife Area, Moulton Weir Unit, Colusa County</u>	71
39.	<u>Oroville Wildlife Area Ponds, Fishing Access Improvements, Butte County</u>	74
40.	<u>Mill Creek, Del Norte County</u>	76
41.	<u>Irish Hills, San Luis Obispo County</u>	81
42.	<u>East Merced Vernal Pool Grasslands Preserve and Expansion 1, Merced and Mariposa Counties</u>	83
43.	<u>Staff Report - Easement Transfers</u>	88
	<u>Program Statement</u>	90

DEPARTMENT OF FISH AND GAME
WILDLIFE CONSERVATION BOARD
1607 13TH STREET, SUITE 103
SACRAMENTO, CALIFORNIA 95814
(916) 445-8448
FAX (916) 323-0280



ATTACHMENT #1
Page 3 of 8

WILDLIFE CONSERVATION BOARD

May 18, 2001

The Wildlife Conservation Board met at the State Capitol, Room 112, Sacramento, California on May 18, 2001. The meeting was called to order at 10:05 A.M. by Mr. Michael Chrisman, President, Fish and Game Commission and Chairman of the Board. At this time he introduced Mr. Robert C. Hight, Director, Department of Fish and Game and Mr. Al Wright, Executive Director of the Board. Mr. Chrisman commented that the Board would be addressing a long agenda and thanked the audience for their attendance and input on the projects being considered today. Mr. Chrisman then turned over the meeting to Mr. Wright. Mr. Wright also welcomed the audience and expressed his appreciation for the audience's participation in these Board meetings. He reported that since the last Board meeting in February, two new legislative advisory committee members were appointed to the Board, Senator Sheila Kuehl and Assembly Member Hannah-Beth Jackson.

1. Roll Call

WILDLIFE CONSERVATION BOARD MEMBERS

Michael Chrisman, Chairperson
President, Fish and Game Commission
Robert C. Hight, Member
Director, Department of Fish and Game

JOINT LEGISLATIVE INTERIM ADVISORY COMMITTEE

Syrus Devers
Vice, Senator Sheila Kuehl

EXECUTIVE DIRECTOR

Al Wright

31. San Jacinto Wildlife Area, Expansions 15 through 19, \$15,100,000.00
Riverside County

Mr. Wright reported that this proposal is to consider the acquisition of five separate ownerships consisting of approximately 1,000 acres of land as expansions of the Department of Fish and Game's (DFG) San Jacinto Wildlife Area (WLA), located in western Riverside County. Specifically, the project area is located in the San Jacinto Valley of southern California, approximately 18 miles southeast of downtown Riverside and just north of the community of Lakeview. To the northwest is the City of Moreno Valley, whose current authorized sphere of influence includes the proposed Expansions 15 through 19 as described herein. Mr. Bill Gallup described the project and its location.

Initial land acquisitions for the WLA were completed during 1981 - 82 as part of a mitigation package developed to compensate for wildlife habitat losses resulting from the construction of the State Water Project. Since 1995, the Board has acquired 1,283 ± acres bringing the total acreage under Department ownership to 7,784 ± acres. The Lake Perris State Recreation Area lies adjacent to the western boundary of the WLA and if this project is approved as proposed, 16,000 ± acres will be protected under public ownership.

Acquisition of the proposed expansions will allow for the protection of a portion of Mystic Lake and its associated upland habitat which is important to a number of sensitive plant and animal species. The upland areas and hills surrounding the lowland flood plain of Mystic Lake are dominated by Riversidian sage scrub and patches of grasslands are found on the uplands and alkali flats. Numerous sensitive plants endemic to the Mystic Lake area, including the thread-leaved brodiaea (state listed endangered and federally proposed threatened), San Jacinto saltbush (federally proposed endangered) and spreading navarretia (federally proposed threatened) are found on site. The WLA and adjoining lands support 38 species of amphibians and reptiles. Mammals species are well represented and range from the desert shrew to the southern mule deer. The Stephens' kangaroo rat (state listed threatened and federally listed endangered) is a resident mammal of the WLA.

Since 1982, over 240 species of birds have been recorded on, or adjacent to, the WLA. Twenty-two over-wintering raptor species are known to utilize the San Jacinto Valley, including osprey, ferruginous hawk, golden eagle and short-eared owl. The San Jacinto Valley consistently ranks in the top one to two percent in species diversity for the North American Christmas bird counts. Historically, the San Jacinto Valley has consistently proved to be an important southern California wintering and nesting area for migratory shorebirds and waterfowl. Three federally or state listed endangered birds have been documented on the WLA, including bald eagle, Peregrine falcon and the California brown pelican.

The DFG has identified the subject properties as being within a Significant Natural Area and has recommended the purchase of the property as an addition to the existing WLA. The acquisition of the subject properties are important to the wildlife area as they will serve as a buffer from development north of the WLA and add significant wildlife benefits to the WLA. It is anticipated that the addition of these properties will enhance public recreational opportunities, as the upland habitat and wetland areas are restored. Therefore, consistent with long-range planning purposes, staff of the Board present the following five proposals for Board consideration:

Expansion 15 \$935,365.00

This proposal is to consider the acquisition of 60 ± acres of land lying adjacent to the San Jacinto WLA on the north. The property has no improvements. The approved appraised value is \$927,365.00 and the owner has agreed to sell to the state for that amount. An additional \$8,000.00 will be needed for appraisal, escrow, title insurance and Department of General Services' (DGS) review costs.

Expansion 16 \$1,907,100.00

This proposal is to consider the acquisition of 126 ± acres of land lying adjacent to the San Jacinto WLA on the north. The property has no improvements. The approved appraised value is \$1,895,100.00 and the owner has agreed to sell to the state for that amount. An additional \$12,000.00 will be needed for appraisal, escrow, title insurance and DGS review costs.

Expansion 17 \$9,209,735.00

This proposal is to consider the acquisition of 613 ± acres of land lying adjacent to the San Jacinto WLA on the north. The property has no improvements. The approved appraised value is \$9,176,400.00 and the owner has agreed to sell to the state for that amount. An additional \$33,335.00 will be needed for appraisal, escrow, title insurance and DGS review costs.

Expansion 18 \$589,400.00

This proposal is to consider the acquisition of 39 ± acres of land lying adjacent to the San Jacinto WLA on the north. The property has no improvements. The approved appraised value is \$581,400.00 and the owner has agreed to sell to the state for that amount. An additional \$8,000.00 will be needed for appraisal, escrow, title insurance and DGS review costs.

Expansion 19

\$2,440,250.00

This proposal is to consider the acquisition of 162± acres of land lying adjacent to the San Jacinto WLA on the north. The property has no improvements. The approved appraised value is \$2,426,250.00 and the owner has agreed to sell to the state for that amount. An additional \$14,000.00 will be needed for appraisal, escrow, title insurance and DGS review costs.

The acquisition of the subject expansions are exempt from CEQA under Class 13 of Categorical Exemptions as an acquisition of land for wildlife conservation purposes and a Notice of Exemption has been filed. There are no claims of sovereign state land ownership within the proposed expansions.

The Board received letters of support for these expansions from the California Native Plant Society, Sierra Club, Endangered Habitats League, Wildlands Conservancy, Riverside Land Conservancy, California State Park Rangers Association and the San Bernardino Valley Audubon Society. Mr. Gallup introduced Mr. Boyd Clark, one of the property owners, Mr. Dave Emri and Mr. Greg Lowther, owner representatives, and Dee Sudduth, Senior Biologist from the Department of Fish and Game Eastern Sierra Inland Deserts Region.

Mr. Chrisman asked if there were any questions or concerns. There were none.

Staff recommended that the Board approve acquisition of San Jacinto Wildlife Area, Expansions 15 through 19, as proposed; allocate \$15,100,000.00 from the Safe Neighborhood Parks, Clean Water, Clean Air and Coastal Protection Bond Act (Prop 12), Sec. 5096.350 (a) (3) T&E, for the purchase price and associated costs; authorize staff to enter into appropriate agreements as necessary to accomplish this project; and authorize staff and the Department of Fish and Game to proceed substantially as planned.

It was moved by Mr. Robert Hight that the Board approve acquisition of San Jacinto Wildlife Area, Expansions 15 through 19, as proposed; allocate \$15,100,000.00 from the Safe Neighborhood Parks, Clean Water, Clean Air and Coastal Protection Bond Act (Prop 12), Sec. 5096.350 (a) (3) T&E, for the purchase price and associated costs; authorize staff to enter into appropriate agreements as necessary to accomplish this project; and authorize staff and the Department of Fish and Game to proceed substantially as planned.

Motion carried.

5. PROPOSED CONSENT CALENDAR (ITEMS 6 - 25)

Staff recommended that the Board approve Consent Calendar items 6 through 25.

It was moved by Mr. Robert Hight that the Board approve Consent Calendar items 6 through 25, as proposed in the individual agenda explanations, including funding as noted therein.

Motion carried.

*6. CORRECTION OF MINUTES - MAY 18, 2001 MEETING

At the May 18, 2001 meeting, the Wildlife Conservation Board approved the acquisition of Expansions 15 through 19 for the San Jacinto Wildlife Area. The minutes for the May 18, 2001 meeting incorrectly identified Expansions 16 through 19 and reference to those expansions should be deleted from pages 56 and 57 of the minutes and the corrected minutes should read as follows. The total number of expansions, dollar amount and acres have not changed.

Expansion 16 \$9,227,885.00

This proposal is to consider the acquisition of 613± acres of land lying adjacent to the San Jacinto WLA on the north. The property has no improvements. The approved appraised value is \$9,194,550.00 and the owner has agreed to sell to the state for that amount. An additional \$33,335.00 will be needed for appraisal, escrow, title insurance and Department of General Services' review costs.

Expansion 17 \$589,400.00

This proposal is to consider the acquisition of 39± acres of land lying adjacent to the San Jacinto WLA on the north. The property has no improvements. The approved appraised value is \$581,400.00 and the owner has agreed to sell to the state for that amount. An additional \$8,000.00 will be needed for appraisal, escrow, title insurance and Department of General Services' review costs.

Expansion 18 \$2,440,250.00

This proposal is to consider the acquisition of 162± acres of land lying adjacent to the San Jacinto WLA on the north. The property has no improvements. The approved appraised value is \$2,426,250.00 and the owner has agreed to sell to the state for that amount. An additional \$14,000.00 will be needed for appraisal, escrow, title insurance and Department of General Services' review costs.

Expansion 19 \$1,907,100.00

This proposal is to consider the acquisition of 126 ± acres of land lying adjacent to the San Jacinto WLA on the north. The property has no improvements. The approved appraised value is \$1,895,100.00 and the owner has agreed to sell to the state for that amount. An additional \$12,000.00 will be needed for appraisal, escrow, title insurance and Department of General Services' review costs.

As one of the consent items heard at the beginning of the meeting, it was moved by Mr. Robert Hight to correct the minutes of the May 18, 2001 Wildlife Conservation Board Meeting pertaining to Item 31, San Jacinto Wildlife Area, Expansions 15 through 19. The minutes for the May 18, 2001 meeting incorrectly identified Expansions 16 through 19 and reference to those expansions should be deleted from pages 56 and 57 of the minutes and the corrected minutes should read as described above.

Motion carried.

***7. APPROVAL OF MINUTES - AUGUST 30 AND NOVEMBER 28, 2001 MEETINGS**

Approval of the minutes of the August 30 and November 28, 2001 Wildlife Conservation Board meetings was recommended.

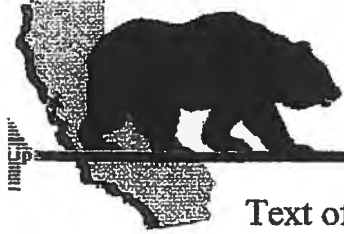
As one of the consent items heard at the beginning of the meeting, it was moved by Mr. Robert Hight that the minutes of the August 30 and November 28, 2001 meetings be approved as written.

Motion carried.

***8. RECOVERY OF FUNDS**

The following projects previously authorized by the Board are now completed, and some have balances of funds that can be recovered and returned to their respective funds. It was recommended that the following totals be recovered and that the projects be closed.

\$43,613.31 to the General Fund
 \$29,810.00 to the Safe Neighborhood Parks, Clean Water, Clean Air
 and Coastal Protection Bond Fund
 \$869,314.41 to the Habitat Conservation Fund
 \$0.00 to the Wildlife Restoration Fund
 \$0.00 to the Harbors and Watercraft Revolving Fund
 \$0.00 to the Other



Safe Neighborhood Parks, Clean Water, Clean Air, and Coastal Protection Bond Act of 2000. (The Villaraigosa-Keeley Act)

Text of Proposition 12

This law proposed by Assembly Bill 18 of the 1999-2000 Regular Session (Chapter 461, Statutes of 1999) and Senate Bill 1147 of the 1999-2000 Regular Session (Chapter 638, Statutes of 1999) is submitted to the people in accordance with the provisions of Article XVI of the California Constitution.

This proposed law adds sections to the Public Resources Code; therefore, new provisions proposed to be added are printed in *italic type* to indicate that they are new.

PROPOSED LAW

SECTION 1. Chapter 1.692 (commencing with Section 5096.300) is added to Division 5 of the Public Resources Code, to read:

Chapter 1.692. Safe Neighborhood Parks, Clean Water, Clean Air, and Coastal Protection Bond Act of 2000 (The Villaraigosa-Keeley Act)

Article 1. General Provisions

5096.300. This chapter shall be known, and may be cited, as the Safe Neighborhood Parks, Clean Water, Clean Air, and Coastal Protection Bond Act of 2000 (the Villaraigosa-Keeley Act).

5096.301. Responding to the recreational and open-space needs of a growing population and expanding urban communities, this act will revive state stewardship of natural resources by investing in neighborhood parks and state parks, clean water protection, and coastal beaches and scenic areas.

5096.302. The Legislature finds and declares all of the following:

(a) Historically, California's local and neighborhood parks often serve as the recreational, social, and cultural centers for cities and communities, providing venues for youth enrichment, senior activities, and family recreation.

(b) Neighborhood and state parks provide safe places to play in the urban neighborhoods, splendid scenic landscapes, exceptional experiences, and world-recognized recreational opportunities, and in so doing, are vital to California's quality of life and economy.

the renovation of a state historical point of interest near the intersection of Jack Tone Road and State Highway 88.

(e) For the purposes of this article, the Sierra Nevada-Cascade Mountain Region includes those portions of Fresno County, Kern County, Stanislaus County, and Tulare County, and counties with populations of less than 250,000 as of the 1990 United States Census, that are located in the mountains, the foothills, and the area adjacent to the geologic formations of the Sierra Nevada and Cascade mountain ranges.

Article 4.7. Murray-Hayden Urban Parks and Youth

Service Program

5096.348. (a) Notwithstanding any other provision of this chapter, funds allocated pursuant to subdivision (j) of Section 5096.310 shall be allocated, upon appropriation by the Legislature, for parks, park facilities, or environmental youth service centers that are within the immediate proximity of a neighborhood that has been identified by the department as having a critical lack of park or open-space lands or deteriorated park facilities, that are in an area of significant poverty and unemployment, and that have a shortage of services for youth. Priority shall be given to capital projects that employ neighborhood residents and at-risk youth.

(b) (1) Fifty percent of the funds allocated pursuant to subdivision (j) of Section 5096.310 shall be made available on a competitive basis to heavily urbanized counties and cities or to nonprofit organizations or park districts in those counties and cities, in compliance with subdivision (a) and the matching requirements of the Roberti-Z'berg-Harris Urban Open-Space and Recreation Program Act (Chapter 3.2 (commencing with Section 5620).

(2) No more than 10 percent of the amounts made available pursuant to paragraph (1) shall be allocated to fund grants pursuant to Chapter 2.5 (commencing with Section 990) of Part 1 of Division 2 of the Welfare and Institutions Code, at least 50 percent of which shall be granted to youth service organizations eligible for tax-exempt status pursuant to Section 501(c)(3) of the Internal Revenue Code that are chartered by a national youth service organization.

Article 5. Wildlife Program

5096.350. (a) Funds appropriated pursuant to subdivision (m) of Section 5096.310 shall be available for expenditure by the Wildlife Conservation Board for the acquisition, development, rehabilitation, restoration, and protection of real property benefiting fish and wildlife, for the acquisition, restoration, or protection of habitat that promotes recovery of threatened, endangered, or fully protected species, maintains the genetic integrity of wildlife populations, and serves as corridors linking otherwise separate habitat to prevent habitat fragmentation, and for grants and related state administrative costs pursuant to the Wildlife Conservation Law of 1947 (Chapter 4 (commencing with Section 1300) of Division 2 of the Fish and Game Code), for the following purposes:

(1) Ten million dollars (\$10,000,000) for the acquisition or restoration of wetland habitat, as follows:

(A) Five million dollars (\$5,000,000) for the acquisition, preservation, restoration, and establishment, or any combination thereof, of habitat for waterfowl or other wetlands-associated wildlife, as provided for in the Central Valley Habitat Joint Venture Component of the North American Waterfowl Management Plan and the Inland Wetlands Conservation Program, notwithstanding Section 711 of the Fish and Game Code. Preference shall be given to projects involving the acquisition of perpetual conservation easements; habitat development projects on lands which will be managed primarily as waterfowl habitat in perpetuity; waterfowl habitat development projects on agricultural lands; the reduction of fishery impacts resulting from supply diversions that have a direct benefit to wetlands and waterfowl habitat; or programs to establish permanent buffer areas, including, but not limited to, agricultural lands that are necessary to preserve the acreage and habitat values of existing wetlands.

(B) Five million dollars (\$5,000,000) for the acquisition, development, restoration, and protection of wetlands and adjacent lands, or any combination thereof, located outside the Sacramento-San Joaquin Valley.

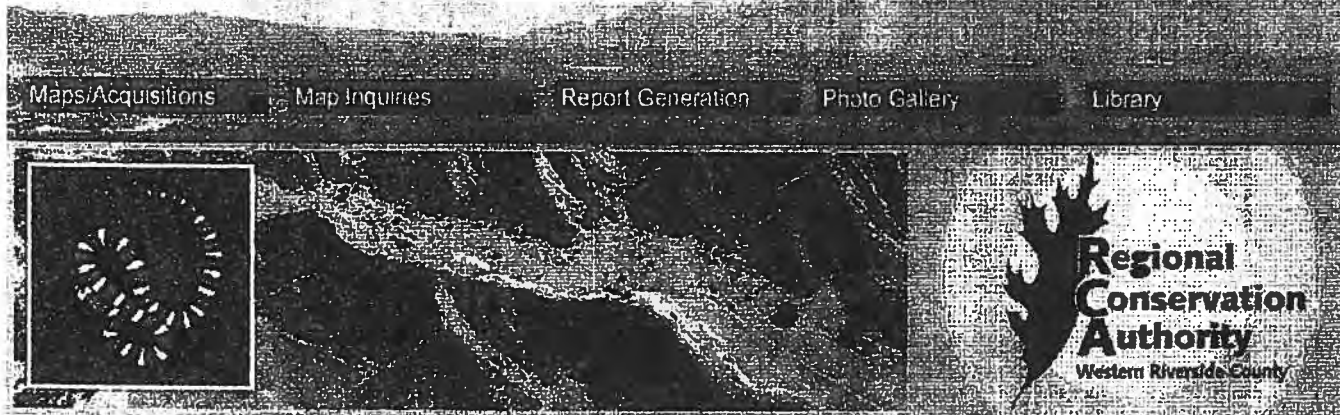
(2) Ten million dollars (\$10,000,000) for the development, acquisition from a willing seller, or restoration of riparian habitat and watershed conservation programs.

(3) Forty-five million dollars (\$45,000,000), upon appropriation by the Legislature, for the restoration, or acquisition from a willing seller, of habitat for threatened and endangered species or for the purpose of promoting the recovery of those species. Five million dollars (\$5,000,000) of that amount shall be for the acquisition of property along the central coast containing coastal terrace prairie, federally listed spineflower, state listed San Francisco popcorn flower, and candidates for federal listing including ohlone tiger beetle and opler's longhorned moth. No funds may be expended pursuant to this paragraph for the acquisition of real property or other actions taken pursuant to Chapter 10 (commencing with Section 2800) of the Fish and Game Code.

(4) Thirteen million dollars (\$13,000,000) for the acquisition from a willing seller, or restoration of forest lands, including, but not limited to, ancient redwoods and oak woodlands. Not more than five million dollars (\$5,000,000) of this amount shall be expended on the federal Legacy Forest Program (16 U.S.C. Sec. 2103) to meet federal matching requirements and not less than five million dollars (\$5,000,000) of this amount shall be allocated for the preservation of oak woodlands. Not more than five million dollars (\$5,000,000) of this amount shall be expended on the federal Legacy Forest Program (16 U.S.C. Sec. 2103) to meet federal matching requirements and not less than five million dollars (\$5,000,000) of this amount shall be allocated for the preservation of oak woodlands.

(5) Eighty-two million five hundred thousand dollars (\$82,500,000), upon appropriation by the Legislature, to match funds contributed by federal or local agencies or nonprofit organizations for the acquisition, restoration, or protection of habitat or habitat corridors that promote the recovery of threatened, endangered, or fully protected species. Projects funded pursuant to this paragraph may include restoration projects authorized pursuant to Public Law 105-372, the Salton Sea Reclamation Act of 1998. The board shall require matching contributions of funds, real property, or other resources from other public agencies, private parties, or nonprofit organizations, at a level designed to obtain the maximum conservation benefits to wildlife and wildlife habitat. No funds may be expended pursuant to this paragraph for the acquisition of

ATTACHMENT #3



[About RCA](#)
 [Habitat Conservation](#)
 [Programs](#)
 [Partners](#)

- Founding Documents
- Annual Reports
- Members
- Board Members
- Calendar
- Agendas/Reports
- Executive Committee
- Calendar
- Agendas/Reports
- Staff
- FAQs

About RCA

The Western Riverside County Regional Conservation Authority (RCA) was created in 2004 to implement one of America's most ambitious environmental efforts, the Multiple Species Habitat Conservation Plan (MSHCP), protecting 146 native species of plants and animals and preserving a half million acres of their habitat.

The MSHCP was one of the results of a comprehensive effort to shape Riverside County's future. Rapid growth in the 1980s and 1990s, the challenges of traffic congestion, and the listing of species as threatened or endangered by development, led to a vision for a unified plan which would guide development and provide for economic growth while protecting the environment and planning for future transportation needs. In 1999, the Riverside County Integrated Project was launched to realize that vision.

The MSHCP was adopted by Riverside County and the cities of Banning, Beaumont, Callimesa, Canyon Lake, Corona, Hemet, Lake Elsinore, Menifee, Moreno Valley, Murrieta, Norco, Perris, Riverside, San Jacinto, Temecula and Wildomar. In addition, Riverside County Flood Control and Water Conservation District, Riverside County Parks and Open Space District, Riverside County Waste Management Department, Riverside County Transportation Commission (RCTC), California Department of Transportation (Caltrans), and the California Department of Parks and Recreation also participated.

This effort to set aside habitat and protect species allows the development and transportation infrastructure necessary for a healthy economy to move ahead without sacrificing our region's environment and quality of life.

Of the 1.26 million acres covered by the MSHCP, 500,000 acres, or 40% is designated for preservation. Of that half million acres, 347,000 acres or 69% is already conserved as public or quasi-public land. The acquisition of the remaining land is one of the most important activities of RCA. To date, more than 27% of the remaining goal of 153,000 acres has been acquired.

While reserve acquisition is RCA's core activity, RCA must also monitor development or "habitat-loss" within the MSHCP, review applications for infrastructure or development projects by public agencies and other regional entities like electric and gas utilities, monitor the species being protected, and manage the lands it acquires. Every year, RCA issues an Annual Report to update its members and the public on its progress.

Western Riverside County
 Regional Conservation Authority
 Riverside Centre Building
 3403 10th Street, Suite 320
 Riverside, CA 92501

Contact Numbers:
 Phone (951) 955-6700
 Fax (951) 955-8873

Business Hours:
 Monday to Thursday 7:00am to 5:30pm
 Closed Friday

ATTACHMENT #4

Page 1 of 1



About RCA

Habitat Conservation

Programs

Partners

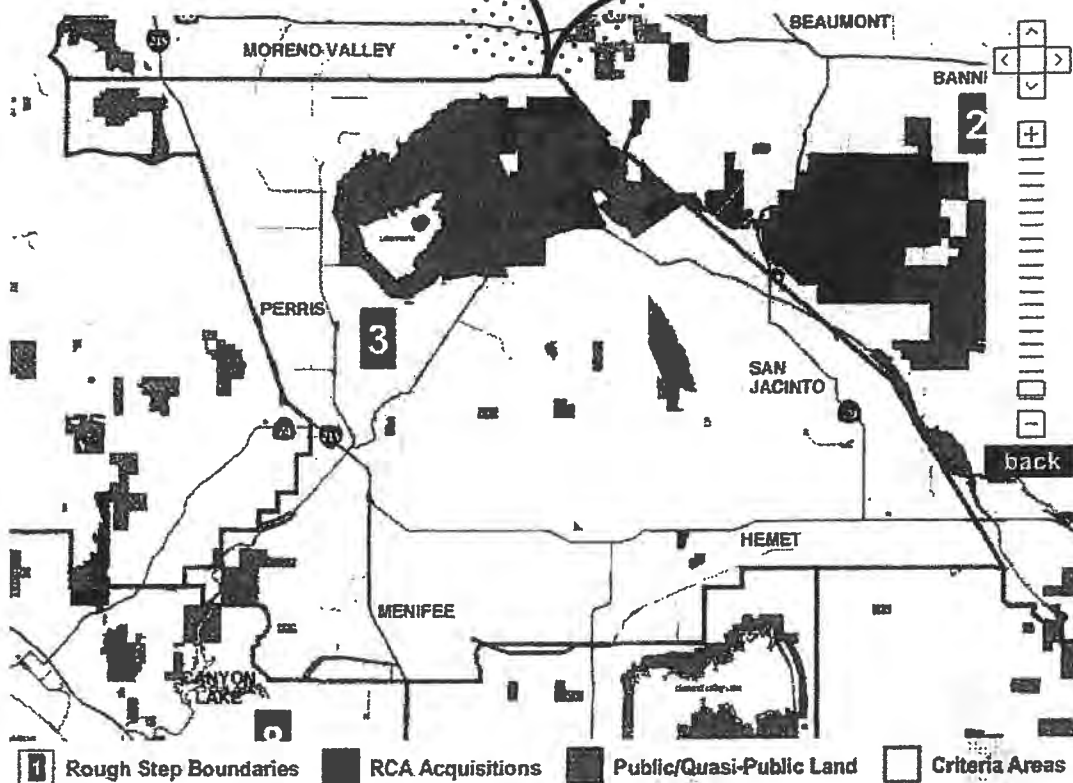
Interactive Map

Recent Acquisitions

Map Inquiries

Report Generation

Interactive Map



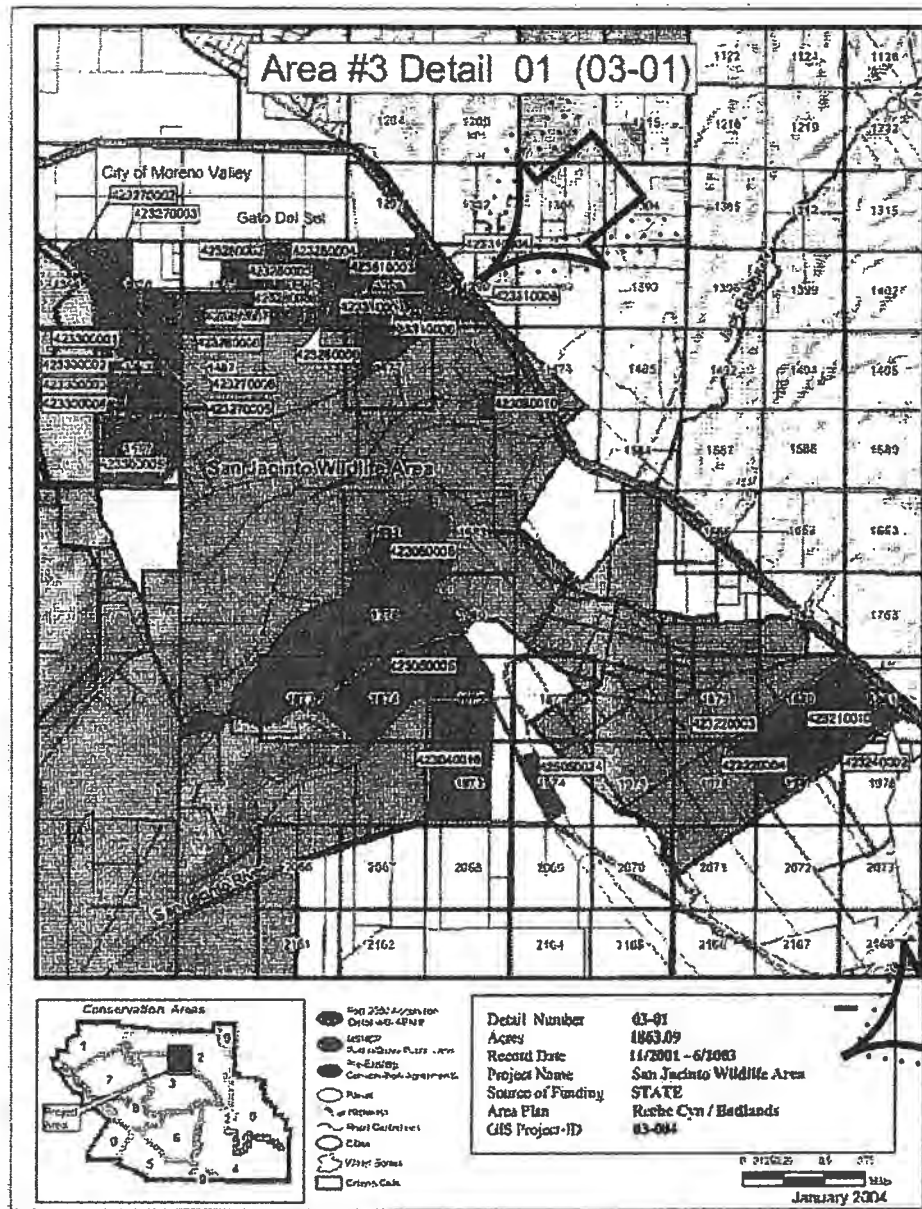
Click any Rough Step area to zoom in, then mouse over and click any dark green acquisition area for more details.

When zoomed in, click and drag map to view adjacent sections.

Western Riverside County
Regional Conservation Authority
Riverside Centre Building
3403 1st Street Suite 320
Riverside CA 92501

Contact Numbers:
Phone (951) 955-9700
Fax (951) 855-8873

Business Hours:
Monday to Thursday 7:00am to 5:20pm
Closed Friday



[Click here for PDF version](#)

Western Riverside County
Regional Conservation Authority
Riverside Centre Building
3403 10th Street, Suite 320
Riverside, CA 92501

Contact Numbers:
Phone (951) 955-9700
Fax (961) 955-8873

Business Hours:
Monday to Thursday 7:00am to 5:30pm
Closed Friday

1.a

Conservation Authority
Western Riverside County

Packet Pg. 571

Board of Directors

Chairman
Marion Ashley
County of Riverside

Vice Chairman
Scott Miller
City of San Jacinto

Kevin Bash
City of Norco

Ben Benoit
City of Wildomar

John Benoit
County of Riverside

Roger Berg
City of Beaumont

Tim Brown
City of Canyon Lake

Maryann Edwards
City of Temecula

Debbie Franklin
City of Banning

Thomas Fuhrman
City of Menifee

Mike Gardner
City of Riverside

Jim Hyatt
City of Calimesa

Kevin Jeffries
County of Riverside

Natasha Johnson
City of Lake Elsinore

Verne Lauritzen
City of Jurupa Valley

Shellie Milne
City of Hemet

Jesse Molina
City of Moreno Valley

Eugene Montanez
City of Corona

Harry Ramos
City of Murrieta

Adam Rush
City of Eastvale

Jeff Stone
County of Riverside

John Tavaglione
County of Riverside

Mark Yarbrough
City of Perris

Executive Staff

Charles Landry
Executive Director

March 19, 2013

Tom Paulek, Certified Wildlife Biologist
P.O. Box 4036
Idyllwild, CA 92549

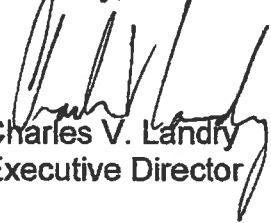
RE: PUBLIC RECORDS ACT REQUEST

Dear Mr. Paulek:

Thank you and Ms. Nash for taking the time to meet with us to clarify your Public Records Act requests dated March 5 and 7, 2013. After meeting with you, we understand that you are asking for information from the Western Riverside County Regional Conservation Authority regarding land conserved within MSHCP Criteria Cells 1364, 1370, 1377, 1386, 1389, 1390, 1482, 1483, 1477, and 1577 (Referenced on the RCA website as "Acquisition 03-01"). These lands were acquired or conserved under easement by the State of California and are part of the Western Riverside County Multiple Species Habitat Conservation Plan Conservation Area and counted toward Additional Reserve Lands.

Again, thank you for taking the time to meet with us. If you have any questions or need additional information, please feel free to call me at (951) 955-9700.

Sincerely,


Charles V. Landry
Executive Director

3403 10th Street, Suite 320
Riverside, California 92501

P.O. Box 1667
Riverside, California 92502-1667

Phone: (951) 955-9700
Fax: (951) 955-8873

ATTACHMENT #7

Page 1 of 3

EXHIBIT A

**CALIFORNIA ENDANGERED SPECIES ACT
MANAGEMENT AUTHORIZATION
FOR IMPLEMENTATION OF
STEPHENS' KANGAROO RAT HABITAT CONSERVATION PLAN
IN
WESTERN RIVERSIDE COUNTY
RIVERSIDE COUNTY HABITAT CONSERVATION AGENCY
(Tracking No. 2081-1996-17-5)**

SUMMARY

The Riverside County Habitat Conservation Agency and its member agencies (the County of Riverside and the cities of Corona, Hemet, Lake Elsinore, Moreno Valley, Murrieta, Perris, Riverside and Temecula) (collectively referred to as 'the RCHCA') has requested a Management Authorization ('MA') pursuant to California Fish and Game Code Sections 2081 and 2835 for the Stephens' kangaroo rat (*Dipodomys stephensi*), a species listed as 'threatened' under the California Endangered Species Act, Fish and Game Code §2050, et. seq.

The RCHCA proposes to manage the Stephens' kangaroo rat in accordance with "The Habitat Conservation Plan for the Stephens' Kangaroo Rat in Western Riverside County" ('The SKRHCP'), which is made binding on the RCHCA by the Implementation Agreement by and among the Department of Fish and Game ('Department'), the United States Fish and Wildlife Service and RCHCA, dated May 6, 1996 ('the IA'). The SKRHCP addresses the potential impacts of development, natural habitat loss and species endangerment and creates a plan to mitigate impacts to the Stephens' kangaroo rat and its habitat due directly or indirectly to future development of both private and public lands within the SKRHCP area ('the Plan Area'). The 533,954 acre Plan Area provides for the establishment of a regional system of seven core area reserves for conservation of the Stephens' kangaroo rat and the ecosystem upon which it depends. The core reserves include 41,221 acres of habitat. Approximately 2,440 acres of additional occupied, core reserve lands will be permanently conserved through future land sale and exchange provisions. Portions of the Plan Area are potential habitat for, or are occupied by, the Stephens' kangaroo rat. The 'take' of individuals of the Stephens' kangaroo rat is prohibited unless authorized by the Department pursuant to Fish and Game Code Sections 2081 or 2835.

The Department has determined that the preservation, conveyance, acquisition, and long-term management of habitat for the Stephens' kangaroo rat under the SKRHCP will offset the impacts contemplated by the SKRHCP and will result in preserving core reserve areas sufficient to achieve sustainable populations of the Stephens' kangaroo rat. The Department has determined further that the impacts contemplated and offset in the SKRHCP will not result in jeopardy to the continued existence of the Stephens' kangaroo rat and that by securing the acquisition of habitat lands, the SKRHCP may protect the species from further degradation. The SKRHCP, as implemented by the IA and this MA, therefore meets the requirements of California Fish and Game Code Sections 2081 and 2835. Pursuant to Sections 2081 and 2835, the Department authorizes RCHCA to 'take' the Stephens' kangaroo rat, subject to the terms and conditions of this MA and the IA.

PROJECT LOCATION

The Plan Area is located in western Riverside County, generally defined as territory west of the San Jacinto Mountains. It extends from the San Bernardino County line to the border with San Diego County. The Cleveland National Forest flanks the western boundary, and the San Bernardino National Forest roughly defines most of the eastern boundary of the Plan Area. The total area of the SKRHCP consists of 533,954 acres, including the reserve areas which comprise 41,221 acres. The SKRHCP encompasses both privately owned and publicly owned land.

PROJECT DESCRIPTION

The RCHCA and member agencies desire to: (1) plan, approve and facilitate public and private development within the Plan Area; and (2) minimize and mitigate the impacts to Stephens' kangaroo rat and its habitat by providing for the substantial conservation of such species and their habitat in the core reserve areas. The future development activities contemplated by the SKRHCP and IA include: (1) land disturbances in the Plan Area within the jurisdiction of the RCHCA member agencies; (2) bona fide ongoing agricultural operations; (3) fire prevention and emergency response activities; (4) operation and maintenance of existing infrastructure facilities; (5) construction of public facilities and; (6) case-by-case approval of projects outside the Plan Area. These activities are referred to in this MA as 'the Project'.

HABITAT DESCRIPTION

Three major vegetation categories account for more than 94% (252,161 acres) of the natural lands within the Plan Area. Sage scrub covers 38%, followed by grasslands (31%) and chaparral (25%). Alkali playa and the total of all other vegetation types account for 3% respectively.

PROJECT IMPACTS

Over a 30-year period of appropriate Project build-out, the SKRHCP will likely result in permanent loss of Stephens' kangaroo rat occupied habitat. The type of occupied habitat subject to most of the loss will involve transitional areas where grasslands border coastal sage scrub, where sage scrub and grasslands are intermixed, areas of sparse sage scrub, and where native habitat has been removed or disturbed by agriculture and other open spaces.

SPECIES OF CONCERN

Based on recorded observations and data compiled for the Plan Area, Stephens' kangaroo rat are known to occupy approximately 30,000 acres within the SKRHCP area. The life history information and specific status for the Stephens' kangaroo rat is provided in the SKRHCP.

EFFECTS ON SPECIES OF CONCERN

The Stephens' kangaroo rat will be subject to direct and indirect adverse impacts and take resulting from the Project. The areas where primary impacts to the species may occur are identified in the SKRHCP.

HABITAT MANAGEMENT LANDS

Preservation of Lands

Under the SKRHCP, provisions are made for the establishment of seven core reserve areas comprising a total of 41,221 acres, of which 12,460 are occupied Stephens' kangaroo rat habitat. Provisions in the SKRHCP and IA provide for an additional 2,440 (approximately) acres of occupied habitat for inclusion in the core reserves. In association with the Project, the RCHCA must preserve, acquire, and convey the conserved habitat and offsite conservation lands as detailed in the IA. The preservation and management of the remaining 15,000 acres of occupied habitat for Stephens' kangaroo rat in the core reserve land, as detailed in the SKRHCP, will provide adequate habitat for the preservation and recovery of the Stephens' kangaroo rat.

SPECIFIC CONDITIONS REQUIRED

Conservation Program and Mitigation Measures

1. All conservation, mitigation, monitoring, and impact avoidance measures, as detailed in the SKRHCP and IA, shall be implemented by the RCHCA, as specified in the IA.
2. The term of this MA shall commence on the date that the IA is executed by the last of the parties thereto and shall terminate 30 years from that date. This period is subject to earlier termination pursuant to provisions of the IA.

DISCLAIMER

3. Upon timely satisfaction of the conditions of this MA and the IA, the RCHCA and member agencies will adequately mitigate impacts to the Stephens' kangaroo rat and will achieve compliance with the California Endangered Species Act, Fish and Game Code §2050, et seq. ("CESA") with regard to the Project. The RCHCA understands and recognizes that it has pendent responsibility for compliance with any and all other applicable laws and regulations.

4. Following execution of the SKRHCP and the Department's issuance of this MA, the RCHCA's decision whether or not to proceed with the Project shall be voluntary, and subject to all other pertinent law and regulations. As such, the RCHCA, its member agencies, the State of California and the Department shall each retain whatever liability each such entity would possess and for which they would otherwise be liable for past, present or future acts or failures to act without reference to this Management Authorization, and shall hold each other free and harmless from any violation of law, lien, suit or claim of injury or damage arising out of or connected with such actions or failures to act, including any joint and several obligation, judgment or other.

DEPARTMENT FINDINGS

Species of Concern

The Department has found and determined that the SKRHCP, as implemented by the IA and this MA, meet the requirements for purposes of California Fish and Game Code Sections 2081. In this regard, the Department has found and determined that if the terms and conditions of this MA are adhered to, the taking of Stephens' kangaroo rat, including the modification of its habitat, as contemplated by the SKRHCP, the IA, and this MA, will not result in jeopardy to its continued existence and may, through the preservation, acquisition, and conveyance of the core reserve lands, protect the species from further degradation. The SKRHCP and the IA, to the extent practicable, minimize and mitigate the impacts of the taking of the Stephens' kangaroo rat including, without limitation, the modification of its habitat.

Other Species

In the event that a species not enumerated in this MA is listed as endangered or threatened pursuant to Fish and Game Code Section 2070, or is a candidate for such listing pursuant to Fish and Game Code Section 2074.2, the Department shall consider, and if appropriate, expeditiously act to negotiate and execute, a Memorandum of Understanding with the RCHCA providing for the management of the species in order that the Project may proceed in accordance with CESA.

In determining whether any further mitigation measures are required to amend this MA to include an additional species, the Department shall: (1) take into consideration that the RCHCA has minimized and mitigated the impacts to the Stephens' kangaroo rat within the Plan Area to the maximum extent practicable; and, (2) cooperate with the RCHCA in good faith to minimize, consistent with CESA, any impediment to the Project's implementation resulting from the listing of a species not enumerated in this MA.

CALIFORNIA DEPARTMENT OF FISH AND GAME

BY *Gregory B. Salinger*

TITLE *Director*

DATE *May 6, 1996*

Grace Espino-Salcedo

Subject: RE: Message from WLC Link

From: Tom Rehard [<mailto:trehard@racewayford.com>]

Sent: Tuesday, June 09, 2015 10:21 AM

To: Jane Halstead, CMC; Ewa Lopez, CMC; Kathy Gross

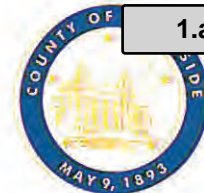
Subject: Message from WLC Link

How is our air quality out here?what will the thousands of diesel trucks do to the air quality alone?

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)



**COUNTY OF RIVERSIDE
TRANSPORTATION AND LAND MANAGEMENT AGENCY**



1.a

Patricia Romo
Assistant Director
Transportation Department

Steven A. Weiss
Planning Director
Planning Department

Mike Lara
Building and Safety Official
Building and Safety Department

Greg Flannery
Code Enforcement Official
Code Enforcement Department

June 8, 2015

City of Moreno Valley
Planning Commissioners
Attn: Rick Sandzimier, Planning Official
14177 Frederick Street
Moreno Valley CA 92551

RE: World Logistics Center Project and FEIR

Dear Commissioners and Mr. Sandzimier:

The County of Riverside Transportation and Land Management Agency (TLMA) appreciates the opportunity to submit our comments regarding the project and the Final Environmental Impact Report (FEIR).

Our concerns are primarily focused on the expected traffic impacts of the project, particularly impacts identified on Gilman Springs Road, which is under shared County-City jurisdiction from SR 60 to about a mile south of Alessandro Blvd. and then within County jurisdiction south-easterly to Lambs Canyon (S.R. 79)/Sanderson Avenue. We are also concerned about the project's regional impacts on SR 60. The project traffic study estimates that it will generate 68,721 total vehicle trips, of which 14,007 are a mix of trucks. When converting to Passenger Car Equivalents (PCE), as the EIR does in conformance with standard practice, this results in adding the equivalent of 89,975 surface street trips and 75,724 freeway trips. (EIR 4.15-47)

GLIMAN SPRINGS ROAD

Gilman Springs Road in its current configuration is a two-lane rural road that extends from SR 60 to Lambs Canyon/Sanderson Avenue (and then further south to State Street). It provides the primary direct connection between the City of Moreno Valley, SR 60, and the San Jacinto Valley. It is a critical regional connector that, according to the EIR, carries approximately 14,400 vehicle trips per day at its peak location.

The County has made significant improvements to this roadway over the years to enhance operations and safety, such as curve realignments, a passing lane, repaving, enhanced pavement markings, and use of radar speed feedback signs. However, the road is operating at its practical capacity as a two-lane road, and adding significant traffic volumes to it as this

4080 Lemon Street, 14th Floor • Riverside, California 92501 • (951) 955-6838
P. O. Box 1605 • Riverside, California 92502-1605 • FAX (951) 955-5177

project would do, without further significant improvements including road widening, would be highly detrimental to traffic safety and mobility. We are particularly concerned about the addition of a significant number of trucks anticipated with this project given its rural two-lane character, without further improvements being done in conjunction.

Our analysis of the EIR data indicates that the project will add an estimated 6,019 autos and 420 trucks daily to Gilman Springs Road. The EIR identifies that the project would have a significant cumulative impact on Gilman Springs Road from Alessandro Blvd. to Bridge St., and on Gilman Springs Road between SR 60 and Alessandro Blvd. These impacts occur under Phase 1 of the project based on existing conditions (EIR 4.15-103), at year 2022 (EIR 4.15-153), and at project build-out under cumulative 2035 conditions. We note that the EIR does not address the segment of Gilman Springs Road from Bridge Street south-easterly to Lambs Canyon/Sanderson. Although some project traffic can be expected to use Bridge Street to access the Ramona Expressway as a direct connection, it is still expected that a significant amount would continue on to the San Jacinto Valley, and some even to the Pass area through Lambs Canyon to the north, by using Gilman Springs Road down to Lambs Canyon /Sanderson Avenue.

We appreciate that the EIR identifies that *"Gilman Springs Road from Alessandro Blvd. to Bridge St. (S-16) is already deficient and needs to be widened to four lanes and will need to be widened to six lanes in the future. In accordance with General Plan Policy 5.5.7, the City will require the developer to widen Gilman Springs Road to provide three southbound lanes and one northbound lane along the frontage of the WLC project. The developer will receive a TUMF credit for the portion of the cost of this improvement that exceeds the project's fair share contribution."* (EIR 4.15-194)

However, we are highly concerned by the statements that follow, which are also reflected in the mitigation measures: *"However, because Gilman Springs Road is partially a Riverside County facility and is thus partially outside the jurisdiction of the City of Moreno Valley, the City cannot ensure that the identified improvements would be made outside of its jurisdiction. Moreover, there are right-of-way constraints involving sensitive environmental areas that may limit widening to four lanes between Alessandro Blvd. and Bridge St., or even preclude any widening at all. The project's impacts in the Existing Plus Project scenario on Gilman Springs Road must therefore be considered significant and unavoidable. The City will work with Riverside County to find funding for improvements that would provide an acceptable LOS on this road to the extent feasible."*

We also note that the EIR identifies that Gilman Springs Road will be widened from 2 to 6 lanes by 2022 south of Alessandro, within County jurisdiction (EIR Fig 4.15.5). We note that the County does not have any active projects on Gilman Springs Road to accomplish this as a feasible goal given the state of our regional and local funding programs. Moreover, since much of the land adjacent to Gilman Springs Road is identified to be set aside for open space, it is not feasible to anticipate that other future development projects would cause major widening improvements to be done within the foreseeable future.

Our position is that improving Gilman Springs Road to a minimum of 4 lanes from SR 60 to Lambs Canyon/Sanderson Avenue is critically important for safety and mobility, and to mitigate direct project impacts. Improvements will be needed at the Gilman Springs Road/SR 60 Interchange consistent with the road widening. Rather than 3 southbound lanes and 1 northbound lane as stated in the EIR, the road needs to be widened to 4 lanes with 2 through lanes and adequate shoulders in each direction. This requirement needs to be tied to the issuance of building permits for the project to assure that project traffic does not degrade conditions on the road.

As the responsible agency for the segments of Gilman Springs Road not in City jurisdiction, County TLMA is willing to work with the applicant and the City of Moreno Valley to provide that the necessary improvements are constructed. This project is expected to generate a very substantial amount of Transportation Uniform Mitigation Fees (TUMF) given its vast size, and Gilman Springs Road is a TUMF eligible facility. It would be a benefit to all users of the road, including the project traffic, to directly construct improvements on Gilman Springs Road for which the project would receive appropriate TUMF fee credit, rather than merely the payment of TUMF fees as has been included in the mitigation measures.

STATE ROUTE 60

The EIR identifies that, for truck traffic, 82% would be to/from the west via one or more freeways (EIR 4.15-49), which would primarily be SR 60, and that 44% of daily passenger autos would use SR 60. Applying these percentages to the overall trip generation, we estimate that the project would add the equivalent (PCE) of 41,302 passenger trips to SR 60 to the west, and 6,815 trips on SR 60 to the east. Although the traffic study states that, because of a counter-peak hour traffic pattern (eastbound in the am and westbound in the pm) the project will be served by some of the underutilized peak hour capacity of SR 60, a more rigorous analysis would show that given the sheer volume of project traffic generation there would be project impacts on SR 60.

Unlike other freeways in Western Riverside County, mainline improvements to SR 60 between I-215 and Gilman Springs Road are not, to our knowledge, included in the Measure "A" expenditure plan. Given the vast scale of this project, it is important that it serve as a catalyst for Caltrans, the Riverside County Transportation Commission (RCTC), affected Cities and the County to come together in a discussion of how to address this need and jointly develop a plan. We do recognize that funding of freeway improvements needs to be to a great degree a Federal and State responsibility. However, as we have seen on other freeway projects, our regional and local agencies, under the leadership of RCTC, have had to play an active role through Measure A and other means to secure complimentary funding for freeway improvements.

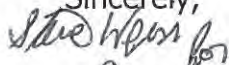
REQUESTED CONDITIONS OF APPROVAL

We therefore urge the Planning Commission to incorporate the following measures as Conditions of Approval for the project:

1. Require that the phased issuance of project building permits be tied to the construction of improvements on Gilman Springs Road to 4-lanes, at a minimum, between SR 60 and Lambs Canyon/Sanderson Avenue, and of improvements to the SR 60/Gilman Springs Road interchange. This would be done in accordance with a phasing improvement plan jointly developed by the applicant, the City, and the County of Riverside.
2. Require that a regional improvement plan be prepared to address needed improvements to SR 60 between I-215 and Gilman Springs Road that is tied to Phase 2 of the project proceeding. This would allow some reasonable time for affected agencies to work together and develop an overall funding strategy. The improvement plan would include a mix of Federal, State, regional, and other potential funds, including an appropriate fair-share of development contributions from projects in proximity to SR 60 that directly and significantly impact the segment between I-215 and Gilman Springs Road.
3. The County and Caltrans are working on the design of a traffic signal/roadway safety improvement project at the Gilman Springs/Lambs Canyon/Sanderson Avenue ramps. Require a fair-share contribution, via an agreement between the applicant, City, County, and Caltrans, towards construction of these facilities to mitigate project impacts.
4. Require a fair-share contribution, via an agreement between the applicant, City, and County, to mitigate project impacts at the intersection of San Timoteo Road/Live Oak Canyon (EIR 4.15-237).
5. Require a fair-share contribution, via an agreement between the applicant, City, and County, to mitigate project impacts at the intersection of Bridge Street/Ramona Expressway (EIR 4.15-3). Although this intersection may potentially have a different configuration or be grade separated in the future as the EIR states, the project will create significant impacts that could be alleviated through an interim improvement project if it proceeds ahead of other future improvements.

We are available to meet with the applicant and City staff to discuss our comments, and to work towards the implementation of the improvements necessary to address project impacts and improve regional transportation safety and mobility.

Sincerely,



Juan C. Perez
Juan C. Perez, Director

Transportation and Land Management Agency

CC: Board of Supervisors
County Executive Office
Riverside County Transportation Commission
Caltrans

Grace Espino-Salcedo

Subject: RE: WLC

From: Valerie Horton [<mailto:sillievh@aol.com>]

Sent: Thursday, June 11, 2015 10:31 AM

To: Jesse L. Molina; Jeffrey J. Giba; George Price; Dr. Yxstian A. Gutierrez; D. LaDonna Jempson

Subject: WLC

I am writing to all of you to ask that you vote NO on the WLC. Regardless what district you preside over, your decisions affect all the citizens of Moreno Valley. Why vote NO....

1. Our current infrastructure can not handle additional traffic.

Take a drive down the 60 FWY, toward Fullerton and see the two lanes of truck traffic and the congestion it causes. The freeway has 4 lanes and 1 carpool lane. Two lanes are taken up by back to back trucks, which congest the traffic throughout this corridor. Our part of the freeway has 2 lanes and 1 carpool, which goes down to 2 lanes and truck traffic already congests the freeway.

Ironwood Ave., Sunnymead Blvd., and Alessandro Blvd. are currently being used to bypass congested traffic on the freeway by many off whom do not live in this city. Recently, speed limit changes have been made but yet I still see people speeding through and never see police/ traffic control on Ironwood Ave. But then again, I know our Police Dept. is doing the best it can with what it has and most of their time is spent handling the ever increasing criminal element within the city.

Our roads throughout the city are in need of repairs. The freeway on and off ramps are in need of repair, except for Nason, of course. All the money spent on Sunnymead Blvd. revitalization has produced what? New businesses....NO! The street looks worse than before.

2. The warehouses will pay minimum to low wages, which only bring in those willing to work those types of jobs. They will not be able to afford to buy, so more renters. They will shop the 99 cent stores (Amazing how many 99 cent stores we have) and low end type businesses. We will gain more homes occupied with multiple families. The city will continue to lose home owners, who will either sell (most likely losing money) or rent the home out, to move to a more preferable neighborhood/city. Unfortunately we now only have Cardenas markets, Food for Less, Win Co., or Stater Bros. to shop at since the other businesses have left. All but Staters are not stores I feel comfortable going in, cleanliness less than desirable, quality of food less than desirable, and less than desirable people hanging in and around the areas.

3. Air quality is already not the best and will only get worse.

4. Most of the construction will be performed by companies outside of the city and will utilize current work force. Jobs available will be at a minimum at best. Past projects, such as this, provided no additional employment. I wonder how many residents will say they have shopped at Sketchers, if polled. I mean have bought and not just went to look out of curiosity. Not I. Have you?

This city has continued to fail because lack of planning, promoting, and working to maintain roads, provide adequate police to deal with the increasing criminal element, Code enforcement to make sure properties are being properly maintained with swift action and follow through to completion. (Example: 11761 Davis St. (Molina, what have you done?) Numerous complaints have been made about the deterioration of the property, for many years. The property is a dump site now and poses a security risk. It is located down the street from an elementary school, with many students passing daily. A few homes away, on the corner of Virginia Lane & Davis St., there is a white house (shack looking) that houses multiple adult men who are known to be heavy drinkers and one is listed on Megan's Law web site as a child molester. This home is less than 2,000 feet from the elementary school. Vagrants/druggies have been seen in and around the deteriorating property. We continue to be told the city is working on it and a case is at the City Attorney's office but nothing has been done yet. Why has this been allowed to continue for years? The city should own the property now and should have had the property cleared of all falling structures, trash, and overgrown weeds.)

I could continue on and on about the problems this city is facing but I value my time and know it is only a matter of time before, I too, move from this failing city.

Again, you all need to focus on the current issues plaguing the city and not just continue to add more issues. The WLC project is already being questioned by outside sources on its reports factuality and legitimacy. I am sure this proposed development will end up in court and cost tax payers again for frivolous litigation (JP @ MAFB, covering Gutierrez's legal fees, etc...) These are not the types of jobs the good citizens of Moreno Valley need, nor will it alleviate the current issues plaguing the city. The time is now to take a step back and develop a plan for the city to attract business, quality people, home owners, to clean up the city and reduce the criminal elements. It is apparent there are many people in the city who are passionate about the city and its success. Promote and develop citizen interaction/committees to help revitalize Moreno Valley.

Valerie H
sillievh@aol.com

Cindy Miller

**Executive Assistant to Mayor/City Council
City Council Office
City of Moreno Valley**

p: 951.413.3006 | e: cindym@moval.org W: www.moval.org

14177 Frederick St., Moreno Valley, CA 92553

THE WOLFSKILL TRUST
P. O. BOX 3005
NAPA, CA 94558

Mr. Mark Gross
City Of Moreno Valley
14177 Frederick Street,
Moreno Valley, CA 92553

Dear City of Moreno Valley,

We are the property owners of the 640 acres located directly east of the World Logistics Center project (Our property has Riverside County Assessor Parcel Numbers: 422-160-008, 009, and 010). This property has been in our family since 1846 when it was granted as part of a Mexican land grant. We have concerns about some of the elements of the World Logistics Center project and have outlined them below:

- (1) We are concerned that the utilities (i.e. gas, sewer, water, telephone, electric, etc.) for the project stops away from Gilman Springs Road. We would like to request that the City of Moreno Valley make sure the roads and/or open space areas where the utilities are located have the necessary easements and permanent access to those easements that would allow us to extend the utilities to our own property when needed.
- (2) We are concerned that the World Logistics Center project's utility lines (i.e sewer, water, gas, telephone, electric, etc.) have enough extra capacity to handle development on our property and the surrounding area..
- (3) We are also concerned about how the drainage control for the World Logistics Center project is being handled. It appears that there may be one or more drainage basins on or near our property and we would like to make sure that our property is not burdened with any of the drainage issues for the World Logistics Center project on our property.

I want to thank you for your time and consideration on this matter. If you have any questions, please let us know.

Best Regards,



Conchita Marusich
Beneficial Owner
The Wolfskill Trusts

Moreno Valley Historical Society

P. O. Box 66

Moreno Valley, CA 92556

RECEIVED
JUN 11 2015
CITY OF MORENO VALLEY
Planning Division

Re: World Logistics Center proposed closure of a portion of Alessandro Boulevard

The Moreno Valley Historical Society works to preserve and celebrate the proud history of our region. We recognize that our history is not just in the amazing photos of our founders, the historic buildings that we seek to save, or the relics of the past. Our history is also contained in the ways that people lived, the ways they traveled, the paths they used to settle our valley and trade with their neighbors. Because we seek to preserve and celebrate all of our history, we strongly oppose any attempt to close Alessandro Boulevard, a vital link to our valley's history.

Not so long ago, Highway 60 simply did not exist. Instead, travelers used what we now think of as historic roads to get to Riverside, Redlands, Beaumont, Hemet, and other surrounding towns. From there, they could travel east, west, north and south. Few roads were more important to what is now Moreno Valley than Alessandro Boulevard.

The centrality of Alessandro Boulevard to Moreno Valley's history is explained in Viola Hamner's book, "Moreno Valley, California, In The Beginning". In it she states:

Historic Alessandro Boulevard, our best known byway, has been extended over the years and now stretches seventeen miles from Gilman Springs Road westerly into the city of Riverside. On November 11, 1988, it was designated a City of Moreno Valley Landmark (Resolution CPAB 88-2). It has been, over the years, a San Bernardino County Road, a Riverside County Road, a California State Highway, part of the Transcontinental U. S. Route 60, part of the old "jack Rabbit Trail", and lastly, a City Boulevard.

The desire to close a portion of Alessandro Boulevard for a new development violates our history and robs future generations of the ability to better understand our history and how our founders lived and worked. A development plan can be changed or altered. Streets can easily be moved in one direction or another. Truck traffic can be restricted with signage and enforcement. We ask that you not attempt to change and alter our history by erasing a vital part of our valley.

The members of the Moreno Valley Historical Society stand at the ready to give the Mayor, City Council and Planning Commission a tour of the area under consideration, including a tour of the links that Alessandro Boulevard gave to the residents of what would become Moreno Valley and its neighbors. Let us know. We would be happy to provide you with a better understanding of why any attempt to close this road would be such a mistake.

Thank you for your consideration on this matter.

Respectfully,


Alice Bradley, President

Grace Espino-Salcedo

Subject: RE: Center for Biological Diversity Supplemental Comments on the WLC FEIR

From: Aruna Prabhala [REDACTED]
Sent: Wednesday, June 24, 2015 6:40 PM
To: Mark Gross
Subject: Center for Biological Diversity Supplemental Comments on the WLC FEIR

Mr. Gross,

Attached are a copy of supplemental comments on the WLC FEIR's GHG analysis from the Center for Biological Diversity. These comments add to and update the GHG comments previously submitted by the Center for Biological Diversity and San Bernardino Valley Audubon Society on June 10, 2015. Please let me know if you have any questions or issues downloading the attachments. The letter and references have also been sent by mail to your office.

Sincerely,
Aruna

Aruna Prabhala
Staff Attorney
Center for Biological Diversity
1212 Broadway, Suite 800
Oakland, CA 94612
[REDACTED]
[REDACTED]

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)



Submitted via USPS and E-mail

June 24, 2015

Mark Gross
 City of Moreno Valley
 Community and Economic Development Department
 14177 Frederick Street
 Post Office Box 88005
 Moreno Valley, California 92552
 MarkG@moval.org

RE: Supplemental Comments on the Final Environmental Impact Report for the World Logistics Center Project, State Clearinghouse No. 2012021045

Dear Mr. Gross:

These supplemental comments are submitted on behalf of the Center for Biological Diversity on the World Logistics Center Project (“Project”), located south of Interstate 60 on the eastern edge of Moreno Valley. After further review of the FEIR, the Center has additional concerns about the GHG emissions analysis in the FEIR and would like to update and supplement their earlier comments on the FEIR for the Project.

IV. THE FEIR’S GREENHOUSE GAS EMISSIONS ANALYSIS IS INADEQUATE AND INCOMPLETE

The FEIR’s analysis of the Project’s greenhouse gas (“GHG”) emissions is woefully inadequate and is misleading to the public and decisionmakers about the true scope of the Project’s GHG emissions. (See FEIR Sec. 4.7.) The FEIR fails to take into account all potential sources of GHG emissions from the Project and then ignores large emission sources when completing the FEIR’s significance analysis. Most troublingly, the FEIR refuses to take responsibility for and minimize a large portion of the Project’s GHG emissions. (FEIR at 4.7-40-49.) This approach violates CEQA requirement that an EIR fully analyze and attempt to mitigate all significant direct and indirect impacts of a project. (CEQA Guidelines § 15126.2; Pub. Res. Code § 21002.) The FEIR, however, fails to adopt all feasible mitigation measures to address *all* of the Project’s tremendous GHG emissions and instead addresses only a small fraction of the Project’s overall GHG emissions with meager and insufficient mitigation measures. (Compare 19,237 metric tons (“mt”) of CO₂ with 396, 754 mt of CO₂; FEIR 4.7-54.) The FEIR claims that its mitigation measures resulting in a mere 30,392 reduction in GHG emissions or less than

8% of the total GHG emissions resulting from the Project justifies a finding of no significant impact. Therefore, the FEIR's significance analysis and mitigation measures for the Project's anticipated GHG emissions are inadequate under CEQA. The FEIR should be revised to comply with CEQA and recirculated to the public and decisionmakers.

Action to address climate change becomes ever more urgent with each passing day. The National Oceanic and Atmospheric Administration ("NOAA") and National Aeronautics and Space Administration ("NASA") confirmed that 2014 was the hottest year ever recorded. (NASA 2015.) In the National Climate Assessment released by the U.S. Global Change Research Program, experts make clear that "reduc[ing] the risks of some of the worst impacts of climate change" will require "aggressive and sustained greenhouse gas emission reductions" over the course of this century. (Melillo 2014.) Indeed, humanity is rapidly consuming the remaining "carbon budget" necessary to preserve a likely chance of holding the average global temperature increase to only 2°C above pre-industrial levels. According to the Intergovernmental Panel on Climate Change, when non-CO₂ forcings are taken into account, total cumulative future anthropogenic emissions of CO₂ must remain below about 1,000 gigatonnes (Gt) to achieve this goal.¹ Some leading scientists—characterizing the effects of even a 2°C increase in average global temperature as "disastrous"—have prescribed a far more stringent carbon budget for coming decades. (Hansen 2013.) Climate change will affect California's climate, resulting in such impacts as increased temperatures and wildfires, and a reduction in snowpack and precipitation levels and water availability, as we detail below.

In order to help stabilize the climate and avoid catastrophic impacts to our environment, the California legislature and Governor Brown have taken important steps. California has a mandate under AB 32 to reach 1990 levels of GHG emissions by the year 2020, equivalent to approximately a 15 percent reduction from a business-as-usual projection. (Health & Saf. Code § 38550.) Based on the warning of the Intergovernmental panel on Climate Change and leading climate scientists, Governor Brown issued an executive order in April 2015 requiring GHG emission reduction 40 percent below 1990 levels by 2030. (Executive Order B-30-15 (2015).) The Executive Order is in line with a previous Executive Order mandating the state reduce emission levels

¹ IPCC 2013 ("Limiting the warming caused by anthropogenic CO₂ emissions alone with a probability of >33%, >50%, and >66% to less than 2°C since the period 1861–1880, will require cumulative CO₂ emissions from all anthropogenic sources to stay between 0 and about 1570 GtC (5760 GtCO₂), 0 and about 1210 GtC (4440 GtCO₂), and 0 and about 1000 GtC (3670 GtCO₂) since that period, respectively. These upper amounts are reduced to about 900 GtC (3300 GtCO₂), 820 GtC (3010 GtCO₂), and 790 GtC (2900 GtCO₂), respectively, when accounting for non-CO₂ forcings as in RCP2.6. An amount of 515 [445 to 585] GtC (1890 [1630 to 2150] GtCO₂), was already emitted by 2011."). See also UNEP 2013 (describing emissions "pathways" consistent with meeting 2°C and 1.5°C targets).

to 80 percent below 1990 levels by 2050 in order to minimize significant climate change impacts. (Executive Order S-3-05 (2005).) In enacting SB 375, the state has also recognized the critical role that land use planning plays in achieving greenhouse gas emission reductions in California.²

The state Legislature has found that failure to achieve greenhouse gas reduction would be “detrimental” to the state’s economy. (Health & Saf. Code § 38501(b).) In his 2015 Inaugural Address, Governor Brown reiterated his commitment to reduce greenhouse gas emissions with three new goals for the next fifteen years:

- Increase electricity derived from renewable sources to 50 percent;
- Reduce today’s petroleum use in cars and trucks by 50 percent;
- Double the efficiency of existing buildings and make heating fuels cleaner.

(Brown 2015 Address.) Most recently, Governor Brown issued Executive Order B-30-15 establishing that California must reduce GHG emissions 40 percent below 1990 levels by 2030 to combat global warming and avoid major climate disruptions. (Executive Order B-30-15 (April 29, 2015).) Studies suggest that an equity approach based on capabilities to mitigate climate change around the world would require reductions of 25-55% below 1990 levels by 2025 and 35-55% below 1990 levels by 2030 from developed nations such as the United States. (Climate Tracker Reports 2014.) Other equity approaches would require even deeper reductions. (*Id.*)

Although some sources of GHG emissions may seem insignificant, climate change is a problem with cumulative impacts and effects. (*Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, (9th Cir. 2008) 538 F.3d 1172, 1217 (“the impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis” that agencies must conduct).) One source or one small project may not appear to have a significant effect on climate change, but the combined impacts of many sources can drastically damage California’s climate as a whole. Therefore, CEQA requires that an EIR consider both direct and indirect impacts of a project and fully disclose those impacts to adequately inform the public and decisionmakers. (CEQA Guidelines, § 15064.) Here, the FEIR failed to meet this requirement.

A. The FEIR Significance Analysis of the Project’s GHG Emissions Should Take into Account *All* GHG Emissions from the Project

At full build out the Project is anticipated to emit 415,991 mt of CO₂ without mitigation measures. (FEIR 4.7-54; *see also* FEIR Air Quality, Greenhouse Gas, and Health Risk Assessment Report: 294 [hereinafter “HRA Report”].) However, when analyzing the significance of the Project’s GHG emissions and considering potential mitigation, the FEIR looked only at portion of these emissions. Specifically, the FEIR

² See <http://www.arb.ca.gov/cc/sb375/sb375.htm>.

examines the significance and potential mitigation of only 19,237 mt of CO₂. The FEIR justifies ignoring the remaining 396,754 mt of emissions by arguing these emissions are independently covered by AB 32's Cap and Trade Program. (FEIR HRA Report at 284-5.) Emissions disregarded by the FEIR are the vast majority of the emissions resulting from the Project, including mobile, electricity, construction fuel, yard trucks, electricity to convey water, generator, forklifts used on the site. (FEIR HRA Report at 294.) Instead, the FEIR focuses on so-called uncapped emissions which include waste, land use change, refrigerants that result in 19,237 mt of emissions. (FEIR HRA Report at 284-5.) This approach allows the FEIR to focus only on approximately 5% of the Project's GHG emissions. By taking just a few steps towards directly minimizing the Project's tremendous GHG emissions, the FEIR was able to conclude the Project with only a few mitigation measures will result in no significant impacts. This approach is flawed, misleading and violates CEQA.

The FEIR justifies its significance threshold and analysis by citing to San Joaquin Valley Air Pollution Control District's and South Coast Air Quality Management District's use of a similar approach when they were acting as lead agencies on other projects. (FEIR at 4.7-41.) However, while the significance threshold and analysis may have been based in part of existing thresholds, compliance with the law is not enough to make a finding of less than significant under CEQA. (*See Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal. App. 4th 1099, 1107.) Instead "the EIR's discussion of impacts must "provide[] sufficient information and analysis to allow the public to discern the basis for the agency's impact findings. Thus the EIR should set forth specific data, as needed to meaningfully assess whether the proposed activities would result in significant impacts." (*Sierra Club v. Tahoe Reg'l Planning Agency* (2013) 916 F. Supp. 2d 1098, 1146-1147 (*Sierra Club*)). The FEIR fails to meet this CEQA requirement and instead leaves the public and decisionmakers uncertain on the Project's true environmental impacts and avoid necessary steps to reduce those impacts.

The FEIR anticipates emissions for the Project as far as 2030 and at full build out of the Project beyond. However, AB 32 Cap and Trade program currently runs only until 2020. (*See* <http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm>.) Currently, there are no provisions for the Cap and Trade program to extend beyond 2020 and the scope of the program beyond 2020 is uncertain. Nonetheless, the FEIR relies on AB 32's Cap and Trade Program to fully minimize and mitigate nearly 400,000 mt of CO₂ emissions at full build out of the Project. This reliance by the FEIR is without any evidentiary basis and should either be removed or substantially revised.

The FEIR also fails to adequately explain how it categorizes certain categories as capped and others as uncapped. For example, the FEIR fails to take into account vehicles miles traveled into its GHG significance analysis or adoption of mitigation measures. (FEIR at 4.7-47-48.) The FEIR acknowledges that vehicles miles traveled is the Project's biggest contributor to GHG emissions but disregards it completely when discussing the significance of the Project's impacts. The FEIR justifies this determination by citing to

SJVAPCD determination in an independent and unrelated context. The FEIR must include a clear description of the Project’s impacts and provide a detailed explanation of its analysis of those impacts. (*Sierra Club, supra*, 916 F. Supp. 2d at 1146-47.) Simply citing to other regulatory approaches in the state is insufficient. The FEIR explanation of other “capped” sectors is similarly vague and inadequate. The FEIR should further explain its classification of “capped” and “uncapped” sectors and recirculate a revised GHG analysis.

As noted above, the goal of AB 32 is to reduce California greenhouse gas emissions to 1990 levels by 2020. (Health & Saf. Code § 38550.) Recent science, however, indicates that far steeper reductions are necessary to avoid the most significant impacts of climate change. Even to stabilize atmospheric CO₂ concentrations at 450 parts per million (“ppm”) and limit global average temperature increases to 2°C—a level at which devastating effects may still occur—industrialized countries will have to reduce emissions by 25-40% below 1990 levels by 2020. Many scientists believe that avoiding the worst impacts of climate change will require reducing the concentration of CO₂ in the atmosphere to 350 ppm or below, which will require even steeper and more rapid reductions. The FEIR must analyze the cumulative significance of the Project’s emissions in light of reductions needed to avoid contributing to these physical impacts, not just measure them against the AB 32 Scoping Plan, regional significance thresholds and the state’s renewable generation goals. This was further emphasized in the Scoping Plan itself which emphasized the steep reductions in GHG emissions that must occur after 2020 to stabilize the climate. (2008 Scoping Plan at 33; *see also* Climate Change Scoping Plan 2014 Update.) The FEIR cannot rely on AB 32 Cap and Trade Program to avoid its own obligation to fully analyze and mitigate *all* of the Project’s GHG emissions.

B. The FEIR Fails to Consider Mitigation Measures and Alternative to Minimize *All* Sources of GHG Emissions from the Project

Mitigation of a project’s environmental impacts is one of the “most important” functions of CEQA. (*Sierra Club v. Gilroy City Council* (1990) 222 Cal.App.3d 30, 41.) Therefore, it is the “policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures which will avoid or substantially lessen the significant environmental effects of such projects.” (Pub. Res. Code § 21002.) Here however, the FEIR adopts only a few mitigation measures, all of which are inadequate to address the Project’s massive GHG emissions. (FEIR at 4.7-48.)

Additionally, to comply with CEQA, mitigation measures must be “fully enforceable through permit conditions, agreements, or other legally-binding instruments.” (CEQA Guidelines § 15126.4(a)(2).) The measures must be “incorporated into the project or required as a condition of project approval in such a way that [would] ensure their implementation.” (*Fed’n of Hillside and Canyon Assoc. v. City of Los Angeles*, (2000) 83 Cal. App. 4th 1252, 1262 (*Federation*)). CEQA also requires the adoption of

all feasible mitigation measures that would reduce the environmental impacts of a project. (Pub. Res. Code § 21002; CEQA Guidelines § 15126.4(c); *City of Marina v. Bd. of Trs. of the Cal. State University* (2006) 39 Cal.4th 341, 369-70.)

Although the Project includes a curtailed list of measures directed at reducing emissions and promoting sustainability, these strategies are severely limited and do not include many feasible mitigation measures. (FEIR at 4.7-47.) The meager steps incorporated into the Project include no enforcement mechanisms and leaves many feasible mitigation measures out completely. (FEIR at 4.7-48.) The mitigation measures are often vague with no specific quantities or binding obligations. (*Id.*) The FEIR justifies this approach in part by stating that it must mitigate only *uncapped* emissions resulting from the Project. (FEIR at 4.7-47-49.) However, as noted above, this approach is flawed and without evidentiary or legal support. The FEIR cannot simply ignore 95% of the Project's GHG emissions and their resulting environmental impacts when adopting mitigation measures. (FEIR at 4.7-54.) The FEIR subsequent conclusion that its limited mitigation measures will ensure the Project's GHG emissions will have significant impacts is misleading. The Project will in fact *do nothing* to mitigate 379,824 mt of CO₂ emissions resulting from the Project.

Available and feasible mitigation measures during construction and operation of the Project would lower the Project's overall GHG emissions and contribution to climate change. California Air Pollution Control Officers Association ("CAPCOA") has identified existing and potential mitigation measures that could be applied to projects during the CEQA process to reduce a project's GHG emissions. (CAPCOA 2010.) The California Office of the Attorney General also has developed a list of reduction mechanisms to be incorporated through the CEQA process. (CA AG 2010.) These resources provide a rich and varied array of mitigation measures that should be incorporated into the revised Project.

For example, as it stands now, rooftop solar power is the most energy efficient, least-environmentally damaging form of renewable energy available for the Project and is ideal for the Project's location. The Project's current on-site renewable energy goals are, however, too modest in scope with only 5.2% of electricity from the Project coming from solar at the end of build out. (FEIR at 4.7-50.) The conservation group urges firm requirements that onsite renewable energy be used to meet at a minimum 30% of the Project's energy use and each subsequent 5 year period include growing reliance on onsite renewable energy to meet its energy demands. These renewable energy use targets should be required mandates to ensure the necessary measures are incorporate into future design plans for the Project. New construction, like this Project, has a unique opportunity to full embrace and incorporate the use of renewable energy in its design, construction and operation. Mitigation measures to reduce vehicle miles traveled, energy use, waste, water consumption, greater use of solar power, hybrid vehicles, LEED certification and others could also lower the Project's impact on climate change. (CAPCOA 2010; CA AG 2010.)

The FEIR acknowledges that the Project will result over 380,000 mt of CO₂ emissions but does little to fully analyze, minimize or mitigate the environmental impacts resulting from the Project's GHG emissions. The FEIR's GHG significance analysis and determination on what mitigation measures are necessary was flawed and raises serious concerns about the Project and its impacts on the region as well as the state. The FEIR's determination that with mitigation, the Project will result in no significant GHG emissions is grossly misleading to the public and decisionmakers and violates CEQA. We urge that the FEIR be revised and recirculated to address these concerns and ensure that the Project's substantial GHG emissions are clearly disclosed, adequately analyzed and fully mitigated.

CONCLUSION

Thank you for your attention to these supplemental comments addressing the Project's GHG emissions. We look forward to working with you to assure that the EIR conforms to the requirements of CEQA to assure that all significant impacts to the environment are fully analyzed, mitigated or avoided.

Sincerely,

Aruna Prabhala

Staff Attorney
 Center for Biological Diversity
 1212 Broadway, Suite 800
 Oakland, CA 94612
 jevans@biologicaldiversity.org

REFERENCES

Climate Action Tracker Policy Report 2014. *Below 2°C or 1.5°C depends on rapid action from both Annex I and Non-Annex I countries*. April 2014.

The following references were submitted as part of June 10, 2015 CBD & SBVAS FEIR Comment Letter:

ARB 2011. California Air Resources Board. Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document. Aug. 2011.

ARB 2014. California Greenhouse Gas Inventory for 2010-2012.

Ault 2014. Ault, T.R., et al. Assessing the Risk of Persistent Drought Using Climate

Brown 2015 Address. California Governor Edmund G. Brown, Inaugural Address (Jan. 6, 2015). Available at: <http://gov.ca.gov/news.php?id=18828>.

Cal Air Res Board 2014. California Air Resources Board. Addendum to the Final Statement of Reasons for Rulemaking: 2013 Amendments to the California Cap on Greenhouse Gas Emissions and Market-based Compliance Mechanisms. 2014.

Cal EPA Statement of Reasons 2010. California Environmental Protection Agency Air Resources Board Final Statement of Reasons. 2010.

Cal NRA Statement of Reasons 2009. California Natural Resource Agency's Final Statement of Reasons. 2009.

CAPCOA 2008. California Air Pollution Control Officers Association. CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Project Subject to CEQA. 2008.

CAPCOA 2009. California Air Pollution Control Officers Association. Model Policies for Greenhouse Gases in General Plans.

CAPCOA 2010. California Air Pollution Control Officers Association. Quantifying Greenhouse Gas Mitigation Measures. Aug. 2010.

CA AG 2010. California Office of the Attorney General. Addressing Climate Change at the Project Level. 2010.

Climate Change Scoping Plan 2014 Update. First Update to the Climate Change Scoping Plan. May 2014.

RE: World Logistics Center FEIR Supplemental Comments
 June 24, 2015
 Page 9 of 9

Hansen 2008. J. Hansen, et al., *Target Atmospheric CO₂: Where Should Humanity Aim?*, 2 OPEN ATMOS. SCI. J. 217. 2008.

Hansen 2013. J. Hansen, et al., *Assessing ‘‘Dangerous Climate Change’’: Required Reduction of Carbon Emissions to Protect Young People, Future Generations and Nature*, 8 PLOS ONE e81648. Dec. 2013.

IPCC 2013. Intergovernmental Panel on Climate Change, *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change; Summary for Policymakers* (2013).

Mden Elzen and Hohn 2008. M. den Elzen & N. Höhne, *Reductions of greenhouse gas emissions in Annex I and non-Annex I countries for meeting concentration stabilization targets*, 91 CLIMATIC CHANGE 249. 2008.

Melillo 2014. Melillo, J., et al., *Chapter 1: Overview and Report Findings in Climate Change Impacts in the United States: The Third National Climate Assessment* 14-15. 2014. Available at: <http://nca2014.globalchange.gov/downloads>.

NASA 2015. National Aeronautics Society of America, *NASA, NOAA find 2014 Warmest Year in Modern Record*, Release 15-010. Jan. 16, 2015. Available at: <http://www.nasa.gov/press/2015/january/nasa-determines-2014-warmest-year-in-modern-record/>

UNEP 2013. United Nations Environment Programme, *The Emissions Gap Report*. pp.13-22. 2013.

2008 Scoping Plan. *Climate Change Scoping Plan*. 2008. Available at: http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf.

Exhibit 1

Below 2°C or 1.5°C depends on rapid action from both Annex I and Non-Annex I countries

Climate Action Tracker

Policy Brief

4 June 2014

Bill Hare , Michiel Schaeffer, Marie Lindberg, Niklas Höhne,
Hanna Fekete, Louise Jeffery, Johannes Gütschow, Fabio Sferra, Marcia Rocha

Summary: Next decade is critical to stay below 2°C or 1.5°C

- The UNFCCC climate talks in June 2014 are aimed at increasing emissions reduction actions in the pre-2020 period, as well as substantially improving mitigation ambition for the post 2020 period in the new climate agreement to be concluded next year.
- In order to prevent dangerous climate change and limit warming to below 2°C or 1.5°C, both Annex I and Non-Annex I countries need to both significantly increase the level of current action to reduce emissions ahead of 2020 and commit to deeper cuts in emissions than currently pledged post 2020.
- In this update the Climate Action Tracker re-evaluates the required level of global and regional levels of ambition for 2020, 2025 and 2030 limit warming to below 2°C or 1.5°C, based on a new analysis of the IPCC AR5 emissions database.
- Limiting warming below 2°C with a high chance of success means that **total GHG emissions would need to be zero between 2060 and 2080, and likely negative thereafter. CO2 emissions from fossil fuel combustion and industry would need to be zero between as early as 2045 and no later than 2065, and be negative thereafter.**
- Required emission reductions for Annex I and Non-Annex I groups depend on the economic and equity assumptions applied. For Annex I (developed) countries an equity approach based on capability to mitigate would require reductions of 25-55% below 1990 levels by 2025 and 35-55% below 1990¹ levels by 2030. Other equity approaches would require even deeper reductions.
- For Non-Annex I (developing countries) an equity approach based on capability to mitigate would require by 2025 an emissions allocation limited to 0-95% above 1990 levels, and by 2030 an emissions allocation limited to 5-90% above 1990² levels. Other equity approaches would allow higher emissions allocations. In 2010 Non-Annex I emissions were about 75-80% above 1990 levels, hence in overall terms during the

¹ 26-48% below 2010 levels

² 41% below to 8% above 2010 levels

2020s these emissions under this equity approach would need to be at the highest close to present level, or more likely, significantly below present levels.

- Rapid and deep emissions reductions are not only necessary to stay below 2° (or 1.5°C), but are feasible at modest cost. However, the window of opportunity to limit warming to below 2°C could be closed by end of the 2020s unless action is accelerated.
- Currently implemented policies are estimated by the 5th IPCC assessment report to put the world on track to a 3.7 to 4.8°C warming by 2100, confirming earlier projections carried out by the Climate Action Tracker.
- One of the main causes of the recent increased emissions growth globally is the post-2000 reversal of historic decarbonisation trends, driven in large part by the growth of coal combustion and use. In all of the studies consistent with limiting warming below 2°C **the energy sector needs to decarbonise rapidly and reduce to zero emissions as early as 2040 but no later than 2070.**
- One of the major challenges for Ministers at the UNFCCC meetings in Bonn is to take concrete steps to arrest and reverse this adverse trend in decarbonisation.

USA “Clean Power Plan” emission reductions and decarbonisation rates far from those needed for 2°C

- In light of this need for decarbonisation of the industry and energy sectors, the CAT has also analysed the US Government’s “Clean Power Plan” proposed rule leading to a 30% cut (from 2005 levels) in emissions from power plants.
 - While the proposal is welcome it is insufficient to meet the USA pledges of a 17% reduction of all greenhouse gas emissions by 2020. In 2030, US national emissions would be around 5% above 1990 levels (or 10 % below 2005 levels), far above levels required for a 2°C pathway.
 - The US “Clean Power Plan” implies an economy-wide decarbonisation rate of about 0.9% per annum, significantly lower than the 1.4% p.a. achieved in the last decade. This is not as fast as is needed for a 2°C decarbonisation pathway.
-

Emission levels compatible with 2°C and 1.5°C

The Climate Action Tracker has conducted a new analysis of the mitigation scenarios assessed by IPCC WGIII, to evaluate the global emissions pathways compatible with holding warming below 2°C and returning to below 1.5°C warming by 2100. The emission pathways were selected on the basis that:

- These emission scenarios fall within historical limits until 2010. This excludes some studies whose emissions diverge significantly below historic emissions before 2010.
- They limit warming to below 2°C with a likely (66%) or high (greater than 85%) probability. The latter pathways we characterize as a return below 1.5°C by 2100
- We differentiated between “overall least-cost” mitigation scenarios, which reach long-term targets by reducing at any time over the 21st century to minimize costs,

and those that involved a “deliberate” delay in mitigation action, focusing on the former.

As a consequence of these selection criteria, the detailed results differ from those presented in the IPCC WGIII Summary for Policy Makers. We confirm the broad findings of WGIII: that limiting warming to 2°C implies halving global GHG emissions in 2010 (49 GtCO₂eq) by 2050 and reaching very low or even negative levels by 2100.

However, for CO₂ emissions from the industry and energy sector, emissions must reach zero much earlier, from around 2045. In this report we have generally compared emissions to 1990 levels to enable easy cross comparison with previous assessments. The emission levels consistent with 2°C and 1.5°C pathways are displayed in Table 1 and Figure 1.

The lowest of the AR5 scenarios (RCP2.6) indicates global warming can be limited to close to 1.5°C above pre-industrial levels. Negative emissions play a larger role than in the 2°C scenarios. It is as likely as not that

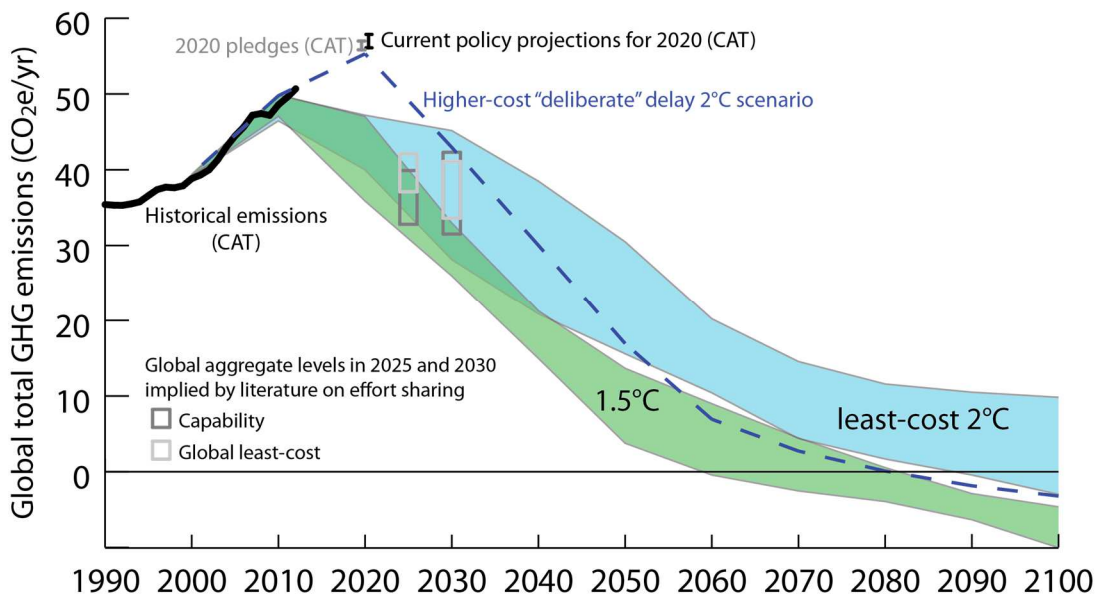


Figure 1: Timeline for global emissions (in Gt CO₂-equivalents per year) to peak and decline towards zero for 2°C and 1.5°C long-term temperature limits. The dashed line indicates the medium of the few scenarios from IPCC AR5 WG3 that reach emission levels in 2020 close to those implied by the Cancun pledges, while still reaching later-century deep reductions sufficient to hold warming below 2°C. Source: Own calculations based on IPCC database (10-90% range of AR5 WG3 emission scenarios that are not deliberately forced to reach 2020 emission levels comparable to those implied by the Cancun pledges and do hold warming below 2°C in >66% of climate-model runs) and scenarios that hold warming below 1.5°C by 2100 in >50% of climate-model runs.

	2020	2025	2030	2050	Zero emissions	2100
Stay below 2°C during 21st century with <i>likely</i> (more than 66%) probability						
Total GHG below 1990	25 to 10% above 1990	to 25% above 5% below 1990	20% above to 25% below 1990	20 to 60% below 1990		75 to 105% below 1990
GtCO ₂ e/yr	40 to 47	35 to 46	28 to 45	16 to 31	2090 or later	-3 to 10
CO ₂ emissions from fossil fuel and industry	26 to 35	21 to 34	16 to 33	3 to 19	2060 or later	-15 to 2
Below 1.5°C by 2100 with at least 50% probability– and stay below 2°C with at least 85% probability						
Below 1990	25% above to 5% below	10% above to 15% below	10-30% below	65-90% below		110-125% below
GtCO ₂ e/yr	36 to 47	31 to 40	26 to 33	4 to 14	2060-2080	-10 to -5
CO ₂ emissions from fossil fuel and industry	21 to 31	17 to 26	13 to 20	-8 to 4	2045-2065	-17 to -9

Table 1: Global emissions pathway to 2°C and 1.5°C for 2020, 2025, 2030, 2050 and 2100 Source: Climate Action Tracker; calculations based on the scenarios assessed by IPCC Working Group 3 in AR5. Range represent 10-90% range for AR5 WG3 “no delay” emission scenarios, i.e. those for which the energy-economic models are not deliberately forced to reach 2020 emission levels comparable to those implied by the Cancun pledges. Likely 2°C scenarios hold warming below 2°C with over 66% probability over the whole of the 21st century. 1.5°C scenarios hold warming below 1.5°C by 2100 with over 50% probability and hold warming below 2°C with over 85% probability over the whole of the 21st century. Probabilities refer to the percentage of climate model runs within a large ensemble of runs, with varying sensitivity and carbon-cycle characteristics, that hold warming below 2 or 1.5°C.

sustained globally negative emissions after 2050 will be required to achieve the reductions in atmospheric CO₂ in RCP2.6 (AR5, WG1).

The global GHG emissions compatible with below 2°C or 1.5°C follow a steep declining pathway for the period 2020 through 2050. During the 2020s and early 2030s the 1.5°C emission pathways overlap with the lower part of the 2°C emission ranges, before diverging:

- In 2020, global emissions should have peaked and drop below 47 GtCO₂ (25% above 1990 emissions; just below 2010 emissions) and safer, as low as 40 GtCO₂, which is 10% above 1990 emission levels and 15% below 2010 levels

- By 2025, emissions should have returned to 35-46 GtCO₂e (5% below to 25% above 1990 emission levels; 5-30% below 2010) for 2°C pathways and 31-40 GtCO₂e (10% above to 15% below 1990 emission levels; 15-35 below 2010) for 1.5°C pathways
- By 2030, should have returned to 28-45 GtCO₂e (20% above to 25% below 1990 emission levels; 5-40% below 2010) for 2°C pathways and 26-33 GtCO₂e (10-30% below 1990 emission levels; 35-45% below 2010) for 1.5°C pathways

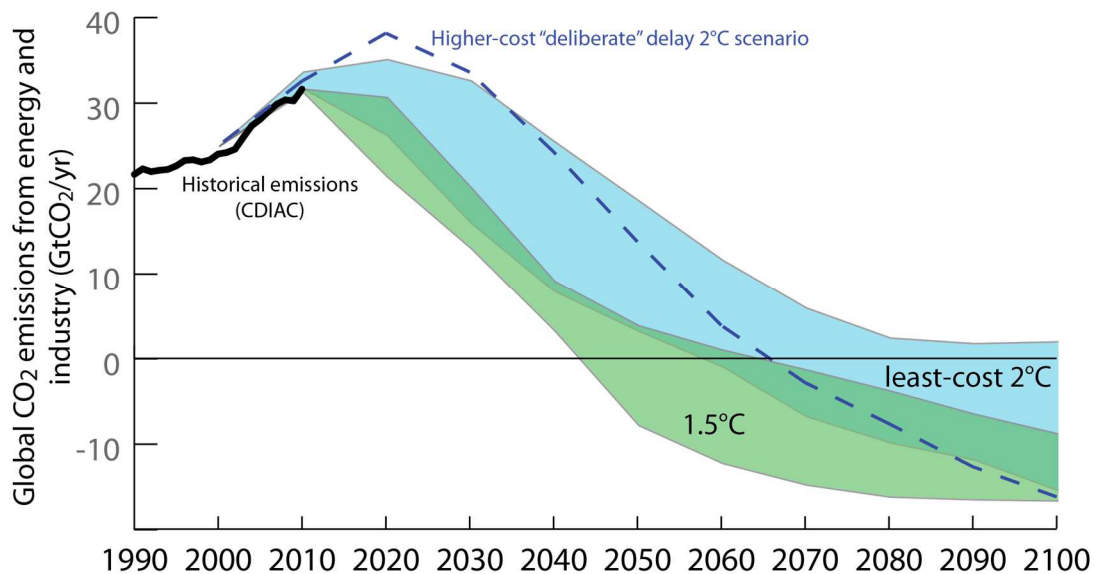


Figure 2: Total global CO₂ emissions from energy and industry 2005 – 2100 compatible with a 2°C pathway. Source: Own calculations based on IPCC database (10-90% range of AR5 WG3 emission scenarios that are not deliberately forced to reach 2020 emission levels comparable to those implied by the Cancun pledges and do hold warming below 2°C in >66% of climate-model runs) and scenarios that hold warming below 1.5°C by 2100 in >50% of climate-model runs.

- In 2050, emissions should be 16-31 GtCO₂eq (20-60% below 1990 emission levels; 35-65% below 2010) for 2°C pathways and 4-14 GtCO₂eq (65-90% below 1990 emission levels; 70-90% below 2010) for 1.5°C pathways

Limiting warming below 2°C with a likely probability implies that total GHG emissions eventually have to decline towards zero by 2100 and CO₂ emissions from fossil fuel and industry would need to be zero as soon as the late 2050s.

Bringing warming back to 1.5°C implies faster emission reductions and an earlier approach to zero GHG and CO₂ emissions: total GHG emissions would need to be zero between 2060 and 2080. CO₂ emissions from fossil fuel and industry would need to be zero by the 2040s and no later than 2070, and negative thereafter. These emission reductions would ensure that there would be a high chance >85% of limiting warming below 2°C, significantly better than the “likely” 2°C pathway described above.

Comparing Figure 2 below with Figure 1 illustrates that for CO₂ emissions, the picture

looks quite different than is the case for all GHG gases.

A 2°C pathway requires a full decarbonisation of the energy sector by around 2060, the year when CO₂ emissions from industry and energy use reach zero in the low emission scenarios. For such low emission scenarios, IPCC WG3 noted that global CO₂ emissions from the energy supply sector are projected to decline over the next decades and are characterized by reductions of 90% or more below 2010 levels between 2040 and 2070. Emissions in many of these scenarios are projected to decline to below zero thereafter (IPCC AR5, WG3, SPM).

The IPCC AR5 warns that “*Delays in mitigation through 2030 or beyond could substantially increase mitigation costs in the decades that follow and the second-half of the century*”.

Delayed action also implies increased use of technologies that can provide ‘negative emission’, primarily bio-energy combined with carbon capture and storage (BECCS).

Without this assumption, many models cannot achieve the 2°C target if Governments delay ambitious action until 2020, or even 2030. Mitigation scenarios without this option are

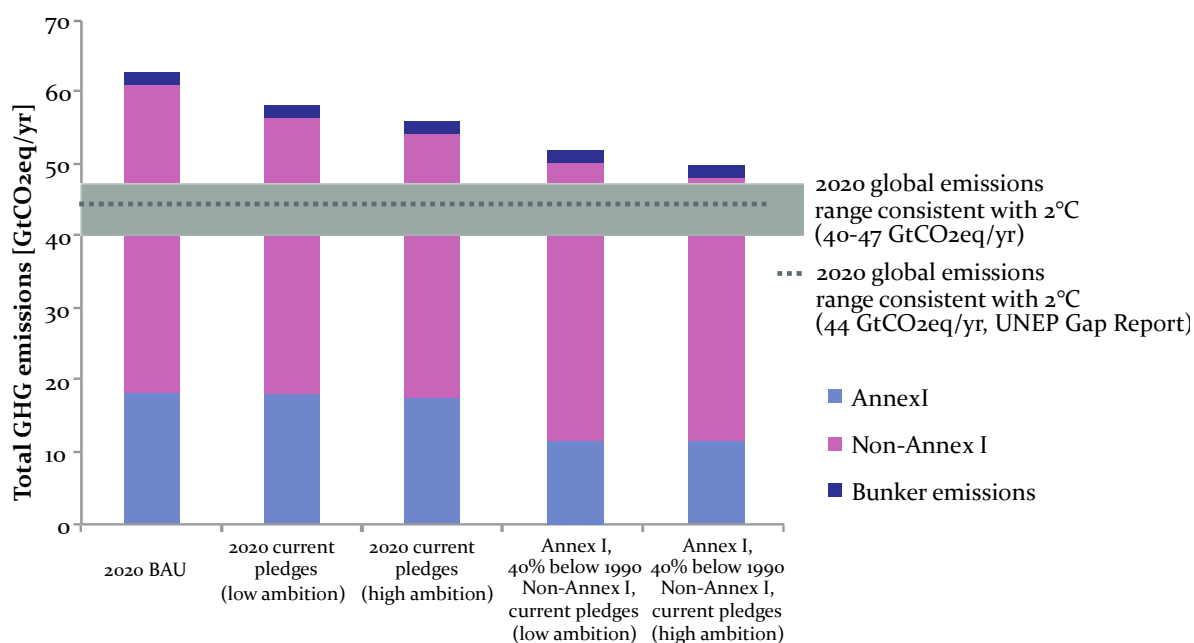


Figure 3: Effect of Annex I increasing mitigation efforts to 40% reduction below 1990 level in relation to 2020 global emissions level consistent 2 and 1.5°C. The emissions gap is the result of total global emissions (top of the bar) and the 44GtCO₂eq level, depicted by the grey dotted line.

found in the lower half of the emission ranges around 2020-2030 and at the upper end by the end of the 21st century.

In other words, very high ambition is required in the near term to still stay within a cumulative CO₂ emissions budget, because compensation of higher near-term emissions through late-century very deep reductions is not possible.

Deeper emission commitments by all parties needed

The results from the scientific research clearly show that international cooperation is a prerequisite for effective mitigation action. The endeavour to stay below 2°C will not be achieved if individual agents advance their own interests independently.

In relation to the discussion in increasing mitigation action ahead of 2020 the numbers show that further action is needed by both Annex I and non-Annex I countries to close the 'emissions gap'.

Some parties to the UNFCCC have argued that if Annex I countries would reduce emissions by 40%, this would be sufficient to close the so-called emission gap in 2020. Figure 3 below shows the contribution of Annex I and Non

Annex I Parties to 2020 levels of emissions. If Annex I Parties reduce emissions by 40% below 1990 levels, the emissions gap would remain in 2020 and would need to be closed by additional efforts from the major emitters in the Non-Annex I group.

Mitigation costs keeping warming below 2°C are modest

The costs of keeping warming levels below 2°C by the end of this century are modest. Estimates of average global macro-economic costs over the century show that loss in total global consumption is limited compared to the overall expected economic growth. It is important to recall that these cost estimates do not take co-benefits of climate action into account.

Under a cost-effective approach, assuming a global and unique carbon price, macro-economic costs equal an average annual reduction of consumption of about 0.04-0.14 % per year.

Given that the baseline increase of consumption over the 21st century projected in the models is **1.6-3% per year**, this means that annual economic growth in 2030 would be 1.4%-3.0% instead of 1.6-3.0%.

In 2050, growth rates are 1.5%-2.9% instead of 1.6-3% and in 2100; the annual growth rate with mitigation action consistent with the 2C pathway is 1.5%-3.0% instead of 1.6-3.0% (IPCC AR5, WG3, Chapter 6, p. 8)

This means that with mitigation action, GDP would grow by 43-107% in 2030 in relation to 2005, instead of 49-109% without mitigation action. In 2050, world GDP is projected to be 92-271% larger than in 2005 with implemented climate policy, against 104%-278% in the baseline scenario. In 2100, the economy is projected to grow by 302-1508% instead of 352-1558%, compared to 2005 levels. The differences in final global consumption of goods are marginal as displayed in Figure 4 below.

Final Consumption of Goods (2005=100)

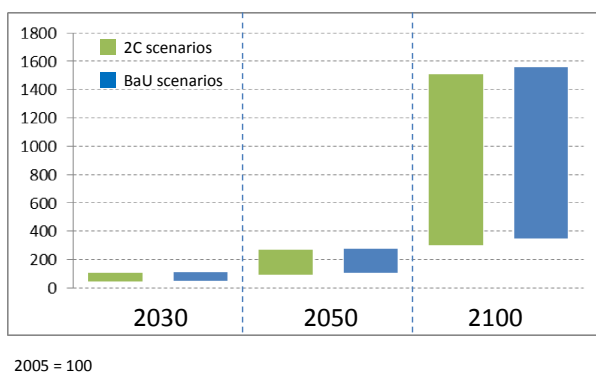


Figure 4: Final total global consumption of goods in 2030, 2050 and 2100, with and without mitigation action required to stay below 2°C.
Source: Own elaboration based on IPCC numbers.

Regional distribution of emission reductions on the pathway to stay below 2°C

The overall emissions pathways to stay below 2°C in 2025 span a range of 35Gt – 46 GtCO₂e/yr, which by 2030 reduces to 28-45 GtCO₂e/yr. This translates into global emissions cuts of approximately 5% below 1990 to 25% above 1990 by 2025 and 25% below 1990 to 20% above 1990 by 2030³. It

³ 5-30% below 2010 by 2025 and 5-40% below 2010 by 2030

should be noted the feasible emissions pathways cannot be at the top of both the 2025 and 2030 ranges. The task now is to share this fixed global emission level amongst all countries.

This condition could be met, for example, if all individual countries were to reduce their emissions by the same percentage, let's say 30% below today's level in 2030.

This is highly unlikely since the basic principle of the United Nations Framework Convention on Climate Change is that "Parties should protect the climate system [...] on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities." This means, that depending on each country's responsibility and capability, countries' emissions cuts would diverge from the global average.

If some countries manage to reduce more than 30%, other countries can reduce less or even increase their emissions. Developed countries currently emit two thirds of the total greenhouse gas emissions of all developing countries. As a rule of thumb, three percentage points additional reduction to 30% by all developed countries would give room for two percentage points less reduction below 30% for all developing countries, if the same global total is to be reached.

One way to differentiate between reductions of countries would be to assume that they would need to happen where they are the cheapest.

Global models provide such scenarios where total global costs are minimised. Results for such a case depend on the model used and the assumptions on costs. Illustrative results of such scenarios are provided in Table 2 and Table 3 as Option "global least cost".

Reductions for developing countries as a whole would be less stringent than a 30% flat rate, because these calculations take into account the growth in consumption in

developing countries. For Latin America, however, it would be more than 30%, because some models assume large potential to reduce emissions from deforestation at relatively low costs.

A second way to look at it is to distribute differentiated reductions across countries based on their responsibility and/or capability, building on the Convention principles.

Below we show several options for how emission reductions can be distributed among

different groups of countries or regions. We here draw upon the summary of these studies in the IPCC AR5⁴, which is based on Höhne et al. 2013⁵. They find a large variation across different options, reflecting that there are many ways to share emission reductions.

Taking a broad average over all possible ways to share the reductions based on the principles, emission targets for OECD1990 countries would be roughly half of current emissions by 2030.

Option	Annex I			Non-Annex I			
	Total	OECD90	EIT	Total	LAM	MAF	ASIA
Relative to 2010							
Global least cost	-33% to -40%	-30% to -35%	-39% to -53%	3% to -32%	-23% to -75%	21% to -22%	2% to -26%
Average	-28% to -73%	-32% to -79%	-20% to -59%	15% to -28%	-12% to -54%	-10% to 26%	17% to -28%
Equal cumulative per capita	-75% to -85%	-76% to -84%	-72% to -85%	4% to -12%	-15% to -71%	n.a.	12% to -13%
Capability	-20% to -50%	-19% to -52%	-23% to -44%	10% to -42%	-16% to -66%	-9% to 47%	3% to -48%
Relative to 1990							
Global least cost	-39% to -46%	-26% to -31%	-60% to -69%	21% to 81%	-11% to -71%	62% to 152%	37% to 90%
Average	-35% to -76%	-27% to -78%	-47% to -72%	28% to 104%	1% to -47%	89% to 164%	34% to 119%
Equal cumulative per capita	-77% to -86%	-74% to -83%	-82% to -90%	55% to 83%	-3% to -67%	n.a.	63% to 109%
Capability	-27% to -54%	-14% to -49%	-48% to -63%	2% to 94%	-3% to -61%	91% to 207%	-3% to 93%

Table 2: 2025 Regional distribution of emission reductions for illustrative cases (relative difference to 1990 and 2010 emissions in 2025) staying within atmospheric GHG concentrations keeping temperature increase below 2°C above preindustrial levels.

The same exercise could be done for 1.5°C, however data for sharing efforts under these scenarios are less available.

Source: Own analysis based on supplemental data from Höhne et al. 2013

⁴ IPCC AR5, working group III, Figure 6.28 and 6.29, www.mitigation2014.org

⁵ Niklas Höhne, Michel den Elzen & Donovan Escalante (2014) Regional GHG reduction targets based on effort

sharing: a comparison of studies, Climate Policy, 14:1, 122-147, DOI:10.1080/14693062.2014.849452

Targets for Economies in Transition (EIT) would be approximately 2/3 of current levels. Emissions targets in Asia would be similar to current levels, for the Middle East and Africa (MAF) slightly above the 2010 level and in Latin America (LAM) well below the 2010 level (Option "Average"). Compared to the "global least cost" option, developing countries as a group would have to reduce less: their mitigation potential is larger than their responsibility and capability.

To cover the extremes of the spectrum, we also show the results for two categories of approaches to share reductions. One extreme approach is "equal cumulative per capita emissions", i.e. equal carbon budgets for countries. In this case, developed countries would have to reduce significantly more, because they have already used most of their per capita carbon budget in the past.

Another extreme approach is sharing emission reductions according to capability, which is defined as equal mitigation costs per GDP. In this case, developed countries would have to reduce a lot less, but still more than the 30% we started from.

When the regions are added up to groups of Annex I and non-Annex I countries, Annex I countries will need to reduce emissions beyond the 30% average under all options. Some approaches suggest very strong additional reductions (Table 3).

A related question is where international financial flows should support mitigation actions. Trading of emission allowances may be necessary as expected emission reductions of developed countries go beyond mitigation potentials.

Option	Annex I			Non-Annex I			
	Total	OECD90	EIT	Total	LAM	MAF	ASIA
Relative to 2010							
Global least cost	-33% to -41%	-30% to -35%	-39% to -57%	2% to -32%	-25% to -75%	21% to -22%	2% to -27%
Average	-36% to -65%	-39% to -69%	-28% to -54%	-28% to 11%	-18% to -51%	-7% to 38%	7% to -31%
Equal cumulative per capita	-81% to -85%	-82% to -85%	-80% to -85%	1% to -12%	-35% to -75%	n.a.	10% to -15%
Capability	-26% to -48%	-28% to -49%	-23% to -47%	8% to -41%	-15% to -58%	-7% to 48%	-1% to -49%
Relative to 1990							
Global least cost	-39% to -47%	-26% to -31%	-60% to -71%	20% to 80%	-14% to -71%	62% to 152%	37% to 90%
Average	-42% to -68%	-35% to -67%	-52% to -69%	26% to 95%	-6% to -44%	93% to 189%	29% to 100%
Equal cumulative per capita	-83% to -86%	-81% to -84%	-86% to -90%	56% to 78%	-25% to -71%	n.a.	58% to 105%
Capability	-33% to -53%	-23% to -46%	-48% to -65%	4% to 90%	-2% to -52%	94% to 210%	-4% to 85%

Table 3: 2030 Regional distribution of emission reductions for illustrative cases (relative difference to 1990 and 2010 emissions in 2030) staying within atmospheric GHG concentrations keeping temperature increase below 2°C above preindustrial levels. As there is no data for MAF, we use the same reduction as in the second option for this region when adding up the total non-Annex I. The same exercise could be done for 1.5°C, however data for sharing efforts under these scenarios are less available.

Source: Own elaboration based on data from Höhne et al. 2013

Changing the negative trend: Reversal of current re-carbonisation is critical - and possible

From 2000-2010, the energy sector saw a reversal of the decarbonisation trend that took place over the preceding 30 years from 1970 - 2000.

This is a critical observation compared with the fact that global CO₂ emissions from energy and industry will have to decrease to zero around 2060 to keep warming below 2°C as shown in Figure 2 above.

The IPCC's interpretation of this development is that economic growth and population

consumption of final goods per capita, which is directly linked to GDP growth.

Therefore reducing GDP growth in order to meet a climate target is an option of last resort for these models. The only parameters that can actually be changed are therefore carbon intensity and energy intensity. Achieving the 2°C targets hence requires substantial efforts in these two areas.

Carbon intensity

Figure 5 illustrates how carbon intensity has increased over the past ten years. The figure shows historical development of carbon intensity from 1970 to 2010. It also draws the

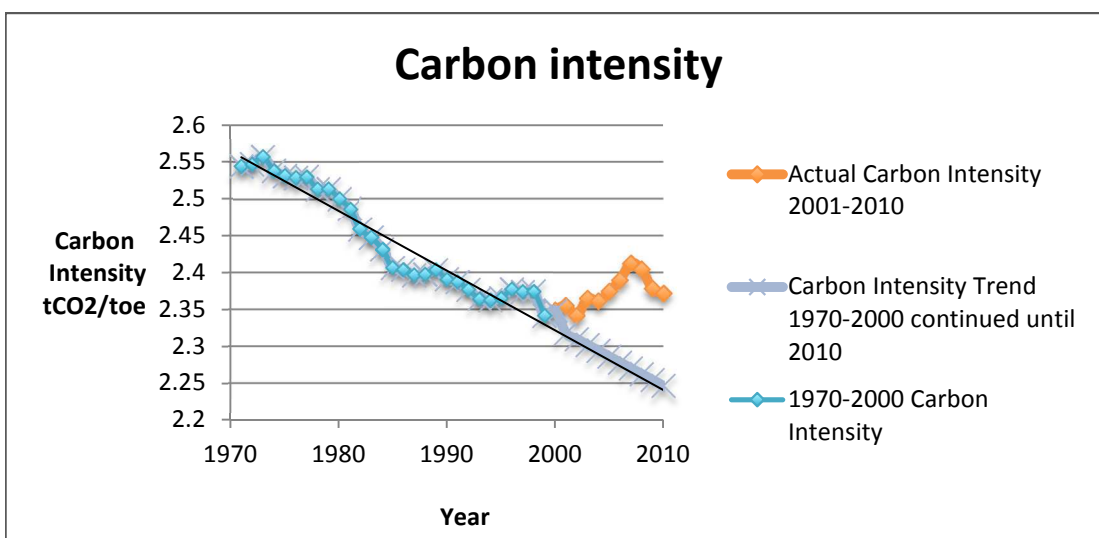


Figure 5: Carbon intensity over the period 1970-2010, actual and corrected to fit the historical trend from 1970-2000. Source: Own calculation based on IEA numbers.

continue to be the most important drivers of the increase in CO₂ emissions from fossil fuel combustion.

While it is true that population and GDP are responsible for the largest absolute changes in decadal CO₂ emissions, both these parameters cannot be “improved” like carbon intensity and energy intensity can.

On the one hand population is an exogenous driver to the models that calculate the emission scenarios. On the other hand, the goal of these models is to maximise

line for the continued trend from 1970 – 2000 to 2010, to show the significant deviation from the previous trend.

CAT's assessment finds that about 80% of the accelerated increase in CO₂ emissions **in the period 2000 – 2010 is due to a reversal of the historical decarbonisation trend**⁶.

Increasing emission reductions in the energy sector means reducing the carbon intensity of the energy sector, i.e. the amount of carbon emissions to energy use.

⁶ These 80% are the share of additional increase in emissions from 2000 – 2010 compared to the emissions trend from 1970 – 2000 that can be explained by the reversal of in carbon intensity. 83% of this additional

increase, i.e. the increase above the trend from 1970-2000, is explained by carbon intensity, not population growth or GDP.

Figure 6 describes what values are required for carbon intensity from now until 2050 in order to stay below the 2°C pathway with 66% probability. From the figure, it becomes clear

that carbon intensity rates will have to decrease rapidly in the coming decades: increasing to 3% annually by 2030 and close to this level through the 2040s, before

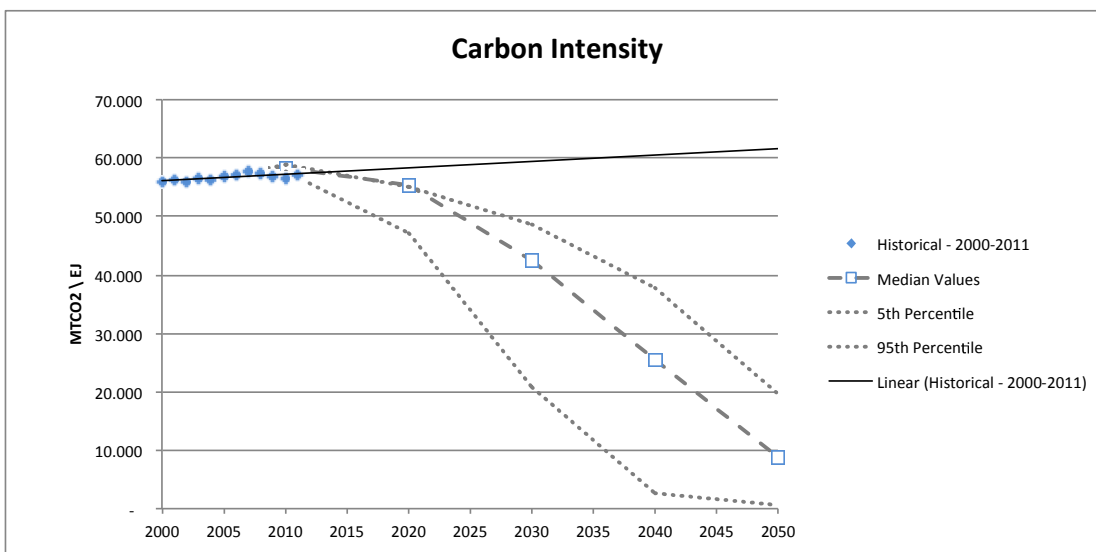


Figure 6: Carbon intensity 2000 – 2050, historical and projected. The solid line shows the trend for 2000-2010 if continued up to 2050. The dotted line shows carbon intensity compatible with 2°C. Source: Own estimates based on IEA and the IPCC database.

gradually reducing to 1.6% annually in the 2050s.

The energy sector is decarbonised at the point when global carbon intensity, i.e. total CO₂ emissions from energy and industry related to global energy consumption, approach zero⁷.

Rapid shifts are possible

Examples from the past show that transformative processes can move faster than initially expected.

Increase of renewable energy: Costs of renewable energy have declined dramatically over the last years and much faster than previously expected. One exceptional example is the decline of costs for solar photovoltaic. Some renewable energy technologies have already achieved market competitiveness. In 2012, renewables made up **just over half of total net additions to**

electric generating capacity from all sources in 2012⁸. This could be the start of a new positive trend paving the way to a full decarbonisation of the energy sector. In fact, a low-carbon world requires 100% of net additions from carbon-neutral technologies and phase out of fossil fuel-based power plants. This transition has been much faster than expected, the International Energy Agency has constantly underestimated the growth of renewable energy: Since 2006, the renewable capacity projections had to be increased with each version of the World Energy Outlook to reflect real developments.

Efficient lighting: Also the transition to very efficient lighting was faster than predicted: 55 countries have agreed to phase out inefficient lighting by 2016 under the initiative En.lighten and are implementing concrete actions to

⁷ With the Kaya identity, a decomposition method aimed at analysing emission scenarios for CO₂ emissions from energy and industry, we can investigate what the required pathways for energy intensity and carbon intensity should be in order to stay below 2°C (and 1.5°C). GDP and population are here considered as external drivers for

reasons explained above.

⁸ <http://www.ipcc-wg3.de/assessment-reports/fifth-assessment-report>

meet this target⁹ The IPCC expects the very efficient LEDs to become the most widely used light source in the future¹⁰. Some global lighting technology providers have switched entirely to very efficient LEDs.

Car standards/electro mobility: Various countries have put in place or increased the ambition of efficiency or emission standards for cars in the last years. Important examples are the US, the EU, Japan and China. The EU with the globally strongest standard is overachieving it. The Global Fuel Economy Initiative, founded in 2009, promotes the improvement of the energy efficiency of vehicles globally to 50% of current energy intensity.¹¹ An electric car is now in the palette of each large car manufacturer, unthinkable a few years ago. They expect this technology to be the future.

US action on existing power plants an important but, taken alone, insufficient step to meet its pledge

The US Environmental Protection Agency (EPA) announced on 2 June 2014 a new regulation that will **reduce GHG emissions from the electricity sector by 30% below**

2005 levels by 2030. This is a first regulation from the US authorities for regulating CO2 emissions from the electricity sector on the federal level. Until this date, comprehensive policies that reduce GHG emissions from power plants have only been implemented at the state level. However, it is insufficient to meet its pledges of 17% reduction from 2005 emissions¹² of all greenhouse gas emissions by 2020 (equivalent to about 4% below 1990 levels by 2020) and is inconsistent with their long-term target of 83% below 2005 level by 2050 (equivalent to about 80% below 1990 levels by 2050)(Figure 7).

Furthermore, based on the CAT assessment here, 2030 national emissions would be around 5% **above** 1990 levels (or 10 % below 2005 levels). These levels are far above those required for a 2°C pathway: the CAT has calculated from the IPCC AR5 scenarios that reductions for the Annex I countries in 2025 and 2030 are 25-55% and 35-65% **below** 1990 levels respectively for an equity scenario based on relative capability to mitigate.

The Clean Power Plan addresses emissions from the electricity sector only, which is a major contributor to the USA's total GHG emissions. In 2012, around one third of the

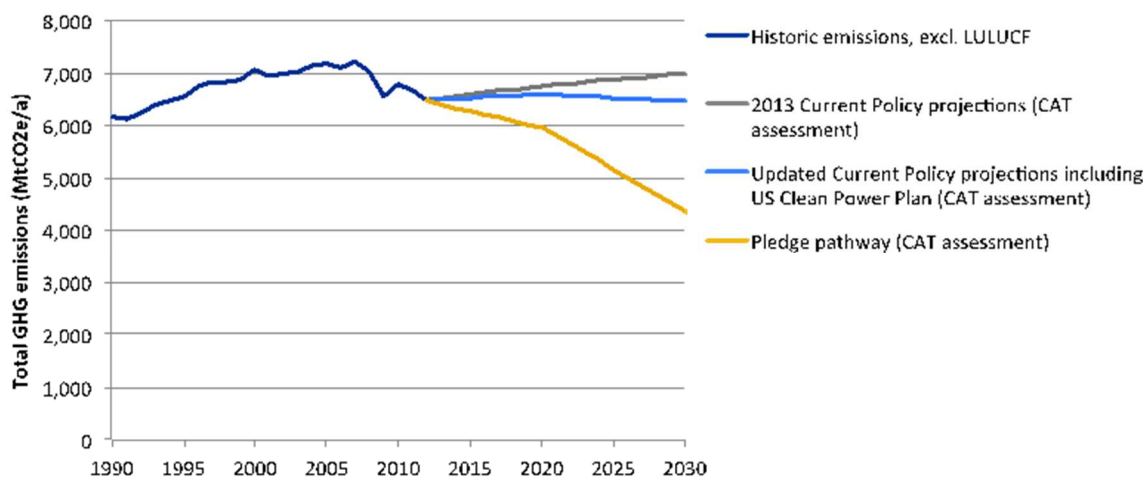


Figure 7: GHG emissions of the USA under different scenarios. Source: Own calculations and CAT update 2013.

⁹ <http://www.enlighten-initiative.org>

¹⁰ <http://www.ipcc-wg3.de/assessment-reports/fifth-assessment-report>

¹¹ <http://www.globalfueleconomy.org>

¹² US 2005 emissions were 16% above 1990 levels.

USA's total emissions of 6488 MtCO₂e originated from the power sector¹³. The new proposed regulation for emissions of electric power plants in the USA will bring GHG emissions down by around 200 MtCO₂e/a in 2020 compared to trends without this regulation. This will help the USA to implement its pledge, but will not be sufficient to close the full gap of around 700 MtCO₂e between recent trends and the pledge from earlier assessments¹⁴ of the climate action tracker.

Under the Copenhagen Accord, the USA has announced a long-term target of reducing total GHG emissions: -83% below 2005 in 2050. This target would be just within the

range of the USA's emissions compatible with 2°C.¹⁵ In order to be on track to meet their long-term target, the US GHG emissions in 2030 would have to be about 39% below 2005 levels (equivalent to 29% below 1990 levels).

Linearly extrapolating the proposed target for emissions from the electricity sector (30% below 2005 in 2030) into the future would mean that emissions reach minus 54% in 2050 and zero by 2090. This would be too late to reach the long-term pledge of the USA of -83% of all greenhouse gas emissions by 2050.

We calculate a reduction below BAU of approximately 0.5 GtCO₂e in 2030 and decrease of 726MtCO₂e/a from

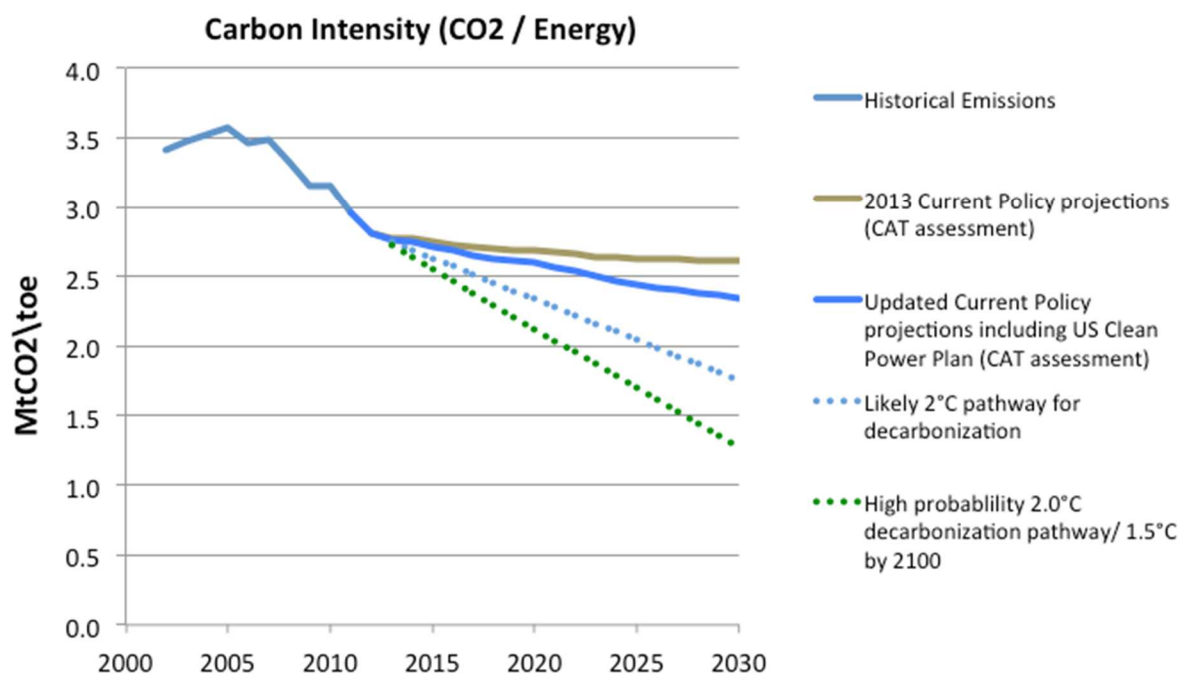


Figure 8: Carbon intensity for the USA historically and under different scenario projections, including the estimated effects of the recently announced Clean Power Plan Proposed Rule.

¹³ In several analyses of the EPA plan a share of 38% was used. This figure arises when including carbon removals from forestry into the US total emissions.

¹⁴

<http://climateactiontracker.org/publications/publication/154/Analysis-of-current-greenhouse-gas-emission-trends.html>

¹⁵ According to Höhne et al. (2013) 'North America's' fair share for 2050 is at minimum an 80% reduction relative to 2010. The USA's 83% reduction below 2005 pledge is equivalent to an 82% reduction below 2010 levels. The 2050 pledge is therefore just within the range of effort-sharing proposals. If all regions only meet the top end of the range, we will not reach the 2 degree goal.

2491MtCO₂e/a in 2005. Assuming a linear decrease from today on, this would mean emissions of 1950 MtCO₂e/a in 2020, in comparison to 2120 MtCO₂e/a in the most recent projections of the USA¹⁶.

The **Clean Power Plan** is part of President Obamas Climate Action Plan and covers the complete electricity sector, suggesting measures in the areas of efficiency on the supply and demand side, renewable energy, and other low-carbon technologies. It will provide options for states to meet the reduction goals in a “flexible manner.”¹⁷

Clean Power Plan decarbonisation rates far from those needed for 2°C

Over the past 10 years, there has been a substantial decline in CO₂ emissions in the US energy sector. The decline corresponds to a

15% decrease in carbon intensity from 2002 to 2012 (about 1.4% per annum improvement), primarily as a result of a fuel switch from coal to gas. The new policy implies an economy wide decarbonisation rate of about 0.9% per annum, significantly lower than that achieved in the last decade. This is not as fast as is needed for a 2°C decarbonisation pathway, and could therefore mean an actual deterioration of the current decarbonisation rate, illustrated by the ‘historical emissions’ in the figure below. The CAT team has calculated the required global carbon intensity pathways for the period 2020 – 2100 consistent with a 2°C pathway.

¹⁶ [http://www.eia.gov/forecasts/aeo/pdf/0383\(2014\).pdf](http://www.eia.gov/forecasts/aeo/pdf/0383(2014).pdf)

¹⁷ <http://www2.epa.gov/sites/production/files/2014-05/documents/20140602fs-overview.pdf>

Background on the Climate Action Tracker

The "Climate Action Tracker", www.climateactiontracker.org, is a science-based assessment by Ecofys, Climate Analytics and the Potsdam Institute for Climate Impact Research (PIK) that provides regularly updated information on countries' reduction proposals.

The Climate Action Tracker¹⁸ reflects the latest status of the progress being made at international climate negotiations. The team that performed the analyses followed peer-reviewed scientific methods (see publications in Nature and other journals)¹⁹ and significantly contributed to the UNEP Emissions Gap Report²⁰.

The Climate Action Tracker enables the public to track the emission commitments and actions of countries. The website provides an up-to-date assessment of individual country pledges about greenhouse gas emission reductions. It also plots the consequences for the global climate of commitments and actions made ahead of and during the Copenhagen Climate Summit.

The Climate Action Tracker shows that much greater transparency is needed when it comes to targets and actions proposed by countries. In the case of developed countries, accounting for forests and land-use change significantly degrades the overall stringency of the targets. For developing countries, climate plans often lack calculations of the resulting impact on emissions.

Contacts

Dr. Niklas Höhne (n.hoehne@ecofys.com) - Director of Energy and Climate Policy at Ecofys and lead author at the IPCC developed, together with Dr. Michel den Elzen from MNP, the table in the IPCC report that is the basis for the reduction range of -25% to -40% below 1990 levels by 2020 that is currently being discussed for Annex I countries.

Dr. h.c. Bill Hare (bill.hare@climateanalytics.org) (PIK and Climate Analytics) was a lead author of the IPCC Fourth Assessment Report, is guest scientist at PIK and CEO at Climate Analytics.

Marie Lindberg (marie.lindberg@climateanalytics.org) leads the CAT project team at Climate Analytics

¹⁸ www.climateactiontracker.org

¹⁹ e.g. <http://www.nature.com/nature/journal/v464/n7292/full/4641126a.html> and <http://iopscience.iop.org/1748-9326/5/3/034013/fulltext>

**ECOFYS**

sustainable energy for everyone

Ecofys – experts in energy

Established in 1984 with the mission of achieving “sustainable energy for everyone”, Ecofys has become the leading expert in renewable energy, energy & carbon efficiency, energy systems & markets as well as energy & climate policy. The unique synergy between those areas of expertise is the key to its success. Ecofys creates smart, effective, practical and sustainable solutions for and with public and corporate clients all over the world. With offices in Belgium, the Netherlands, Germany, the United Kingdom, China and the US, Ecofys employs over 250 experts dedicated to solving energy and climate challenges.

www.ecofys.com

Climate Analytics

CLIMATE ANALYTICS is a non-profit organization based in Potsdam, Germany. It has been established to synthesize climate science and policy research that is relevant for international climate policy negotiations. It aims to provide scientific, policy and analytical support for Small Island States (SIDS) and the least developed country group (LDCs) negotiators, as well as non-governmental organisations and other stakeholders in the ‘post-2012’ negotiations. Furthermore, it assists in building in-house capacity within SIDS and LDCs.

www.climateanalytics.org

Potsdam Institute for Climate Impact Research (PIK)

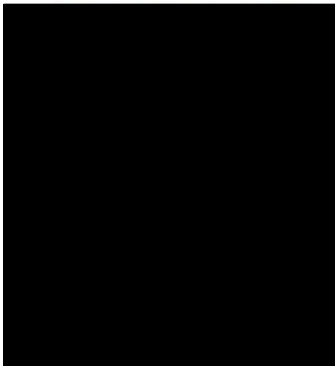
The PIK conducts research into global climate change and issues of sustainable development. Set up in 1992, the Institute is regarded as a pioneer in interdisciplinary research and as one of the world’s leading establishments in this field. Scientists, economists and social scientists work together, investigating how the earth is changing as a system, studying the ecological, economic and social consequences of climate change, and assessing which strategies are appropriate for sustainable development.

www.pik-potsdam.de

RECEIVED

JUN 24 2015

CITY OF MORENO VALLEY
Planning Division



Dennis Bruce Sibley

[REDACTED]
Moreno Valley, CA 92557
[REDACTED]

23 June 2015

Planning Commission
City Council of Moreno Valley
14177 Frederick Street
Moreno Valley, CA 92553

Dear Sirs:

I am a resident of Moreno Valley since 1986.

I support the World Logistics Center.

Unlike housing or tax supported projects, the World Logistics Center, a for-profit endeavor, will increase tax revenues that will outpace the strain on current services that other projects will create.

I request the World Logistics Center be approved.


DENNIS BRUCE SIBLEY

Grace Espino-Salcedo

Subject: RE: World Logistics Center

From: Elie Chouinard [REDACTED]
Sent: Sunday, June 21, 2015 12:07 PM
To: City of Moreno Valley
Cc: wlc@highlandfairview.com
Subject: World Logistics Center

June 21, 2015

City of Moreno Valley Planning Commission
City of Moreno Valley Council Members

My name is Elie Chouinard. I am a resident of Moreno Valley and have been since 1986.

I want the record to show that I am in favor of the World Logistics Center being built in Moreno Valley.

I believe it is a viable solution to our current and future economic, environmental and social issues.

A project of this size and scope needs to be researched and gone over with due diligence.

From what I understand there are no justifiable reasons why this project should not go forward.

Opportunity is knocking. Now is the time for Moreno Valley to boldly enter into this win win situation and finally break the mold of past anti-progress decisions.

Sincerely,

Elie Chouinard
[REDACTED]

Moreno Valley, Ca 92557-3030

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Grace Espino-Salcedo

Subject: RE: World Logistics Center

From: [REDACTED]
To: Moreno Valley Planning Commissioners
Subject: World Logistics Center
Date: Mon, 23 Jun 2015

Dear Moreno Valley Planning Commissioners,

We are writing to let you know that as long-time residents of Moreno Valley, we oppose the World Logistics Center where it is planned in a residential zone in District 3, and we are very concerned with the very vague Development Agreement between Highland Fairview and the City of Moreno Valley. The term used in the Development Agreement, "Fair Share," is a very vague term, as is another term used, "reasonable." The Development Agreement needs to be sent back to the drawing board for much more specific terms. Also, there is nothing in the Development Agreement that precludes Highland Fairview from holding much of the land for speculation for many years, or selling the land to a firm which wants to do something very different or damaging to Moreno Valley, for example, store and transport toxic substances that could spill on our 60 freeway and roads. The Development Agreement may cause us to get something very different from what is expected, and in fact it says right in the Development Agreement that the Development Agreement ITSELF can be changed!

We are also speaking of a very long period of time for a project. If the City of Moreno Valley goes ahead with this project (which we oppose as we sincerely believe it will turn out to be a huge, catastrophic mistake,) we believe at a minimum, it would be wiser for the City to instead to re-zone a smaller piece of land as needed, and give Mr. Benzeevi approval to build only one warehouse at a time, rather than committing all that land to one use at once, and so MANY YEARS IN ADVANCE of the actual building and use.

We feel the City of Moreno Valley is looking for a quick revenue source from property taxes from the rezoning of all the property from residential to industrial. Yes, that rezoning may increase the revenue from property taxes right after the rezoning, but at a terrible long-term price of irretrievably damaging the potential of the city to use the land for uses that would ENHANCE rather than destroy the quality of the city.

Yes, the WLC buildings may be energy efficient, but that large of a number of huge warehouses and related big-rig trips on the 60-215 and city roads will be disastrous to the city. It will literally be a "Hot Mess," greenhouse gas and pollution from trucks, and hot glaring pavement where people are trying to live. People will leave and property values will fall.

Committing all the City's resources of the future to constructing and maintaining infrastructure for the warehouses and big-rigs for the World Logistics Center, for the onramps and offramps, roads, and water use/treatment/the storm water pollution elimination system, (among other maintenance requirements,) will be so expensive that there will be no money left over for amenities for residents, which make a city a good place to live.

The infrastructure will be required not just in the project area, but FAR OUTSIDE of the project area. Our neighboring cities have already expressed opposition to the WLC, and will be very reluctant to help with any infrastructure. It will be an uphill battle to get funds to build and maintain infrastructure.

The City of Moreno Valley does not have the revenue to construct this massive infrastructure. In fact the city does not have enough money to keep its own internal residential roads in repair. Many of those City of MV roads are in very poor condition, with pot holes and big rifts, especially in District 4 and 5.

Tax increases for the infrastructure for the World Logistics Center will be greatly opposed, whether it is Measure A, gas tax, property tax increases or utility user tax. Residents should not have to pay increased taxes

for a project they do not want, and one that will vastly lower the quality of their lives with heavy traffic congestion. Most residents will resent a tax increase to pay for the WLC. Residents are still waiting for a new library from the funds that were supposed to give residents this small amenity (already spent.) The Riverside Transportation Commission has already publicly stated that they cannot get any more funds to widen the 60 freeway and there is a zero balance in the Federal Funds Account designated for work on our 60 freeway.

There is much opposition to this project from residents. Many residents I have spoken with do not feel comfortable coming to meetings and speaking openly, but they oppose the World Logistics Center.

Seemingly quick and easy solutions to monetary problems hardly ever work in the long-term. As I stated we want to enhance and improve our city, not cause it to deteriorate and property values fall and residents leave, similar to what happened in San Bernardino.

The FEIR had wildly different estimates for jobs. Lately one job for every 4,000 warehouse square feet appears to be the most updated estimate according to BJ Patterson and other logistics experts. That would immediately reduce the estimated jobs to 10,000. However, the EIR says it could be as low as 8,000, and these jobs may not go to Moreno Valley residents despite anyone's best effort. Since this project is so far into the future, the number of jobs will be greatly reduced further by Robotics development. The tenants are unknown and will probably transfer jobs as they are going to do what is economically best for them.

You should vote NO on this project. Please send the Development Agreement back as inadequate. This project needs closer study and more definite specifications. Thank you.

Sincerely,
Greg and Susan Billinger

June 25th, 2015

Moreno Valley Planning Commission, Moreno Valley City Council
 Re: WLC

This Project will destroy Moreno Valley.

It will convert a decades-old residential (“bedroom”) city into the worst kind of urban blight in a few short months.

There will be several thousand semi truck trips in an out of the City every day.

Our side streets will be clogged with Semis, and Fwy 60 will become a death run 24/7.

Your family will run with the Semis anytime they drive the 60; and your children will walk on side streets with Semis parked and/or cruising by; their health and safety at risk.

The major retailers not only use near new Semis, but also contract with independent truckers from all over the USA and Mexico which creates a policing issue.

Truckers sleeping in their rigs; drugs; prostitution; semi vs. auto accidents.

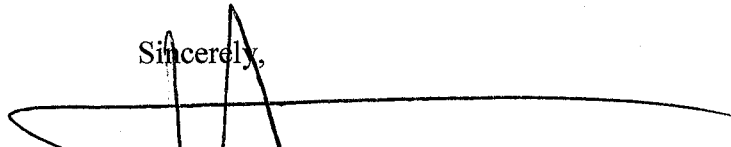
Now that the Benzeevi Three Stooges control the City Council, they will simply revise the General Plan/Zoning on a piecemeal basis to add even more warehouses; truck stops; truck washes; truck repair etc. eventually jumping the 60 moving East; quite literally gobbling up any and all undeveloped parcels.....owned by?

This urban cancer will grow over time, and obliterate a residential City with great promise, into the City of Commerce, City of Industry; Mira Loma...take your pick.

To the objective, ethical, thoughtful *bona fide* residents of the City of Moreno Valley who sit on the Planning Commission, stand up for your home, your family, your City.

To those who are complicit in the WLC, a Mad Hatter’s folly, because you believe you have a finger in the Benzeevi pie; shame on you; and may your home stand and family live in the shadow of a massive warehouse and all that encompasses.

Sincerely,



Howard L. Grady
 A *bona fide* 35 year resident
 of Moreno Valley

**The statements made in this missive are protected by the First Amendment to the US Constitution; Article 1, Sections 1 and 2 of the California Constitution; and the California Anti-SLAPP Statute, California Code of Civil Procedure Sec 425.16 et.seq.

Grace Espino-Salcedo

Subject: RE: Comments regarding the World Logistics Center PEIR

From: Ian MacMillan [REDACTED]
Sent: Wednesday, June 24, 2015 5:05 PM
To: Mark Gross
Subject: Comments regarding the World Logistics Center PEIR

Mark,
Comments regarding the World Logistics Center project are attached to this email. We will also send a hard copy of this letter via US Mail. Should you have any questions, don't hesitate to contact me.

Regards,
Ian MacMillan

Planning and Rule Manager
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

[REDACTED]

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 • www.aqmd.gov

E-Mailed: June 24, 2015
markg@moval.org

June 24, 2015

Mr. Mark Gross
Community and Economic Development Department
14177 Frederick Street
Moreno Valley, CA 92553

Final Program Environmental Impact Report (Final PEIR) for the Proposed World Logistics Center Project

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to submit comments on the Final PEIR for the World Logistics Center Project. SCAQMD staff appreciates the time that city staff and the project applicant have taken to meet with us to discuss this project and the inclusion of some mitigation measures in the Final PEIR, such as the requirement for 100% Tier 4 construction equipment. However, we continue to have significant concerns about this project that were raised in previous comments, including those not adequately addressed in the Final PEIR.¹ Most importantly, given the magnitude of the air quality impacts, the project must provide more substantial mitigation for the significant emissions from the additional on-road truck trips generated by this project.

SCAQMD staff recognizes the critical role that warehousing and goods movement have in our regional and national economy. While there has been tremendous growth in warehousing in our region over the past several years to accommodate the needs of the logistics sector, the scale of the proposed World Logistics Center is unprecedented. The 40.6 million square feet of new warehousing in this single project make up almost ten percent of the total new warehousing space projected to be needed in the region by 2035², and also represents an area that is bigger than 32 individual cities in our jurisdiction. As a further indication of the scale of this project, the estimated ~14,000 trucks per day serving this project at project build out will be more than half the total number of trucks that currently visit the entire Port of Long Beach³. Below we present the major air quality issues that the lead agency must address before it considers approving this project.

¹ <http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2012/march/world-logistics-center-specific-plan.pdf>
<http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2012/may/world-logistics-center-specific-plan-may-2012.pdf>
<http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2013/april/world-logistics-center.pdf>
<http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/june/fpeirworldlog.pdf>

² Industrial Space in Southern California: Future Supply and Demand for Warehousing and Intermodal Facilities, Southern California Association of Governments (2010)
<http://www.freightworks.org/DocumentLibrary/Comprehensive%20Regional%20Goods%20Movement%20Plan%20and%20Implementation%20Strategy%20-%20Regional%20Warehousing%20Needs%20Assessment%20Final%20Report.pdf>

³ Based on the most recent emission inventory: <http://www.polb.com/civica/filebank/blobload.asp?BlobID=12246>

Inadequate Mitigation of Trucking Emissions

While the proposed project includes a seemingly stringent requirement to only allow trucks that meet the 2010 emissions standard onsite, in reality this measure will do very little to reduce air quality impacts beyond current regulatory requirements. Due to the state Air Resources Board's existing Truck and Bus Regulation, by the time the first warehouse will become operational (likely no sooner than 2018), approximately 75 percent of all truck miles in our region will already be driven by trucks meeting the 2010 emissions standard. By 2023 (when half of this project is still unbuilt), the proposed mitigation will affect no more than about 1 percent of the project's trucking emissions from then onwards.

As currently proposed, the mitigated emissions from this project will reach between about one half and three quarters of a ton of nitrogen oxide (NOx) emissions each day for the majority of the project's life.⁴ To put this in perspective, this level of emissions is comparable to facilities in the top ten largest stationary sources of NOx in the air basin (e.g., power plants or refineries). Despite this substantial air quality impact, the proposed mitigation from this project does not include all feasible measures to reduce impacts, nor does it provide a fair-share reduction in NOx to meet air quality standards, as demonstrated below.

In order to meet federal requirements to achieve air quality standards, our air basin must reduce NOx emissions beyond existing regulations by up to 65% by 2023 and up to 75% by 2032⁵. If these ozone and particulate matter air quality standards are not achieved, the region faces two significant challenges. First, we will continue to experience poor air quality and the resulting health impacts, including lung damage and premature deaths. Second, federally mandated sanctions will be imposed, including higher operating costs for businesses with air permits and more importantly for this project, loss of federal transportation funding. It is for these reasons that we are disappointed that this project does not propose more measures to mitigate its air quality impacts. This project can and must do more.

The unprecedented scale of this project requires all feasible mitigation measures for the large amount of NOx emissions that will be generated by the project. Although the PEIR investigated the truck technologies currently utilized by the ports of Los Angeles and Long Beach to determine what is feasible to implement for this project today, it ignored the more important actions taken by both ports to encourage and implement newer technologies in the future. For example, because vehicle technology is evolving rapidly, both ports have programs in place to demonstrate and deploy newer truck tailpipe and infrastructure technologies as they become available.⁶ These actions are implemented both as mitigation measures within individual CEQA projects⁷, and as measures separate

⁴ NOx is a key ingredient to both ozone and particulate matter formation in the atmosphere, two pollutants for which the air basin and the Inland Empire in particular do not meet air quality standards.

⁵ Based on estimates from the 2012 Air Quality Management Plan.

⁶ <http://www.cleanairactionplan.org/>

⁷ See the following Mitigation, Monitoring, and Reporting Programs for examples of how projects have incorporated future technology reviews and implementation into project approvals:

from development projects. This approach has proven to be generally successful to ensure continued growth at the ports by bringing stakeholders together to build consensus regarding feasible mitigation measures without excessive litigation and corresponding delays, subsequently resulting in sizable air quality improvements.

The Final PEIR's response to SCAQMD staff and ARB staff comments regarding the implementation of an alternative technology truck phase-in was not sufficient and did not consider the feasible measures that are, or soon will be, available to implement new technologies early and throughout the life of the project. It is inappropriate to simply dismiss as 'speculative' the comments of two public agencies who have considerable expertise in truck engine technologies and who have devoted considerable financial resources to ensure that these technologies will be commercially available in the time frames specified. Establishing a program of enforceable mitigation that actually will reduce emissions for most of the project's life is particularly important at this juncture because the PEIR is being used to approve a Development Agreement, which may not receive any further environmental review.

More specifically, the lead agency and project applicant should consider developing strategies that are consistent with ARB's Draft Sustainable Freight Strategy (SFS) document⁸. For example, the project could include a project-wide cap (e.g., SFS page 45) that declines through time as newer truck engine types become commercially available and/or are required to be manufactured per future regulations. Today there are already many trucks that are commercially available that have certification levels that are below ARB's current NOx standard (Attachment A). Further, trucks that meet ARB's lowest Optional NOx standard (90% lower than the current standard) are expected to be commercially available in the 2018 timeframe, very early in the life of the project (Attachment B). Lastly, engine technologies that may achieve even greater reductions in emissions are being demonstrated widely today for potential commercialization well before project buildout (Attachment C).

Requested Modification to PEIR⁹: SCAQMD staff strongly recommends that the PEIR implement a program that includes elements such as:

- Steps to implement new truck and infrastructure technologies as a part of the project based on periodic and frequent technology/feasibility reviews as individual buildings are leased or sold.
- Project-wide or building-specific emissions caps that decline through time. The lowering of emission caps could be tied to the advancement of engine technologies. For example, in a set period of time after the commercial introduction of trucks meeting ARB's lowest Optional NOx Standard the emission caps could be reduced by a certain percentage. These caps could be implemented as individual buildings are leased or sold.

<http://www.polb.com/civica/filebank/blobdload.asp?BlobID=6261> (e.g., MMAQ-8 & 25)

http://www.portoflosangeles.org/EIR/YTI/FEIR/MMRP_FINAL.pdf (e.g., MMAQ-8 & LMAQ-1 & 2 & 4)

⁸ Draft document available here: http://www.arb.ca.gov/gmp/sfti/Sustainable_Freight_Draft_4-3-2015.pdf

⁹ SCAQMD staff is available to help craft detailed revisions to the project's mitigation on an expedited basis.

- Similar to the SCAQMD Surplus Off-road Option for NOx (SOON) program for owners of off-road vehicles¹⁰, tenants that occupy buildings in the project site should be required to apply in good faith for incentive funding assistance¹¹ to replace and retrofit older trucks. Should awards be granted, the applicant must also be required to use them.

Misleading Discussion of Potential Health Risks

The PEIR misinterprets and then relies heavily on a single study published by the Health Effects Institute (HEI) to determine that “*new technology diesel exhaust does not cause cancer.*” (PEIR pg. 4.3-1). The PEIR should not make such sweeping conclusions based on a single study. While the study identifies real reductions in the mass of particulate matter with newer truck technologies, the study size was too small to identify potential cancer effects for exposures similar to what people will experience from this project. This study did not, nor was it designed to, evaluate the question of whether the toxicity per unit mass of diesel exhaust particulate (e.g., the cancer potency factor) was different compared to older engines. At the concentrations studied, one would not expect to find any tumors given the number of animals used, even if the carcinogenic potency of the new technology particulate emissions were the same as that of the particulate from the older technology engines. From the study results, it is not possible to make any conclusions on the relative carcinogenic potency of diesel exhaust particulates.

Further, the state Office of Environmental Health Hazard Assessment (OEHHA) is charged with determining the cancer potency factors of all pollutants for use in Health Risk Assessment (HRAs) throughout the state. The cancer potency factors from OEHHA have been used in the HRA prepared for this EIR, and the emission factors from the state Air Resources Board’s EMFAC model already account for the reduced diesel exhaust coming from 2010 trucks. Therefore, the EIR’s conclusions regarding diesel exhaust from this single HEI study are wholly unsupported by the volume of studies that OEHHA and ARB rely on to determine the carcinogenicity of diesel particulate matter coming from 2010 trucks.

We note that in response to ARB staff’s comments expressing concern about the misuse of the HEI study, the PEIR consultant provided a response using a partial quote taken from the study’s Executive Summary.

RESPONSE TO ARB STAFF’S CONCERNS ABOUT THE HEI STUDY IN
JUNE 10, 2015 MEMO FROM LSA ASSOCIATES TO MORENO VALLEY
PLANNING DEPARTMENT.

“The primary conclusion of the HEI ACES is ‘that the [New Technology Diesel Exhaust] would not cause an increase in tumor formation or substantial toxic health effects.’ (HEI ACES Report p.3)”

SCAQMD staff is concerned that the lead agency is selecting this quote out of the full context of the report and ignoring an important aspect of the HEI publication process, the

¹⁰ <http://www.aqmd.gov/home/programs/business/business-detail?title=off-road-diesel-engines&parent=vehicle-engine-upgrades>

¹¹ For example, Carl Moyer, Proposition 1B, VIP, or other similar funding programs.
<http://www.aqmd.gov/home/programs/business/business-detail?title=vehicle-engine-upgrades>

independent peer review. Importantly, in the Commentary prepared by HEI's own independent review panel, the peer reviewers felt it necessary to modify the quote from above to the statement below.

HEI PEER REVIEW PANEL CONCLUSION ON STUDY (PAGE 165 OF THE HEI STUDY) (**EMPHASIS ADDED**):

*“Using appropriate statistical approaches to analyze the data, the investigators in this core study confirmed the a priori hypothesis, namely, that lifetime exposure to [New Technology Diesel Exhaust] **at the concentrations studied** would not cause an increase in tumor formation or substantial toxic health effects in rats, although some biologic effects might occur.”*

The HEI study as designed cannot determine whether diesel exhaust from the World Logistics Center project would pose a potential cancer risk in the surrounding community. The study does not contain sufficient information to determine whether 2010 diesel truck exhaust can cause cancer in humans. The number of animals in the study was too low to detect any cancer risk that would be expected at the concentrations evaluated. Therefore in SCAQMD staff's expert opinion, the whole of the scientific literature leads us to conclude that 2010 diesel truck exhaust be considered carcinogenic.

Requested Modification to PEIR: SCAQMD staff strongly recommends that the lead agency not rely on an approach that cherry picks and misuses a single study to conclude that diesel exhaust emitted from this project would not be carcinogenic. In particular, this study – which contradicts the general consensus of air quality experts that diesel exhaust is a carcinogen – should not be used as substantial evidence to support a Statement of Overriding Considerations. For significance determinations, the PEIR instead should only rely on the HRA that was already prepared following standard procedures to account for reduced emissions from 2010 trucks. If the lead agency chooses to keep references to the HEI study as part of the PEIR, then it should only be as supplementary information and characterized correctly.

Conclusion

As demonstrated in this letter, the project's mitigation is insufficient, but the city still has several options to improve this project and the PEIR prior to approval that would reduce the substantial and significant impacts on air quality. The choice is not about promoting jobs OR promoting clean air. It is about promoting a future that provides both. It has been done before and it should be done for this project.

Mr. Mark Gross

6

June 24, 2015

We appreciate your willingness to consider these comments, and we look forward to continuing to work with you in developing strategies that can be implemented to reduce the air quality impacts of the World Logistics Center project. If you have any questions, don't hesitate to contact me at (909) 396-3244.

Sincerely,



Ian MacMillan
Planning & Rules Manager

ATTACHMENT A1
Trucks That Have Certification Levels That Are Lower Than the Current NOx Standard of 0.2 (g/bhp-hr)

ARB Executive Order	OEM/Engine MFR	Engine Family	Heavy-Duty Engine Model	Fuel Type	Liters	Max BHP	Low BHP	NOx Cert. Level (g/bhp-hr)
A-364-0051	BAF	FBAFE06.83NN	V-10	CNG	6.8	285	285	0.100
A-364-0052	BAF	FBAFE06.89NN	V-10	CNG	6.8	242	242	0.050
A-338-0012	Capstone Turbine	FCSTH0.31NGL	Turbine	CNG		30kW	30kW	0.050
A-338-0013	Capstone Turbine	FCSTH0.51NGB	Turbine	CNG		65kW	65kW	0.050
A-338-0014	Capstone Turbine	FCSTH0.51NGH	Turbine	CNG		65kW	65kW	0.050
A-290-0148	Detroit Diesel Corp.	FDDXH14.8EAD	DD15	Diesel/SCR	14.8	505	455	0.090
A-290-0149	Detroit Diesel Corp.	FDDXH14.8EED	DD15	Diesel/SCR	14.8	560	455	0.090
A-290-0154	Detroit Diesel Corp.	FDDXH15.6GED	DD16	Diesel/SCR	15.6	600	475	0.070
A-010-1814-2	Ford Motor Company	FFMXE06.8BW5	F450/550 Chassis Cab; F650 Chassis Cab; Step Van; Motor Home	Gasoline	6.8	362	362	0.030
A-398-0012-1	Greenkraft, Inc.	FGKTE06.8FM1	V10	CNG	6.8	362	362	0.010
A-328-0068	IMPCO Technologies	FZ9XE06.0DCA	6.0L CNG	CNG	6.0	265	265	0.080
A-328-0069	IMPCO Technologies	FZ9XE06.8DC3	F- Series	CNG	6.8	308	308	0.080
A-328-0070	IMPCO Technologies	FZ9XE06.8DC2	E- Series	CNG	6.8	251	251	0.060
A-328-0074	IMPCO Technologies	FZ9XE06.8DC4	E- Series	CNG	6.8	251	251	0.060
A-400-0014	Landi Renzo USA	FLDRE06.8C10	F450/550 Chassis Cab; Step Van; Motor Home; F650 Chassis Cab	CNG	6.8	362	362	0.100
A-400-0018	Landi Renzo USA	FLDRE06.8B10	E450	CNG	6.8	362	362	0.080
A-415-0003-1	Power Solutions International	FPSIE08.8CNG	PSI CNG 235-180	CNG	8.8	235	180	0.100
A-415-0001-1	Power Solutions Intl	FPSIE08.8LPG	PSI LPG 270	LPG	8.8	270	270	0.100
A-344-0052-4	Roush Industries	FRIIE06.8BW5	Bluebird Vision School Bus: F450, 550, 650, Motor Home, Step Van	LPG	6.8	362	362	0.080
A-344-0056	Roush Industries	FRIIE06.8BWX	E450	LPG	6.8	305	305	0.090
A-242-0076	Volvo Powertrain Corp.	FVPTH10.8G01	MP7: 325E, 355E, 405E, 345A, 345C, 365C, 395C, 325M, 365M, 405M; D11H: 325, 355, 365, 385, 405	Diesel/SCR	10.8	405	325	0.060
A-242-0077	Volvo Powertrain Corp.	FVPTH12.8G01	D13H: 375, 405, 425, 435, 435P, 475, 500, 500P; MP8: 415 E, 415C, 425M, 445C, 445E, 455M, 505C, 505E	Diesel/SCR	12.8	505	375	0.060
A-242-0078	Volvo Powertrain Corp.	FVPTH16.1G01	D16H: 500, 550; MP10: 515M, 525C, 555M, 565C, 605C	Diesel/SCR	16.1	605	515	0.060

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER

ATTACHMENT A2
Heavy Duty Vehicles that Have Emissions Benefits Beyond NOx Standard of
0.2 g/bhp-hr That are Funded Through the State HVIP Program
https://www.californiahvip.org/docs/HVIP_Year4_EligibleVehicles.pdf

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Type: Utility

Aerial Boom Vehicle with JEMS: 16-20 kWh Lithium-Ion battery and 3000 PSI maximum hydraulic pressure

Chassis Model	TA50, AM55	TA50, TA60, AM55, AM55E
Gross Vehicle Weight	> 26,000	> 26,000
Vehicle Year/Engine Model Year	All	All
Exportable Power	N/A	> 3.0 kW
Year 4 ARB Preliminary Voucher Amount	\$20,000	\$22,000



 [PDF Spec Sheet](#)

Manufacturer: AMP Electric Vehicles

Type: Delivery

E-100 Workhorse Zero-Emissions Walk-In Van

Gross Vehicle Weight	19,501-26,000
Vehicle Year/Engine Model Year	2013/2013
Year 4 ARB Preliminary Voucher Amount	\$90,000



 [PDF Spec Sheet](#)

Manufacturer: Autocar

Type: Refuse

Xpeditor E3 Refuse Vehicle with Cummins ISL9 Engine and Parker RunWise Advanced Series Hydraulic Hybrid Drive

Gross Vehicle Weight	38,001-66,000	38,001-66,000
Vehicle Year/Engine Model Year	2013/2012	2015/2012
Year 4 ARB Preliminary Voucher Amount	\$40,000	\$40,000



 [PDF Spec Sheet](#)

Manufacturer: BYD Motors

Type: Bus

40-Ft All Electric Zero-Emission Transit Bus

Gross Vehicle Weight	33,001-55,000	33,001-55,000
Li-Ion Battery Specification	324 kWh	324kWh
Vehicle Year/Engine Model Year	2014/2014	2015/2015
Year 4 ARB Preliminary Voucher Amount	\$95,000	\$95,000



 [PDF Spec Sheet](#)

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

60-Ft Articulated All Electric Zero-Emission Transit Bus

Gross Vehicle Weight	33,001-55,000
Li-Ion Battery Specification	547.5 kWh
Vehicle Year/Engine Model Year	2015/2015
Year 4 ARB Preliminary Voucher Amount	\$95,000

 [PDF Spec Sheet](#)



1.a

30-Ft All Electric Zero-Emission Transit Bus

Gross Vehicle Weight	>26,000
Li-Ion Battery Specification	182.5 kWh
Vehicle Year/Engine Model Year	2015/2015
Year 4 ARB Preliminary Voucher Amount	\$95,000

 [PDF Spec Sheet](#)



Manufacturer: EVI

Type: Delivery

EVI WI (Walk In)

Gross Vehicle Weight	14,001-19,500	19,501-26,000
Vehicle Year/Engine Model Year	2013/2013	2013/2013
Year 4 ARB Preliminary Voucher Amount	\$80,000	\$90,000

 [PDF Spec Sheet](#)



EVI MD (Medium Duty)

Gross Vehicle Weight	14,001-19,500	19,501-26,000	19,501-26,000
Vehicle Year/Engine Model Year	2013/2013	2013/2013	2014/2014
Year 4 ARB Preliminary Voucher Amount	\$80,000	\$90,000	\$90,000

 [PDF Spec Sheet](#)



Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Type: Delivery

195h Delivery Truck with Parallel Hybrid System

Delivery Type	Beverage Delivery	Package Delivery	Food Distribution	Liquid Propane Pick-Up & Delivery	Uniform & Linen Delivery	Other Delivery
Gross Vehicle Weight	14,001-19,500	14,001-19,500	14,001-19,500	14,001-19,500	14,001-19,500	14,001-19,500
Vehicle Year/Engine Model Year	2016/2015	2016/2015	2016/2015	2016/2015	2016/2015	2016/2015
	2015/2014	2015/2014	2015/2014	2015/2014	2015/2014	2015/2014
	2014/2013	2014/2013	2014/2013	2014/2013	2014/2013	2014/2013
Year 4 ARB Preliminary Voucher Amount	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000



[PDF Spec Sheet](#)

195h-DC Delivery Truck with Parallel Hybrid System

Delivery Type	Package Delivery	Other Delivery
Gross Vehicle Weight	14,001-19,500	14,001-19,500
Vehicle Year/Engine Model Year	2016/2015	2016/2015
Year 4 ARB Preliminary Voucher Amount	\$18,000	\$18,000



[PDF Spec Sheet](#)

Manufacturer: Motiv Power

Zero-Emission FE4 Vehicle with Ford Chassis

Chassis Model	School Bus, Shuttle Bus, Delivery, Utility	School Bus, Shuttle Bus, Delivery, Utility
Gross Vehicle Weight	14,500	22,000
Li-Ion Battery Specification	80 kWh, 100 kWh, 120 kWh	4, 5, and 6-Battery Variations
Vehicle Year/Engine Model Year	2015/2015	2015/2015
Year 4 ARB Preliminary Voucher Amount	\$80,000	\$90,000



[PDF Spec Sheet](#)

Manufacturer: Phoenix

Type: Bus

ZEUS 300 Bus with Lithium-Ion 102-120kWh Battery Pack

Chassis Model	Shuttle Bus
Gross Vehicle Weight	10,001-14,000
Vehicle Year/Engine Model Year	2015/2015
Year 4 ARB Preliminary Voucher Amount	\$50,000



[PDF Spec Sheet](#)

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Zero-Emission Flat Bed Truck with Lithium-Ion 102kWh Battery Pack

Chassis Model	Shuttle Bus	
Gross Vehicle Weight	10,001-14,000	
Vehicle Year/Engine Model Year	2015/2015	No Photo Available.
Year 4 ARB Preliminary Voucher Amount	\$50,000	

 [PDF Spec Sheet](#)

Manufacturer: New Flyer

Type: Bus

Xcelsior Bus with Lithium-Ion Battery Pack

Chassis Model	XE35	XE40
Gross Vehicle Weight	42,540-44,312	42,540-44,312
Li-Ion Battery Specification	100 kWh, 150 kWh, 200 kWh	100 kWh, 150 kWh, 200 kWh, 300 kWh
Vehicle Year/Engine Model Year	2015/2015	2015/2015
Year 4 ARB Preliminary Voucher Amount	\$117,000	\$117,000



 [PDF Spec Sheet](#)

Manufacturer: Proterra

Type: Bus

Catalyst 40-foot Urban Transit Bus

Chassis Model	BE40	BE35-74T
Gross Vehicle Weight	>38,000	>26,000
Vehicle Year/Engine Model Year	2015/2015	2013/2013
Year 4 ARB Preliminary Voucher Amount	\$115,000	\$115,000



 [PDF Spec Sheet](#)

Manufacturer: Smith Electric

Type: Delivery

Newton Box Truck

Gross Vehicle Weight	14,001-19,500	19,501-26,000	26,001-33,000
Chassis Length (ft.)	18.8, 21.3, 23.8	18.8, 21.3, 23.8	18.8, 21.3, 23.8
Vehicle Year/Engine Model Year	2013/2013	2013/2013	2013/2013
Year 4 ARB Preliminary Voucher Amount	\$80,000	\$90,000	\$95,000



 [PDF Spec Sheet](#)

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Newton Step Van			
Gross Vehicle Weight	14,001-19,500	19,501-26,000	26,001-33,000
Chassis Length (ft.)	18.8, 21.3, 23.8	18.8, 21.3, 23.8	18.8, 21.3, 23.8
Vehicle Year/Engine Model Year	2013/2013	2013/2013	2013/2013
Year 4 ARB Preliminary Voucher Amount	\$80,000	\$90,000	\$95,000



 [PDF Spec Sheet](#)

Manufacturer: Zenith Motors
Type: Bus

Electric Shuttle Van		
Gross Vehicle Weight	8,500-10,000	10,001-14,000
Li-Ion Battery Specification	51.84kWh	62.1kWh
Vehicle Year/Engine Model Year	2014/2014	2014/2014
Year 4 ARB Preliminary Voucher Amount	\$25,000	\$50,000



 [PDF Spec Sheet](#)

Type: Delivery

Electric Cargo Van		
Gross Vehicle Weight	10,001-14,000	10,001-14,000
Wheelbase	159"	136"
Li-Ion Battery Specification	62.1kWh	51.8kWh
Vehicle Year/Engine Model Year	2014/2014	2014/2014
Year 4 ARB Preliminary Voucher Amount	\$50,000	\$50,000



Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

ATTACHMENT B

Trucks Engines That Will Be Available Very Early in The Life of the Project That Will Meet ARB's Optional NOx Standard

<http://www.cumminswestport.com/press-releases/2015/near-zero-nox-emissions-isl-g-natural-gas-engine-proprietary-technology-capable-of-reducing-nox-emissions-by-90>

Cummins Westport Contact Us Newsletter A- A+ Search

About Us Engines Customer Care Find a Natural Gas Truck or Bus Natural Gas Academy Brochures **Newsroom**

Newsroom

Industry News
Trade Shows & Events
Press Releases
Newsletters

Near Zero NOx Emissions ISL G Natural Gas Engine ~Proprietary technology capable of reducing NOx emissions by 90%~

May 6, 2015
VANCOUVER, May 6, 2015 - Cummins Westport (CWI) announced it will begin field tests this year in California in transit buses with a spark ignited natural gas engine capable of producing Near Zero NOx emissions well before the 2023 California Near Zero NOx schedule for Low NOx vehicles.

CWI believes its proprietary Stoichiometric EGR Spark Ignited (SESI) natural gas engine technology as released on its ISL G and ISX12 G engines is ideally suited to continue to provide an economic and efficient solution to California air quality improvement initiatives.

With funding support from South Coast Air Quality Management District (SCAQMD), SoCal Gas and California Energy Commission (CEC), CWI has recently invested significantly on leveraging the SESI platform to develop a new Near Zero NOx technology pathway to 0.02 grams per brake-horsepower hour NOx. CWI has demonstrated this technology and will now field test a transit bus with the new Cummins Westport Near Zero NOx ISL G that will reduce NOx emissions by 90% from the current EPA limit of 0.2 g/bhp-hr to 0.02 g/bhp-hr NOx while also meeting the 2017 EPA greenhouse gas emission requirements.

The new Near Zero NOx ISL G will continue to offer customers the benefit of performance with the lowest emissions utilizing maintenance-free Three Way Catalyst (TWC) aftertreatment. TWCs are effective, simple, passive devices, packaged as part of the muffler.

Cummins Westport natural gas engines do not require active aftertreatment such as a Diesel Particulate Filter (DPF) or Selective Catalytic Reduction (SCR).

Since it was first introduced in 2007, the ISL G 8.9 liter engine has become the leading natural gas engine for transit buses and refuse trucks which represents a significant portion of on-highway and urban power in California.

While commercial availability will be announced at a later date, the Near Zero NOx technology in the ISL G engine will be made available as a first fit engine with transit and refuse OEMs and as an engine replacement for existing ISL G vehicles resulting in an immediate NOx emission reduction well before the 2023 Near Zero NOx goals set in California.

Engines

Natural Gas Academy

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

ATTACHMENT B
Trucks Engines That Will Be Available Very Early in The Life of the Project That Will
Meet ARB's Optional NOx Standard

Southern California Gas Company Briefing for A Business Case for Clean Air White Paper Working Group: Natural Gas Near Zero Emission Technologies Near-Zero Emission Natural Gas Opportunities, October 31, 2014

<http://www.aqmd.gov/docs/default-source/Agendas/aqmp/white-paper-working-groups/business-case-socalgas-pres-final.pdf>

Southern California Gas Company Briefing for A Business Case for Clean Air White Paper Working Group

Natural Gas Near Zero Emission Technologies
Near-Zero Emission Natural Gas Opportunities

October 31, 2014

Natural Gas Near Zero Emission Technologies

To meet NOx and GHG Emissions
Reductions

Offering Cleaner Solutions for The Mobile Sectors

← **Current Focus** → ← **Expanding Focus** →

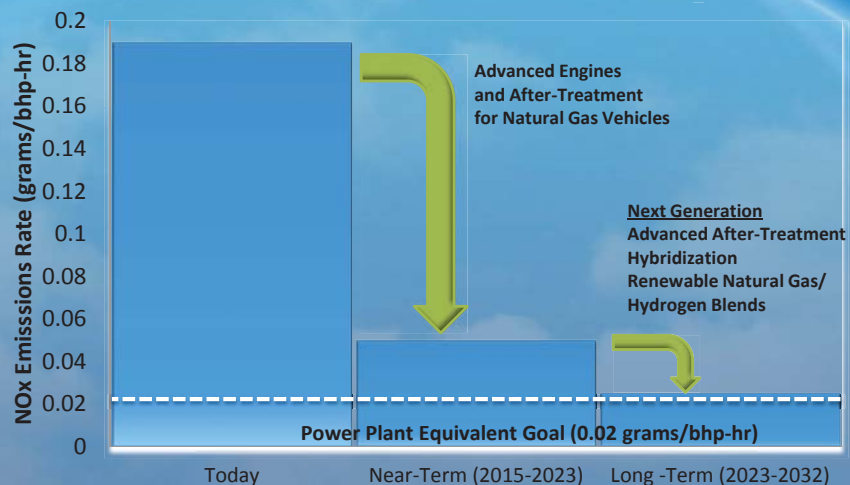


Fleet Vehicles Heavy Duty Trucks Cargo Handling Equipment Locomotives Marine Vessels

CNG

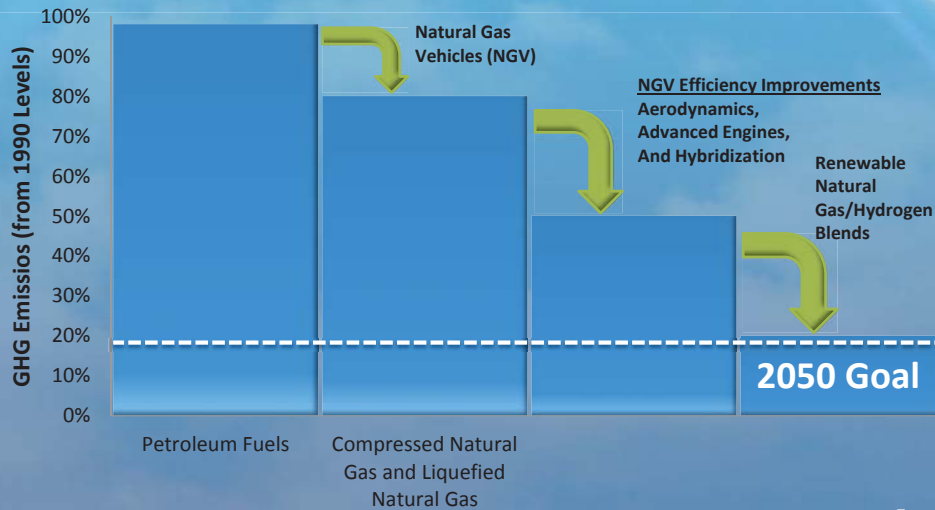
LNG

"Near Zero" NOx Emissions for Heavy Duty Truck Achievable through Technology Development



Technologies Also Address Greenhouse Gas (GHG) Goals

Efficiency Improvements & Renewables Availability Increase Over Time



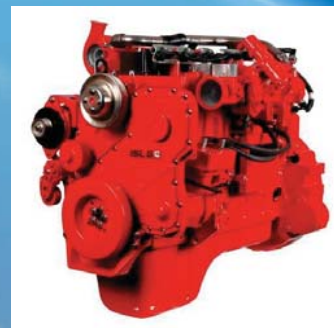
SCG-Supported CNG RD&D Programs for HHD Trucks

Project	NOx Goal (g/bhp-hr)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CNG Engines	CWI ISL-G 8.9L	0.20	Commercial								
	CWI ISX 12G	0.20	Commercial								
	CWI 6.7L	0.20	RD&D		Commercial						
	Doosan 11G	0.05	RD&D		Pre-commercial		Commercial				
	Brayton Gas Turbine	0.05	RD&D		Pre-commercial		Commercial				
	CW 8.9L, PSI 8.9L & Cummins 15L	0.02	RD&D		Pre-commercial		Commercial				
CNG HEVs	BAE/GTI ZEV-Catenary with CNG Genset	TBD	RD&D		Pre-commercial						
	Three HEV Trucks (Cl 8 & 4)	TBD	RD&D		Pre-commercial						

Near-zero Emission Development – CWI8.9L and Cummins 15L Engines

Project Overview

- Reduce emissions through stoichiometric combustion with high rates of EGR and a three way catalyst to achieve near zero emission (i.e., 90% reduction from current CARB standards) focusing on:
 - dedicated NG engine
 - Power cylinder and cylinder head
 - Air handling (i.e. turbocharger)
 - Ignition system
 - Control system and fuel supply module
- Cummins-Westport** 8.9 liter
- Cummins Inc.** 15 liter



Goals / Targets

- NOx: 0.02 g/hp-hr vs. 2010 0.2 g/hp-hr / PM: near zero
- Performance/Efficiency: 2010 diesel equivalent
- CO2: 15% reduction from current diesel options
- Secondary goal: NH3 < 10 ppm



Funding Partners

- CEC (\$4M), SCAQMD (\$2M), Cummins, SCG

ICR-350 Multi-fuel Vehicular Engine

Technology Description

- Develop a near zero emissions dual natural gas and diesel combustor for the existing 350 kW microturbine designed for a hybrid Class-8 trucks
- Use natural gas as a priority, but when the truck is required to travel outside its normal territory or when CNG fueling is not readily available, the engine will seamlessly transition to operate on liquid fuel
- Plan to demonstrate a Kenworth & FedEx Class 8 dual fuel truck in 2015



Goals / Targets

- Price** : Same as emission compliant diesel engine system
- Fuel Efficiency** : 10-20% savings
- Maintenance** : 16x longer interval
- Life** : +1,000,000 miles with only routine maintenance
- Fuel Flexibility** : any liquid or gas
- Emissions** : 5x-10x better CARB & no treatment
- Size** : half size/half weight (+ aerodynamics)
- Any drivetrain** : mechanical/electric/hybrid



Funding Partners

- Brayton, CEC

US Hybrid: Plug-in Hybrid Drayage and Hybrid Natural Gas Trucks



Technology Description

PHEV

- Demo of 80,000 GVWR Nat Gas Plug-in Hybrid Drayage Truck
- Utilizes CWI ISL-G (8.9 L) CARB certified engine, 100 kWh Li-Ion Battery-Pack, 500 HP Electric Drive Motor, 300 amp converter
- Eliminates frequent periods of idling typical at Port facilities where drayage trucks often queue for long periods. Hybrid truck will operate in electric mode (EV mode) around 25% of time (30 miles) in charge depletion mode, then in hybrid mode with sustaining charge.

Hybrid

- 8.9L CWI ISL-G engine integration with 200kW motor, battery storage and engine controllers

Goals & Targets

- Low NOx plus target of 30% fuel reduction due to HEV operation
- Overcomes perceived issue of lack of power from CWI 8.9 liter engine currently in use.
- No limitation of the range and usage and will have higher number of operating hours than a diesel truck.
- CNG / LNG / biomethane capable

Funding Partners

- PHEV - CEC (\$1.6M), GTI, US Hybrid, CWI, Calko Transport, Freightliner, UC-Riverside, SCG (two trucks)
- Hybrid - CEC(\$900K) US Hybrid, SCG (\$100K)



GTI Class 8 CNG- Hybrid



Technology Description

- Develop a Class 8 CNG-hybrid truck with an advanced systems approach to NOx reduction.
- Utilize a 9 Liter CWI ISL-G Engine integrated with a 200 kW electric motor, battery storage and engines controls optimized for hybrid operations
- Reduce the NOx emissions beyond current CARB limits
- Showcase the economic attractiveness of CNG vehicles for fleet operators



Goals / Targets

- Demonstrate improved fuel economy
- Demonstrate ability to meet and exceed CARB emissions limits
- Test the vehicle in a typical duty cycle
- Prepare a Chassis Dynamometer Demon Report with recommendations for extended field testing by a fleet operator as well as summaries of the emissions and fuel economy profiles

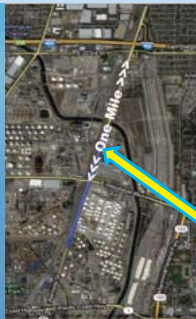
Funding Partners

- CEC (\$900K), US Hybrid (In-Kind), SCG (\$100K)

Recent Project Funding by SCAQMD and SoCalGas



Gas Technology Institute Team – Electric Drayage Truck with CNG 6.7L Genset Range Extender



Based on Kenworth Model T-370 (Cummins 6.7L CNG engine)

Approx. one mile each way along Alameda St in Carson (current north bound route for trucks to warehouses and I-405)

Packet Pg. 634

Scope	Develop HEV truck with CNG 6.7L engine and Siemens pantograph hardware enabling catenary connection capability. ZEV operation in port, catenary power outside of port, onboard CNG engine genset providing extended range when off of catenary.
Schedule	1/1/15 (Project Start) thru 7/31/18 (Commercialization Roadmap)
Budget	Total of about \$10M (DOE & SCAQMD 50/50 cost share) – SoCalGas contributing \$0.5M in total to SCAQMD share of \$5M
Benefit	Demonstrates zero-emissions capability of heavy duty truck with extended range provided by CNG and hybrid-

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Infrastructure - Central



- Standardized station designs
- Increased dispensing efficiencies
- Better controls, including for time-fill
- Smaller footprint
- Lower cost
- Co-Locating with Hydrogen Station
- On-site Hydrogen Production (SMR)



Now, LNG can drive your projects

Fuel Storage



- Need:
- Lower Cost
 - Lower Pressure
 - Less/Conforming Space

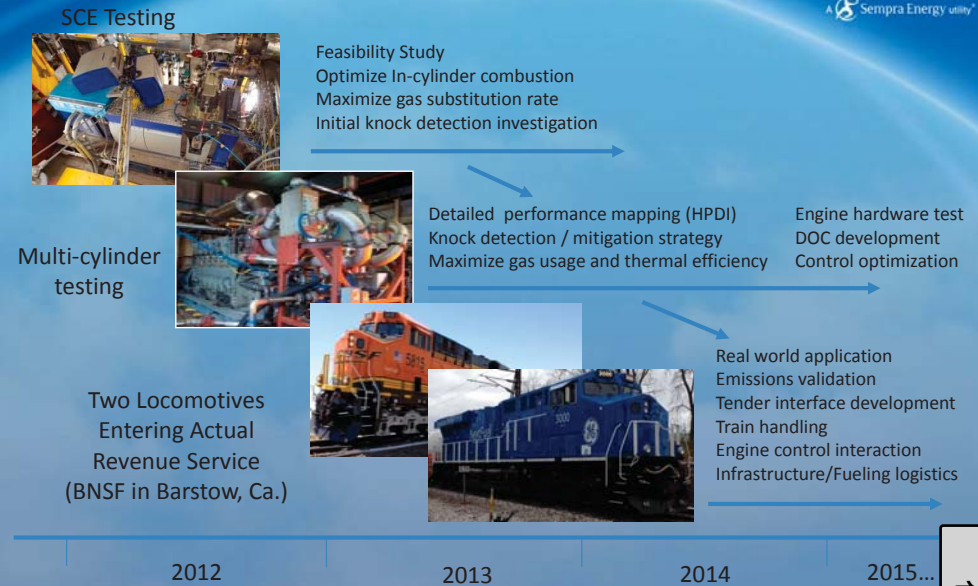
Rail & Marine Opportunities for Natural Gas

Extending the Pathways to Off Road Locomotives

Today	2013-2015	2015-2023	2023-2032	2032+
-------	-----------	-----------	-----------	-------



GE Dual Fuel – Development Timeline



Extending the Pathways to The Ports LNG for Marine Vessels



Today	2013-2015	2015-2018	2018-2023	2032+
-------	-----------	-----------	-----------	-------

Existing Tier 1 & 2 Vessels

- 1,000 ppm fuel sulfur limit for marine vessels in ECAs
- IMO Tier 3 NOx standards

- Ongoing RD&D for LNG fuel systems and vessel retrofits.
- Development of LNG bunkering standards and infrastructure

- Tier 1 & 2 LNG retrofits
- Tier 3 LNG new builds
- First LNG work boats, ferries, short sea shipping vessels deployed

- Benefits**
- Up to 90% NOx reductions
 - 98%+ PM and SOx reductions
 - 20%+ GHG reductions

- Tankers
- Container Ships
- Tug boats (new builds)
- Expanded LNG bunkering
- Vessel hydrodynamics
- Vessel size increases

High penetration of LNG into marine vessel fleet – estimated at 10,000+ vessels

- Benefits**
- NOx, PM, and SOx reductions beyond IMO Tier 3
 - GHG reductions of up to 70%



Summary



- ❑ Engine technology advancements can achieve power-plant equivalent / near-zero emission NOx levels and diesel equivalent GHG emissions reductions
- ❑ Pure economics of transportation fuel will drive natural gas technology adoption by the heavy-duty trucking sector
- ❑ Near term and consistent financial and other incentives can accelerate and increase the adoption of conventional natural gas technologies
- ❑ New storage technologies will have tremendous impact on CNG for both heavy and light duty vehicles
- ❑ In-use mobile emissions need further evaluation
- ❑ Significant opportunities exist for natural gas trucks and buses, but also for both locomotive and large marine engine emissions reductions



Near-Zero Emission Natural Gas Opportunities in the South Coast Air Basin

Lee Wallace
Southern California Gas

Packet Pg. 636

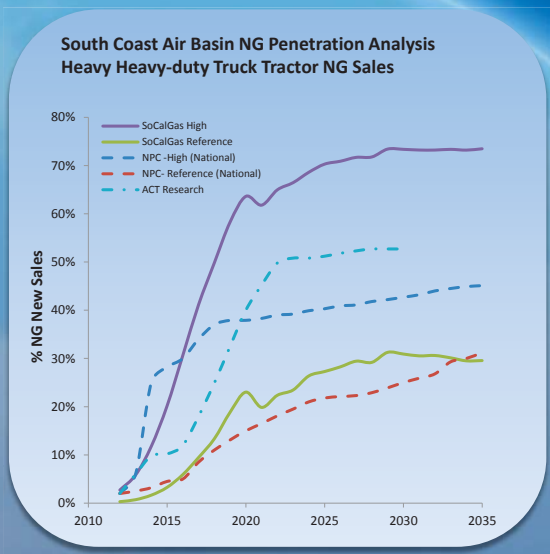
Project Goals

1. Evaluate NOx benefits of near-zero natural gas engines in heavy-duty vehicles.
2. Explore the effect of incentives on natural gas vehicle penetration rates.



Economic Analysis via the "NPC Model"

- **Economically Derived Analyses** are required to project NGV new sales (penetration rate) based on competition with diesel technology
- **National Petroleum Council Future of Transportation Fuels Economic Decision Model ("NPC Model")** was used to determine rates of NGV adoption by the open market
- **NPC Model Projections** are consistent with projections published by independent research organizations
- **SoCalGas Adjustments** are made to the NPC Model settings specific to the South Coast Air Basin marketplace
- **SoCalGas "Reference" and "High"** NGV adoption curves via the NPC model are derived to bound the analysis



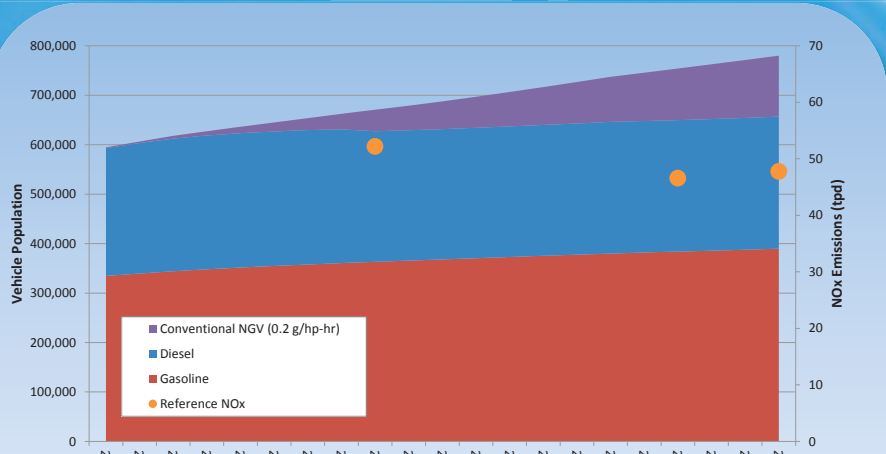
Economic Analysis via the "NPC Model" (cont'd)

- **Fuel Price Projections** are based on 150% of EIA 2010 projections
- **Model variables** adjusted for SoCalGas scenarios include *natural gas vehicle cost* and the *natural gas adoption curve* (3 settings, aggressive, moderate, conservative)
- **SoCalGas Reference Penetration Rate** case ("SoCalGas Reference") assumes: (1) a high price differential between NGV and Diesel Trucks; and (2) uses the conservative NGV adoption curve
- **SoCalGas High Penetration Rate** case ("SoCalGas High") assumes: (1) a low price differential between NGV and Diesel Trucks; and (2) uses aggressive NGV adoption curve
- **NG Financial Incentives** are applied to increase NGV new sales projections

SoCalGas NPC modeled cases, NG truck pricing assumptions.

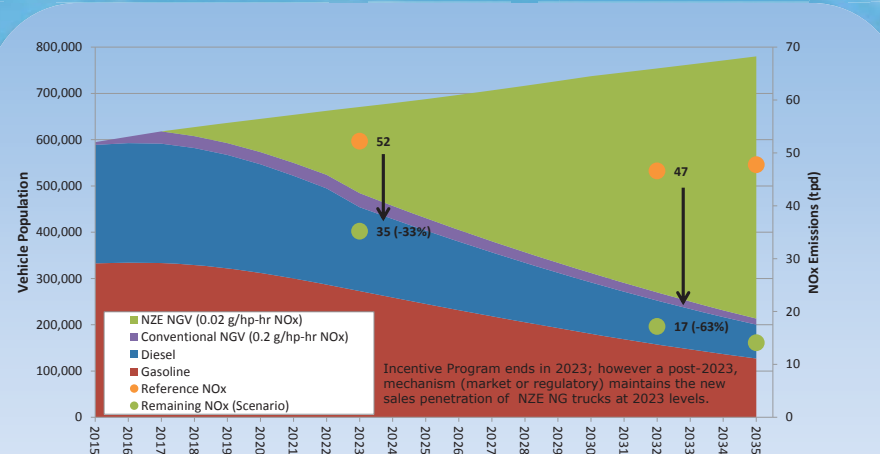
Truck Group	2023 Base Diesel Vehicle Cost	NG Incremental Price in 2023	
		SoCalGas Reference	SoCalGas High
Class 7/8 Combination	\$144,953	\$47,355	\$30,028
Class 7/8 Single	\$190,399	\$18,906	\$7,463
Drayage	\$144,953	\$34,604	\$18,399
Refuse	\$190,399	\$18,906	\$7,463
Class 3-6	\$61,529	\$21,165	\$15,682

SoCalGas High- BASE CASE In-state Heavy-duty Truck Fleet Composition¹ - No Incentives -



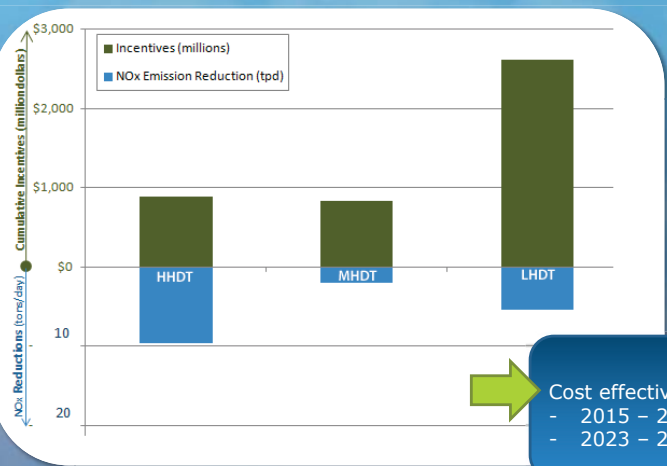
Notes:
1. Analysis includes T7 Drayage, T7 Single, T7 Solid Waste Collection Vehicle, T7 Tractor, T7 Tractor Construction, T7 Agriculture, T7 Single Construction, T7 Public, T7 Ut, T7 IS, T6 Instate Heavy, T6 Instate Small, T6 Utility, T6 Public, T6 TS, T6 Agriculture, T6 Instate Construction Heavy, T6 Instate Construction Small, LHDDT, and LHDGT.
2. Vehicle population is based on the EMFAC2011 data for the South Coast Air Basin.

SoCalGas High Incentive Scenario In-State Heavy-duty Truck Fleet Composition¹ - MODIFIED Maximum Incentivized² NG Truck Purchases -



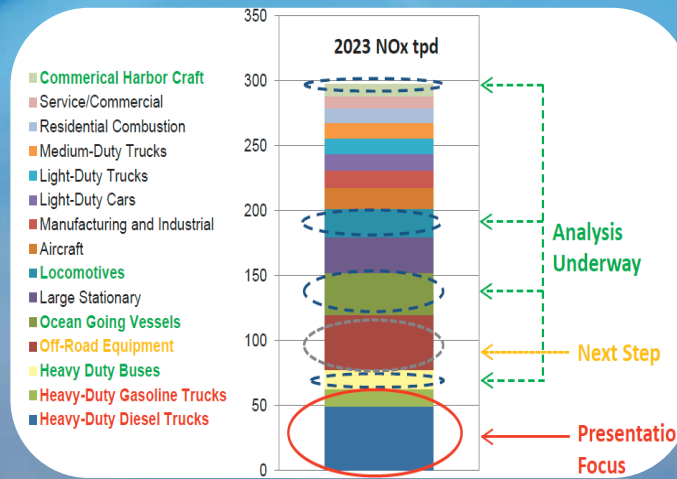
Note:
1. Analysis includes T7 Drayage, T7 Single, T7 Solid Waste Collection Vehicle, T7 Tractor, T7 Tractor Construction, T7 Agriculture, T7 Single Construction, T7 Public, T7 Ut, T7 IS, T6 Instate Heavy, T6 Instate Small, T6 Utility, T6 Public, T6 TS, T6 Agriculture, T6 Instate Construction Heavy, T6 Instate Construction Small, LHDDT, and LHDGT.
2. Maximum incentives range from \$15,500 - \$35,000/Truck depending on the vehicle type and engine size
3. Assumed penetration rates after the incentive period ends remain at the 2023 level due to some mechanism.

SoCalGas High Incentive Program 2023 Cumulative Cost vs. NOx Reductions



Next Step
 Cost effectiveness/ranking for sources
 - 2015 - 2023 (incentive program)
 - 2023 - 2035 (regulatory program)

Technical Analyses: Next Steps



• Expand analyses to other on- and off-road mobile sources

Conduct full cost-effectiveness analyses (beyond cost vs. year-specific emission reductions) by source categories

Step-wise incentives (0.1 g/bhp-hr from 2015-2018 and 0.02 g/bhp-hr from 2018+)

Summary

- Pure economics of transportation fuel will drive natural gas technology adoption by the heavy-duty trucking sector.
- Financial incentives can accelerate and increase the adoption of conventional natural gas technologies.
- Additional financial incentives (<\$10K/vehicle) can shift conventional natural gas technology purchases to “NZE” (90% NOx reductions) natural gas purchases.
- Maximized NOx reductions can be achieved through post-incentive period mechanisms (TBD) to maintain NZE natural gas vehicle penetration rates.

ATTACHMENT C

Advanced Technology Demonstration Projects for Truck Engines That Will Meet or Surpass ARB’s Optional NOx Standard Before Full Project Buildout

Project	Truck Manufacturer	Number of Vehicles in Project	Truck Class	Technology Type	Project Completion Year	Total Project Cost
Zero Emission Cargo Transport (ZECT) I - 2012	TransPower	4	8	Battery Electric	2016	\$2.8M
ZECT I - 2012	US Hybrid	2	8	Battery Electric	2017	\$2.0M
ZECT I - 2012	TransPower	2	8	CNG plug in hybrid	2017	\$2.1M
ZECT I - 2012	US Hybrid	3	8	LNG plug in hybrid	2017	\$2.1M
ZECT II -2014	BAE Systems	1	8	Battery Electric - Hydrogen Fuel Extender	2018	\$7.1M
ZECT II -2014	TransPower	2	8	Battery Electric - Hydrogen Fuel Extender	2017	\$2.4M
ZECT II -2014	US Hybrid	2	8	Battery Electric - Hydrogen Fuel Generator	2017	\$3.2M
ZECT II -2014	BAE Systems & Kenworth	1	8	Battery Electric - CNG Range Extender	2018	\$5.6M
ZECT II -2014	International Rectifier	1	8	Plug in Hybrid	2017	\$1.7M
Volvo PHEV Project	Volvo	1	8	Plug in Hybrid	2014	\$2.4M
SCAQMD Project	Transpower	2	8	Catenary	2016	\$3.2M
Siemens Project	Siemens + Volvo	1	8	Infrastructure + 1 Volvo PHEV catenary truck	2016	\$13.5M
UPS	EVI	40	6	Electric	2013	\$7.45M

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER

Grace Espino-Salcedo

Subject: RE: World Logistic Center

From: Jack Weleba [REDACTED]
Sent: Monday, June 22, 2015 12:42 PM
To: Mark Gross
Subject: World Logistic Center

Mr. Gross:

I understand the need for cities to produce income as it is necessary to turn the wheels that run the programs but, and this is a big but, this idea for the area in mind is terrible on many fronts.

First and foremost in my estimation is the destruction of natural habitat that is quickly diminishing all over the state. There are constant efforts in cities to provide "green areas" not only for children to play in but for the plants that provide much needed oxygen for humans to live. The continued destruction of this type of habitat is tantamount to suffocating those who live in the area and beyond.

Secondly the state and many agencies, as well as private citizens, have spent millions of dollars to protect, upgrade and provide for future wildlife at the San Jacinto Wildlife Refuge as well as surrounding properties. This would not be possible without all of the concerted efforts of all involved. Many of us have spent many hours and dollars making sure the waterfowl and all other wildlife that is supported by these lands have a place to rest, feed and breed, continuing the life cycle as nature intended it. Close to 90% of all the wetlands in the United States have been decimated by developers, turning once abundant havens for many creatures into parking lots and homes for people. This has taken a catastrophic toll on all the animals that require open space to survive.

Thirdly, I don't believe that this community will be served by the few jobs actually provided by this development and will actually be harmed by the huge amount of traffic congestion and air pollution caused by the thousands of trucks that will be transporting all the goods going in and out of these warehouses, which although being euphemistically called a Logistics Center, is basically just a huge group of warehouses.

There are many locations that would be better served and cause less problems and interruptions to this area and should be considered before going ahead with any project of this size.

Obviously the developer wants this project to go forward as it will put a lot of money in his pocket but it will be at the expense of the many and this is not good. I am in the engineering field and I know we need infrastructure to facilitate the economy but this project has all the earmarks of a disaster waiting to happen in too many ways.

I sincerely hope you and all who are in the decision making process will consider this to be a big mistake and prevent it from going forward.

Thank you for your time and feel free to contact me.

Jack Weleba
Senior Designer



[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]



Please consider the environment before printing



www.ttgcorp.com

If you are sending attachment(s)
always use our [Large File Courier](#)

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Grace Espino-Salcedo

Subject: RE: Message from Thomas Jerele Sr.

From: Loretta Bree [REDACTED]
Sent: Thursday, June 18, 2015 4:22 PM
To: Jane Halstead, CMC; Ewa Lopez, CMC; Kathy Gross
Subject: Message from Thomas Jerele Sr.

This is an email from Thomas Jerele Sr. regarding the World Logistics Center public hearings being conducted by the Moreno Valley Planning Commission.

Dear Planning Commissioners, please allow me to thank you all and your Staff for an optimum public hearing to date on the World Logistics Center. I was present for the entirety of the initial hearing on 6/11/15. The Staff Report/Consultant's comments on the Development Agreement and the Highland Fairview were highly informative and very valuable. In short, they took the mystery out of much of the projects perception. I am looking forward to the continuation of the Hearings. I infer that our Planning Commissioners will continue to ask probing and important questions about the impact of the Project. I affirm that procedure.

A comment was expressed from the crowd about "why can't we 'see' the project?" This was in reference to the massive "Burm" along Redlands Ave. on the west boundary of the Project, I have the same question. This appears to be a well-conceived, high value Project. In my opinion, we would want to eliminate the "Burm," such that the World can see and appreciate Project.

This electronic message is intended for the above individual (s) and may contain information that is confidential and privileged. Be aware that any disclosure, copying, distribution or use of the contents of this information is prohibited. If you believe you have received this message in error, notify me by return e-mail and please delete this email.

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Grace Espino-Salcedo

Subject: RE: World Logistics Center

-----Original Message-----

From: Marian Bailey [REDACTED]
Sent: Thursday, June 18, 2015 10:45 AM
To: Jeffrey J. Giba
Cc: Mark Gross
Subject: World Logistics Center

Dear Mr. Giba,

I am writing to you because the district map shows that you represent the part of Moreno Valley closest to my home in Riverside, which is near Sycamore Canyon Park, about a mile away from the 60 freeway.

I am writing to say that I think Moreno Valley can do better than approve the World Logistics Center (WLC). Right now, the east end of the Moreno Valley is attractive, with its open land and rural aspect; I can imagine that it would appeal to many other developers, some of whom would be likely to want to situate business parks there. The WLC, with its square miles of warehouses, would eradicate that appeal. Simultaneously, the WLC would make Moreno Valley more vulnerable to the downturns in the economy that rely on the sale of material goods.

The WLC would also make the eastern end of the valley less appealing to migrating birds, some of which now settle in and around Mystic Lake to rest and recoup.

The addition of big rigs to the 60 freeway would be unwelcome too. I drive that freeway myself, as do many commuters, and the part of the route that travels downhill from about Day Street to University Avenue is already very dangerous; adding huge trucks with heavy loads would make things even worse. Noise would be a problem too; trucks going downhill often chortle and snort, and since I can hear this from my house, hundreds of other people will be affected by that noise as well.

Please vote against this development, Mr. Giba. Moreno Valley has the luxury of time, because its population is steadily increasing. Better, more attractive development proposals than this one will be forthcoming in the years to come, and I think that will be the time to vote yes.

Sincerely,

Marian Bailey
Technical Editor (Retired)
Riverside

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Grace Espino-Salcedo

Subject: RE: world logistics center

From: Bob Fey [REDACTED]
Sent: Thursday, June 18, 2015 12:37 PM
To: Jesse L. Molina
Cc: Jeffrey J. Giba; George Price; Dr. Yxstian A. Gutierrez; D. LaDonna Jempson
Subject: world logistics center

Dear Council members

Although I am not a resident of Moreno Valley, as a Trustee of the UCR Foundation and an active member of the Community Foundation, I am a frequent traveler thru Moreno Valley and a shopper in your malls.

I am very concerned with the proposed project for two principal reasons:

First, the traffic that will result will create a congestion beyond imagination and will force people like me (Coachella Valley) to use the 10 (instead of the 60) and by pass Moreno Valley completely.

Second, the jobs that will be created will, for the most part, be at minimum wage (or very close to minimum wage) which will lower the average wage and, therefore, “downscale” Moreno Valley – I know that you have worked very hard to improve Moreno valley and this is not an improvement.

As you may or not be aware, the Coachella Valley turned down similar projects (at a lower scale) because the economic analysis showed a decrease in the standard of living.

I would urge you to weigh very carefully the impacts on Moreno Valley

Sincerely

Robert Fey

Cindy Miller
Executive Assistant to Mayor/City Council
City Council Office
City of Moreno Valley
p: 951.413.3006 | e: cindym@moval.org W: www.moval.org
14177 Frederick St., Moreno Valley, CA 92553

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Grace Espino-Salcedo

Subject: RE: WLC Supplemental FEIR Comments

From: Rikki Weber [REDACTED]
Sent: Wednesday, June 24, 2015 2:12 PM
To: Planning Email
Cc: Adrian Martinez; Yana Garcia
Subject: Re: WLC Supplemental FEIR Comments

Please find attached Supplemental Comments on Air Quality Analysis regarding the World Logistics Center Project Final Environmental Impact Report.

Rikki Weber
Litigation Assistant
50 California Street, Suite 500
San Francisco, CA 94111

[REDACTED]
[REDACTED]
earthjustice.org

facebook.com/earthjustice
twitter.com/earthjustice



Because the earth needs a good lawyer

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)



EARTHJUSTICE

ALASKA CALIFORNIA FLORIDA MID-PACIFIC NORTHEAST NORTHERN ROCKIES
NORTHWEST ROCKY MOUNTAIN WASHINGTON, D.C. INTERNATIONAL

June 24, 2015

Via E-Mail

Mark Gross
Senior Planner
14177 Frederick Street
Moreno Valley, CA 92553
planning@moval.org

RE: World Logistics Center Project Final Environmental Impact Report (SCH No. 2012021045) – Supplemental Comments on Air Quality Analysis

Dear Mr. Gross:

On behalf of the Center for Community Action & Environmental Justice and the Coalition for Clean Air, we submit this supplemental letter on the Final Environmental Impact Report (“FEIR”) for the World Logistics Center project and the project-related entitlements under consideration by the City of Moreno Valley Planning Department. We submit this supplemental letter because we believe it is necessary to elaborate more fully on substantial flaws in the FEIR’s air quality analysis.

The air quality analysis contained in the FEIR is extremely misleading. This analysis alone renders the document woefully inadequate and violates the mandates of the California Environmental Quality Act’s (“CEQA”). In an effort to minimize the true consequences of this massive warehouse development, the FEIR drastically underestimates the health risks posed by the project, and nearly exclusively relies on a single study published in January 2015, called the *Advanced Collaborative Emissions Study (ACES): Lifetime Cancer and Non-Cancer Assessment in Rats Exposed to New-Technology Diesel Exhaust* (hereinafter “HEI Rat Exposure Study”). Based on the study’s assessment of health impacts to rats, the FEIR concludes that “[t]he HEI study clearly demonstrates that the application of new emissions control technology to diesel engines have virtually eliminated the health impacts of diesel exhaust.” FEIR, at 4.3-17. However, neither the study itself nor any other studies support this conclusion. Indeed, aside from the statements made in the FEIR, there is no support on the record before the Planning Department, or the City, to validate the claim that the “application of new emissions control technology” has “virtually eliminated the health impacts of diesel exhaust.”

First, the FEIR’s conclusion is not found in the HEI Rat Exposure Study’s Summary of Findings, [Attached hereto as “Exhibit A”]. To the contrary, even the HEI Rat Exposure Study concluded that some impacts to the study subjects remained, as a result of their exposure to NO₂, among other toxins, whose emissions were not curbed by the installation of new diesel controls.

LOS ANGELES OFFICE 800 WILSHIRE BLVD., SUITE 1010 LOS ANGELES, CA 90017

T: 415.217.2000 F: 415.217.2040 CAOFFICE@EARTHJUSTICE.ORG WWW.EARTHJUSTICE.ORG

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

Second, even the Health Effects Institute (“HEI”) itself, which commissioned the report relied upon in the FEIR has stated that the FEIR goes too far in its reading of the HEI Rat Exposure Study and the study’s conclusions. A recent news article provided the following quote from the president of the Health Effects Institute:

Dan Greenbaum, the president of the HEI, said the city’s report appears to have overstated the study’s findings.

“You will not find in any of the press releases or reports a statement that these new engines have ‘virtually eliminated the impacts,’” Greenbaum said. “We routinely and accurately describe these emissions as being substantially or dramatically reduced.”

MORENO VALLEY: Study on proposed World Logistics Center called ‘legally inadequate’, Riverside Press Enterprise, June 9, 2015 [Attached as “Exhibit B”]. Thus, the conclusion in the FEIR is not even in line with the HEI, or the HEI’s reading of its own study and reported findings.

Third, the FEIR’s reliance on the HEI Rat Exposure Study is impermissible because the study itself is based on best case-scenario assumptions. We agree with the California Air Resources Board in its assessment of the inherent flaws in the FEIR’s use of this study as conclusive evidence that harm from diesel engines has been “virtually eliminated.” As noted by the Air Resources Board, the study’s conclusions are based on the use of engines that received oil changes every 250 hours, or 5,000 miles. *See* Letter from Heather Arias, California Air Resources Board, to Mark Gross, City of Moreno Valley, p. 5 n.4, June 8, 2015. The project duration for the World Logistics Center, however, is set to extend out beyond 2030. Unlike the controlled environment used to conduct the HEI Rat Exposure Study, there is no way to ensure that the thousands of trucks visiting the World Logistics Center will be well maintained and will have pollution controls operating correctly throughout the life of the project. To the extent the Planning Department and the City wish to rely on the best case-scenario assumptions contained in the HEI Rat Exposure Study, mitigation measures must be included to ensure that the conditions underlying the HEI Rat Exposure Study’s conclusions are met. *See* Pub. Res. Code § 21002 (prohibiting public agencies from approving projects as proposed without requiring feasible mitigation to substantially lessen the significant environmental effects of the project).

Because neither the FEIR nor the HEI Rat Exposure Study provide evidence that newer diesel engines “have virtually eliminated the health impacts of diesel exhaust,” the air quality analysis is unlawful and fails to provide substantial evidence to support the FEIR’s conclusions. *See* CEQA Guidelines § 15384(a) (“substantial evidence” includes enough relevant information and reasonable inferences to support a fair argument supporting the conclusion reached).

This flaw in the FEIR is not minor. Rather, it is a major error that infects the entire air quality analysis. The HEI Rat Exposure Study is referenced on the very first page of the FEIR’s Air Quality Analysis, and also appears on at least 12 other pages of the FEIR, often as a basis for

WLC Supplemental FEIR Comments

June 24, 2015

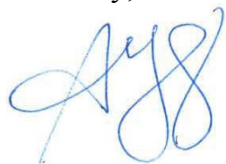
Page 3

the FEIR's conclusions regarding the significant impacts of the World Logistics Center project. *See generally* FEIR, at 4.3-1, -17, -57 -66, -71, -77, -128, -129, -137, -139, -140, -142, -145. Moreover, the FEIR's Response to Comments uses this study extensively, and almost exclusively, as a basis to dismiss a range of comments on the DEIR's analysis and the conclusions contained in that document.

In addition to many arguments related to recirculation included in prior comment letters, this error alone constitutes a reason for re-circulation. *See generally* CEQA Guidelines § 15088.5(a). The consultants preparing the FEIR are operating under a misapprehension about the severe consequences of diesel exhaust on communities in the region. Their willingness to marginalize the consequences of the pollution from this facility based on a single study, despite the volumes of evidence to the contrary requires re-circulation. Accordingly, the public has been deprived of a "meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect," and a re-circulated EIR is necessary to ensure a full and fair discussion of these important air quality issues. *Id.*

We appreciate your consideration of this supplemental comment letter. Please do not hesitate to contact us if there are questions regarding the contents of this letter, its supporting documents or any of our prior submissions.

Sincerely,



Yana Garcia
Adriano Martinez
Attorneys
Earthjustice

Attachments

EXHIBIT A



STATEMENT

Synopsis of Research Report 184, Parts I–4

HEALTH
EFFECTS
INSTITUTE

Effects of Lifetime Exposure to Inhaled New-Technology Diesel Exhaust in Rats

INTRODUCTION

This Statement summarizes HEI's independent evaluation, conducted by a specially convened Review Panel, of four studies conducted as a single phase (Phase 3B) of the Advanced Collaborative Emissions Study (ACES) program. The ACES Phase 3B studies investigated the health effects of chronic, lifetime exposures of rats (up to 30 months) and subchronic exposures (3 months) of mice to "new-technology diesel exhaust" (NTDE) — emissions from a heavy-duty diesel engine system compliant with 2007 U.S. Environmental Protection Agency (EPA) regulations. The studies were led by Drs. Jacob D. McDonald of the Lovelace Respiratory Research Institute (LRRRI), Albuquerque, New Mexico, Jeffrey C. Bemis of Litron Laboratories, Rochester, New York, Lance M. Hallberg of the University of Texas Medical Branch, Galveston, Texas, and Daniel J. Conklin of the University of Louisville, Louisville, Kentucky.

BACKGROUND

In light of concerns identified over many decades about the potential health effects of diesel emissions, the U.S. EPA and the California Air Resources Board adopted stringent regulations for heavy-duty highway diesel engines, which were required to meet a new standard for particulate matter (PM) by 2007. A tighter standard for nitrogen oxides (primarily nitric oxide [NO] and nitrogen dioxide [NO₂]) came into effect in 2010. The regulatory agencies also mandated that sulfur in fuel be reduced substantially. To address these regulations and standards, motor vehicle and engine manufacturers introduced new technologies. These developments were expected to substantially reduce emissions from diesel engines.

To characterize the exhaust emissions from heavy-duty diesel engines that met the new standards and to assess the possible adverse health effects of exposure to these emissions, HEI, working in collaboration with the Coordinating Research

What This Study Adds

- This is the first study to conduct a comprehensive evaluation of lifetime inhalation exposure to emissions from heavy-duty 2007-compliant engines (referred to as "new-technology diesel exhaust," or NTDE).
- The study evaluated the long-term effects of multiple concentrations of inhaled NTDE, which has greatly reduced particle emissions compared with "traditional-technology diesel exhaust" (TDE) in male and female rats on more than 100 different biologic endpoints, including tumor development, and compared the results with biologic effects seen in earlier studies in rats after exposure to TDE.
- Lifetime inhalation exposure of rats exposed to one of three levels of NTDE from a 2007-compliant engine, for 16 hours per day, 5 days a week, with use of a strenuous operating cycle that more accurately reflected the real-world operation of a modern engine than cycles used in previous studies, did not induce tumors or pre-cancerous changes in the lung and did not increase tumors that were considered to be related to NTDE in any other tissue. A few mild changes were seen in the lungs, consistent with long-term exposure to NO₂, a major component of NTDE, which is being further substantially reduced in 2010-compliant engines.

This Statement, prepared by the Health Effects Institute, summarizes a research project funded by HEI and conducted by Drs. Jacob D. McDonald of the Lovelace Respiratory Research Institute, Albuquerque, New Mexico, Jeffrey C. Bemis of Litron Laboratories, Rochester, New York, and Lance M. Hallberg of the University of Texas Medical Branch, Galveston, Texas, and their colleagues, and Daniel J. Conklin and Maiying Kong of the University of Louisville, Louisville, Kentucky. The complete report, *Advanced Collaborative Emissions Study (ACES): Lifetime Cancer and Non-Cancer Assessment in Rats Exposed to New-Technology Diesel Exhaust* (© 2015 Health Effects Institute), can be obtained from HEI or our Web site (see last page). ACES 184

Research Report 184, Parts 1–4

Council, a nonprofit organization with expertise in emissions characterization, launched the multiphase ACES program. Phases 1 and 2 focused on emissions characterization, and Phase 3A established conditions for animal exposure. Phase 3B was designed to evaluate health outcomes in rats exposed to NTDE for up to 24 months, with the possibility of extension to 30 months, and in mice exposed for up to 3 months.

Through competitive processes, HEI funded several investigator teams in Phase 3B: a core study at LRRRI, led by McDonald (who became principal investigator after the retirement of Dr. Joe L. Mauderly), and ancillary studies to evaluate endpoints not assessed in the core study. The overall hypothesis for ACES Phase 3B was that NTDE would *not* increase tumor formation or have substantial toxic health effects in rats and mice, although some biologic effects might occur.

This Statement summarizes results reported from the core study and the ancillary studies led by Bemis and Hallberg, which assessed genotoxic endpoints in the exposed animals, and by Conklin, which assessed inflammatory and thrombotic endpoints. Reports from the investigator teams were reviewed by a specially convened ACES Review Panel, comprising members of HEI's Health Review Committee and outside experts. The current report focuses on findings in rats over the entire study; findings from subchronic exposures of mice and rats (up to 3 months of exposure) have already been published in HEI Research Report 166.

APPROACH

McDonald and colleagues generated exhaust from a 2007-compliant heavy heavy-duty diesel engine (defined as an engine installed in a vehicle with gross vehicle weight rating above 33,000 lb; hereafter called "heavy-duty") equipped with emission controls. The engine was fueled with ultra-low-sulfur diesel fuel meeting current on-road specifications and was operated with a dynamometer.

The investigators exposed male and female 6-week-old Wistar Han rats (140 animals of each sex per exposure level) to one of three target dilutions of whole diesel exhaust — 4.2 (high), 0.8 (mid), or 0.1 (low) ppm NO₂ — or to filtered air as a control. Exposure levels were set based on NO₂ rather than PM, which had been used in previous studies of TDE, because the PM level in NTDE, identified in earlier phases of ACES, was so substantially reduced compared with TDE. Thus, calibrating exposures based on PM would have been problematic. In addition, the

highest NO₂ exposure level was chosen to provide a comparison with the same cumulative exposure to NO₂ (the product of concentration and exposure duration) used in prior HEI-funded long-term inhalation studies in rats conducted by Mauderly and colleagues, in which minor biologic changes — but no cancer or pre-cancerous changes — were observed in the respiratory tract.

Exposures were conducted for 16 hours per day from approximately 1600 to 0800 hours for 5 days per week. The engine was run on a unique and strenuous operating cycle that represented more closely the behavior of modern engines than operating cycles used in older long-term studies of TDE. The emissions were characterized before they reached the animal exposure chambers as well as inside the chambers; in this way, the investigators could assess how the presence of the animals affected the composition of the exposure atmospheres.

Groups of male and female rats were euthanized at LRRRI after 1, 3, 12, and 24 months of exposure, as well as at the terminal sacrifice — 28 months for males, 30 months for females. The LRRRI investigators harvested blood and tissues for their analyses at these time points (10 animals of each sex per exposure group) and also sent aliquots of blood and appropriate tissue samples from 5 to 10 animals of each sex per exposure group to the ACES Phase 3B ancillary studies investigators. McDonald and colleagues evaluated animals histologically throughout the study for the presence of tumors and other types of lesions in the airways and in multiple tissues. In addition, they examined a vast array of biologic endpoints: hematologic (several cell types, plus coagulation), serum chemistry (including triglyceride and protein components), lung lavage (including numbers of cells and levels of multiple cytokines and markers of oxidative stress and tissue injury), and pulmonary function.

For the assessments of genotoxicity, Bemis and colleagues measured the number of reticulocytes — immature red blood cells — containing micronuclei in peripheral blood. Micronuclei can form as a result of a break in deoxyribonucleic acid (DNA) or from the disruption of chromosome segregation during cell division. Hallberg and colleagues assessed several markers of oxidative damage to cell components, which is believed to be involved in the induction of carcinogenesis. To detect damage to DNA, the Hallberg team used a comet assay on lung cells and measured 8-hydroxydeoxyguanosine levels in blood. As a measure of damage to lipids, they assessed levels of thiobarbituric acid

Research Report 184, Parts 1–4

reactive substances in brain tissue. Conklin and Kong measured multiple plasma markers of inflammation and thrombosis, and whether chronic exposure had an effect on cardiac fibrosis or the remodeling of the aorta.

RESULTS AND CONCLUSIONS

In its independent review of the core ACES Phase 3B report by McDonald and colleagues, the HEI ACES Review Panel concluded that their study is the first to conduct a careful, comprehensive, and well-executed evaluation in rodents of lifetime inhalation exposure to NTDE from a 2007-compliant engine. Using appropriate statistical approaches to analyze the data from more than 100 endpoints in the broad areas of histology, serum chemistry, systemic and lung inflammation, and respiratory function, the investigators confirmed the a priori hypothesis, namely, that NTDE would *not* cause an increase in tumor formation or substantial toxic health effects in rats, although some biologic effects might occur.

Over the entire exposure period, the investigators attained NTDE exposure atmospheres within 20% of the target NO₂ levels. In their extensive analysis of the physical and chemical composition of the emissions, McDonald and colleagues found that the most abundant pollutants were carbon dioxide, carbon monoxide, NO, and NO₂. Concentrations of engine-generated PM were very low (< 11 µg/m³) at all exposure levels (in the ultrafine range of 20–40 nm in diameter), as were concentrations of sulfur dioxide and semivolatile and volatile organic species. These findings confirm that the concentrations of components of NTDE differ strikingly from those of older engines, in which the concentrations of PM, as well as volatile and PM-associated organic species, are much higher.

Most biologic endpoints evaluated showed no NTDE-associated changes after exposure of rats for up to 28 months in males and 30 months in females. In particular, chronic exposure to NTDE did not induce tumors or pre-cancerous changes in the lung and did not increase tumors that were considered to be related to NTDE in any other tissue. Some mild histologic changes were found in the lung; however, these were not pre-cancerous lesions, previously described in long-term exposure studies of rats to TDE. Rather, the histologic changes — periacinar epithelial hyperplasia, bronchiolization, accumulation of macrophages, and periacinar interstitial fibrosis — were confined to a small region, the centriacinus, which is involved in gas exchange.

HEI convened a separate panel of expert pathologists, the Pathology Working Group (PWG), to evaluate the histopathology data collected. The PWG findings confirmed the major histopathologic observations reported by the investigators. Also, the PWG, by evaluating the findings of this study side by side with findings from prior long-term exposure studies, provided a context with which to compare and contrast the current study findings with those of other relevant long-term studies of exposure to TDE and oxidant gases. The overall conclusion was that chronic exposure of rats to NTDE did not produce tumors in the lung, in marked contrast to the effects of chronic exposure to TDE observed in multiple previous rat studies, in which lung tumors, as well as inflammation and the deposition of soot in the lung, were observed. Rather, the effects of NTDE in the lung more closely resembled changes noted after long-term exposures to gaseous oxidant pollutants, in particular NO₂, and to TDE from which particles have been filtered out. It is possible that components of NTDE other than NO₂ may have contributed to the effects reported, but the low levels of other components suggest that they would not be primarily responsible.

The ACES Review Panel concluded that the multiple toxicity endpoints evaluated — including lung and serum chemistry and respiratory function — were appropriate for evaluating a wide range of possible biologic effects. There were small decreases in some respiratory endpoints, in particular those concerned with expiratory flow, predominantly at the highest exposure level and more in females than males. The diffusing capacity of carbon monoxide (DL_{CO}, a measure of alveolar-capillary gas exchange) showed a small effect of exposure to NTDE. The Panel considered the small reductions in DL_{CO} to be consistent with the histopathologic findings of mild changes in the gas-exchange regions of the lung, indicating that the histologic changes might have had functional effects. In addition, some small changes in a few markers of oxidative stress and inflammation were detected in lung tissue, bronchoalveolar lavage fluid, and blood. The Panel identified a minor limitation to the study: some biochemical assays lacked positive controls (to determine that each was sensitive enough to detect any changes).

The Panel considered that the ancillary studies by Bemis et al., Hallberg et al., and Conklin and Kong were valuable extensions to the ACES core investigation. These generally well implemented studies took advantage of samples collected by McDonald

Research Report 184, Parts 1–4

and colleagues at several exposure time points up to 24 months to assess multiple endpoints that are not normally part of chronic inhalation bioassays. The genotoxicity studies assessed well-accepted endpoints — the frequency of micronucleated reticulocytes (immature red blood cells) in blood in the report by Bemis et al., and DNA damage and lipid peroxidation in the report by Hallberg et al. Conklin and Kong assessed a wide range of plasma markers associated with systemic inflammation and thrombosis, as well as markers of more chronic effects, to identify possible cardiovascular effects of NTDE. The Panel agreed with the conclusions of Bemis and colleagues and of Hallberg and colleagues that no genotoxic effects could be detected that were associated with exposure for up to 24 months to NTDE. However, the Panel noted that the assays measured relatively short-term effects (lasting 1 month or less), which somewhat reduced confidence in the utility of these negative findings. In Conklin and Kong's study, NTDE had no effect on cardiac fibrosis or aortic remodeling and few effects, predominantly in females and of uncertain pathophysiologic significance, on the inflammatory

and thrombotic pathway endpoints measured in plasma over 24 months of exposure.

Overall, these results indicate that rats exposed to one of three levels of NTDE from a 2007-compliant engine for up to 30 months, for 16 hours per day, 5 days a week, with use of a strenuous operating cycle that more accurately reflected the real-world operation of a modern engine than cycles used in previous studies, showed few exposure-related biologic effects. In contrast to the findings in rats chronically exposed to TDE, there was no induction of tumors or pre-cancerous changes in the lung and no increase in tumors that were considered to be related to NTDE in any other tissue. The effects that were observed with NTDE were limited to the respiratory tract and were mild and generally seen only at the highest exposure level. The histologic changes in the lungs were consistent with previous findings in rats after long-term exposure to NO₂ — a major component of the exposure atmosphere, which is being substantially further reduced in 2010-compliant engines.

HEALTH EFFECTS INSTITUTE

101 Federal Street, Suite 500
Boston, MA 02110, USA
+1-617-488-2300 phone
+1-617-488-2335 fax

pubs@healtheffects.org
www.healtheffects.org







Recycled Paper

EXHIBIT B

[Subscribe Today](#) | [Customer Service](#) | [P-Edition](#) | [Advertise](#) | [Top Workplaces](#) | [UnidosSC.com](#) | [Weather](#)
[News](#) | [Sports](#) | [Entertainment](#) | [Business](#) | [Life](#) | [Opinion](#) | [Blogs](#) | [Photos](#) | [Obits](#) | [Register](#) [Connect](#)

[CARS](#)
[JOBS](#)
[HOMES](#)
[DEALS](#)
[CLASSIFIEDS](#)

[City News](#) | [Politics](#) | [Topics](#) | [Environment](#) | [Education](#) | [Announcements](#) | [Traffic](#) | [Photos](#) | [Blogs](#)

 <p>NEWS RIVERSIDE: Retrial opens in attack on CHP officer</p>	 <p>NEWS LAKE ELSINORE: 'Tarzan House' razed</p>	 <p>NEWS MURRIETA: Dance provides freedom from disabilities</p>	 <p>ENTERTAINMENT MORONGO: 10 things we learned from David Cassidy</p>
---	---	--	---

NEWS

MORENO VALLEY: Study on proposed World Logistics Center called 'legally inadequate'

An environmental report on the proposed project – which would stretch 700 football fields – could be vulnerable to court challenges, air board says. The developer sticks by the report.

RELATED
NO SPECIAL ELECTION: Council, not voters, will decide on World Logistics Center after all RECALL EFFORTS: 3 council members served with papers

[g+](#) | [Like](#) | [Share](#) | [Tweet](#) | [Email](#) | [Share](#)

BY DAVID DANELSKI / STAFF WRITER
 Published: June 9, 2015 Updated: June 10, 2015 2:38 p.m.



DAVID DANELSKI, FILE PHOTO

IF YOU GO

What: The Moreno Valley Planning Commission is scheduled to hold its first hearing on the World Logistics Center project.

When: 7 p.m. Thursday, June 11

Where: The city's Conference and Recreation Center, 4075 Frederick St.

State air quality officials say that Moreno Valley's environmental analysis of a proposed warehousing complex with enough indoor space for 700 football fields is "legally inadequate" and needs major revisions. The developer countered Tuesday that the report "meets all the requirements" of the state's environmental quality law.

The California Air Resources Board staff said that the city's required environmental study for the World Logistics Center did not properly address the potential health risks of air pollution or measures that would make the city less polluting, such as use of zero or near-zero emission machinery.

"The health risk analysis must be revised to ensure that the potential impacts are fully analyzed and disclosed," said the letter by Heather Arias, chief of the state air board's freight transport branch.

The letter, however, is disputed by the project's developer, Iddo Benzeevi, the president and CEO of the Highland Fairview Co., who expects the distribution hub to

More from this story

SLIDE SHOW:
 MORENO VALLEY: Study on proposed World Logistics Center called 'legally inadequate'
 3 Photos »

BREAKING Get breaking news alerts in your inbox
 Sign up today

Today's Poll What's this?

What do you think about Bobby Jindal as a presidential candidate?

- I'd vote for him
- I won't be voting for him
- I'm not sure

Submit

Attachment: PC COMMENTS (COMBINED). [Revision 1] (1549 : PROPOSED WORLD LOGISTICS CENTER CONTINUED PUBLIC HEARING)

create 20,000 jobs.

“Both the city and Highland Fairview’s independent legal counsel have reviewed the exhaustive CEQA (California Environmental Quality Act) analysis and found it to be thorough and complete,” Benzeevi said in a statement. “The WLC also incorporates the most stringent and aggressive environmental mitigation of any project of its kind.”

Mark Gross, a city planner, said city officials received the eight-page letter on Monday and are evaluating it.

The city’s environmental report, however, did say the project’s local and regional air quality impacts would be “significant and unavoidable.”

It was unclear how the state air board’s concerns will affect the 4.2-square-mile project sought for the east side of Moreno Valley on what is now mostly farm fields between the 60 freeway and the San Jacinto Wildlife Area.

Melanie Turner, a spokeswoman for the state air board, said Tuesday that the agency will consider its options if the city decides to not make any changes to its analysis.

The letter by the air board cites examples in which it contends the city did not comply with the state environmental quality law, suggesting the city’s environmental impact report may be vulnerable to court challenges.

Revising the report could be time consuming, considering it took the city more than two years to revise a draft version of the document after closing a public comment period on the document, which was prepared for the city by a Riverside consulting firm, LSA Associates.

A major concern, air officials said, is the air pollution that could come from center’s estimated 14,000 truck trips a day.

The air board criticizes the city for relying in its analysis on a study published this year by the Boston-based Health Effects Institute that found that rats exposed in a laboratory to the exhaust of newer diesel engines did not develop cancer.

The draft report was released in February 2013. The final report was issued last month.

The city’s report says that this study “clearly demonstrates” newer diesel-emissions technology has “virtually eliminated the health impacts of diesel exhaust.” The logistics center project would require that the big-rig trucks serving it would be the cleaner 2010 models or later.



Trending



LAKE FIRE: Spread stopped; containment inches up



TEMECULA: Court records detail teen shooting



LAKE ELSINORE: 'Tarzan House' razed



TEMSCAL VALLEY: Woman drowns in pool



MURRIETA: City to consider investigating mayor



Marie Callender's Hemet

951-925-7727

Riverside Yellow Pages

MORE FROM MORENO VALLEY



MORENO VALLEY: Fred Odgaard finds his niche in 'Neverland'

Moreno Valley native Fred Odgaard has landed on Broadway cast in nine different roles.



MORENO VALLEY: What will Fisker Automotive do for the Inland region?

The resuscitated maker of plug-in hybrid luxury cars plans to bring manufacturing jobs to the area

Per-Mile Insurance advertisement by Metromile with text 'If you hardly drive, you should hardly pay.' and a 'FREE QUOTE' button.



June 22, 2015

VIA US MAIL & EMAIL

City Planning Commission & City Council
City of Moreno Valley 14177 Frederick St.
P.O. Box 88005
Moreno Valley, CA 92552 cityclerk@moval.org

SUBJECT: COMMENTS ON WORLD LOGISTICS CENTER

To whom it may concern:

Thank you for the opportunity to comment on the Environmental Impact Report prepared for The World Logistics Center. Please accept and consider these comments on behalf of SoCal Environmental Justice Alliance.

The proposed World Logistics Center project (WLC) site covers 3,918 acres in eastern Moreno Valley. A General Plan Amendment is proposed to designate 2,635 acres for logistics warehousing including up to a maximum of 41.4 million sf of "Logistics Development" and 200,000 sf of warehousing-related uses classified as "Light Logistics." The remaining 1,104 acres will be designated for permanent open space and public facilities. The following elements of the General Plan are included in the proposed Amendment: Community Development (land use); Circulation; Parks, Recreation, and Open Space; Safety; Conservation; and the General Plan Goals and Objectives. The site is just north of the San Jacinto Wildlife Area and includes 7 rural residential properties. A new Specific Plan will be adopted to govern development of the 2,635 acres, and a separate zoning amendment will also be processed to rezone 1,104 acres for open space and public facilities uses.

Currently there are several logistics warehouse facilities approved, built, or proposed in Moreno Valley. Additionally, the City has recently approved the 2,000,000 SF ProLogis project and is in the process of approving the World Logistics Center (WLC), a 42,000,000 SF logistics facility.

The SoCal Environmental Justice Alliance urges the City Council to consider the combined effect of the oversupply of logistics warehousing and failing to maintain a mix of land uses and industry within the city. The World Logistics Center is one of the few remaining non-logistics or industrial uses within the City. The EIR must evaluate the impact of stripping

42,000,000 SF of Moreno Valley of the opportunity to be utilized as a land use classification that is more beneficial to the residents of the City.

There are a number of studies that report a connection between heightened sensitivity to pollution for communities with low income levels, low educational levels, and other social and environmental factors. The combined impact of pollutants coming from several sources and increased sensitivity among these communities can result in a higher cumulative pollution impact.¹

Moreno Valley benefits as one of the most ethnically diverse cities in the state. However, Moreno Valley also suffers from high rates of unemployment, low levels of education, and chronic health issues among residents.

According to the 2010 U.S. Census data, Moreno Valley had a population of 193,365 people which grew to 201,175, a 4% rate of growth.² This is higher than the 3.2% change in California as a whole. People are still moving into Moreno Valley and the City should seek to provide the most environmentally conscious living environment possible.

The 2009-2013 median household income in Moreno Valley was \$54,918 compared to the California median of \$61,094³. Additionally, a striking 19.5% of residents in Moreno Valley live below the poverty level while 15.9% of California overall is below the poverty level⁴. In 2013, 18,244 residents of Moreno Valley lived below the poverty level and 34.9% of them were unemployed⁵. These statistics demonstrate that the City Council must consider new economic development in Moreno Valley as an opportunity for residents to live above the poverty level

Table 8-3
Employment of Residents by Occupation

Occupation	Number of Jobs	% of Total
Management, business, science, and arts occupations	18,439	24.5%
Service occupations	13,446	17.9%
Sales and office occupations	21,180	28.1%
Natural resources, construction, and maintenance occupations	9,535	12.7%
Production, transportation, and material moving occupations	12,696	16.9%
Total	75,296	100%

Source: U.S. Census Bureau, 2007-2011 American Community Survey 5-Year Estimates for "Moreno Valley city, California"

and increase their access to education and clean jobs.

¹ Office of Environmental Health Hazard Assessment, Cumulative Impacts: Building a Scientific Foundation (Dec 2010), Exec. Summary, p.ix, available at <http://oehha.ca.gov/ej/cipa123110.html>.

² U.S. Census: Moreno Valley Facts <http://quickfacts.census.gov/qfd/states/06/0649270.html>

³ U.S. Census: Moreno Valley Facts <http://quickfacts.census.gov/qfd/states/06/0649270.html>

⁴ U.S. Census: Moreno Valley Facts <http://quickfacts.census.gov/qfd/states/06/0649270.html>

⁵ U.S. Census: Employment Status 2009-2013 American Community Survey 5-Year Estimates

Only 75% of Moreno Valley residents have graduated from high school, in comparison to 81.2% of California Residents⁶. Further, only 14.8% of Moreno Valley residents 25 and older possess a Bachelors degree or higher, only half of the 30.7% of California as a whole⁷.

The table above from the Housing Element of the Moreno Valley General Plan shows that only 16.9% of residents 2007-2011 reported employment in the production, transportation, and material moving occupations⁸. 42,000,000 SF will bring an abundance of jobs in this field. Residents are unable to benefit from the increase in jobs available unless they receive the proper training to work safely, effectively, and efficiently in the logistics industry.

The mean travel time to work for workers in Moreno Valley age 16 and over is 34.2 minutes compared to 27.2 minutes for California⁹. The extensive amount of time spent commuting to work takes time away from Moreno Valley residents to pursue other activities such as exercising, higher education, and personal development. Further, traffic congestion and pollution have been increased significantly due to more vehicles on the road for people commuting out of the city. Thousands of employees will be commuting into Moreno Valley for work at the World Logistics Center and increasing traffic congestion, air pollution, and the need for city services. The way the project stands, residents must commute out of Moreno Valley for lower wage jobs when they should be enjoying the benefits of industrial development within their city.

This data demonstrates that residents of Moreno Valley are low-income, live below or near the poverty line, and unable to obtain the education that can enhance the lives of their family and community. These residents need access to skills and technical training in order to be employed in a logistics career. Otherwise, employees for these mega job centers will be imported from other areas which leaves Moreno Valley residents stuck in the same cycle of a low-income, high poverty level, and low education community. The City Council must regard this fact and the needs of residents to bring themselves above the poverty level when considering the impact of the World Logistics Center.

There are many factors that contribute to a successful and highly functioning city environment. The ability of residents to travel to work with ease and care for the environment is dependent upon the city's commitment to ensuring that development will have a positive impact on the citizens of Moreno Valley. Work, income, and job skills are plausibly the root of the vitality of the community and environmentally friendly routes to local work will engage the community in environmental consciousness while ensuring progress towards smart urban growth. Decreasing the commute time for residents to their workplace can increase their connectivity to the environment and local community. Overall, planning new development in Moreno Valley must encourage local job growth, sustainable living, and economic vitality in the city. The future of Moreno Valley requires focused planning and compact development in the present to ensure a successful and sustainable urban future.

⁶ U.S. Census: Moreno Valley Facts <http://quickfacts.census.gov/qfd/states/06/0649270.html>

⁷ U.S. Census: Moreno Valley Facts <http://quickfacts.census.gov/qfd/states/06/0649270.html>

⁸ Moreno Valley General Plan: Housing Element, p 40.

⁹ U.S. Census: Moreno Valley Facts <http://quickfacts.census.gov/qfd/states/06/0649270.html>

Sincerely,

Joe Bourgeois
Chairman of the Board

Terrell Watt Planning Consultants

[REDACTED]
San Francisco, CA 94123
[REDACTED]
[REDACTED]

June 24, 2015

Richard Drury
Lozeau/Drury
410 12th Street, Suite 250
Oakland, CA 94607

Dear Mr. Drury,

Subject: Review of the FEIR for the World Logistics Center (WLC) Project in the City of Moreno Valley -- Additional Comments on the Lack of an Adequate Analysis of Urban Decay Impacts

At your request and on behalf of LIUNA, I have reviewed all of the relevant information on the proposed World Logistics Center project, including the pertinent sections of the Revised Draft EIR, FEIR, responses to comments, comment letters, supplemental responses to comments (June), staff report and Fiscal and Economic Impact Study prepared by David Taussig & Associates ("DTA Study") for the purpose of ascertaining whether an urban decay study was warranted and the extent to which the FEIR includes an urban decay study. My conclusions are: 1) given the potential for urban decay impacts, a thorough analysis of all potentially significant urban decay impacts should be completed as required by case law and CEQA; and 2) the FEIR lacks an adequate analysis of urban decay impacts.

This letter supplements the comments submitted by Lozeau Drury in its letter of June 10, 2015 and focuses on the lack of an adequate analysis of potentially significant urban decay related impacts in the project FEIR. It is my professional opinion that given the scale and type of uses that would be developed in the World Logistics Center, the likelihood of significant urban decay impacts in the primary and secondary market areas (including adjacent cities and unincorporated areas) is high. The lack of an adequate analysis of these potentially significant impacts is a glaring omission in the FEIR and one that must be addressed in a supplemental environmental document, including but not limited to:

- 1) Analysis of potential areas of blight as a result of "nuisances" caused by the project (e.g., traffic, noise, air pollution, odors, lower response time from police, fire and other services); and
- 2) Analysis of the potential for existing similar uses and industrial/warehouse areas to be rendered no longer economically viable and forced to close or stagnate thereby creating a blighted area prone to vandalism, increase in crime and other forms of urban decay.

As pointed out in detail in the letter submitted by Lozeau Drury, the Courts have found that social and economic changes that may have a physical impact must be analyzed in an EIR. It is understandable that the City sees benefits in creating jobs locally, improving the jobs-housing balance, attracting quality businesses and enhancing City revenue. Without an adequate analysis of potential urban decay impacts, it is not clear at what the local and regional “costs” of these potential benefits are. Specifically, this project may shift the location of warehouse development without accounting for the potentially offsetting impacts to existing businesses and neighborhoods. In addition, benefits such as improving job-housing balance are appropriately done taking into consideration adjacent and even regional balance, and not just one city or community.

The massive scale, change in land use and type of land use proposed by this Center warrants an in depth analysis of urban decay impacts in a supplemental DEIR. Finally, given the project entitlements include a Development Agreement (“DA” FEIR page 4.14-1) between the City and the project applicant, the project will be “vested” and it will be difficult as project details emerge to address significant impacts that were not addressed in the FEIR. The DA makes even more critical the completion of an adequate and thorough analysis of all potentially significant impacts, including urban decay, prior to project approval.

While most urban decay studies and analyses have focused on large-format big box stores, any project under CEQA could be subject to an urban decay study where it would have a potentially significant impact. In this case, there are numerous project features that require a full urban decay analysis including, but not limited to: 1) the massive scale of the project and therefore generation of both “nuisance” type impacts as well as market share-related impacts; 2) the proximity of existing uses that could be impacted by the project as a result of traffic, air quality, noise and other nuisance type effects; and 3) the number of similar uses and entitled uses in the primary and secondary market areas that would likely be impacted by the development of an entirely new and massive center.

I. The EIR Fails to Analyze Urban Decay Impacts

The FEIR contains a two sentence section on urban decay:

“5.4 Urban Decay

A detailed analysis of potential employment and fiscal impacts of the project is provided in Section 4.13, Population, Housing and Employment. This analysis concludes the proposed project is not expected to cause or contribute to any conditions of urban decay within the City of Moreno Valley.” (FEIR p. 5-7)

A thorough review of the referenced section, 4.13, and all other relevant documents including EIR, EIR appendices and staff reports, reveals that there is no substantive or adequate analysis of urban decay impacts. Urban decay impacts in the form of existing similar enterprises and warehouse/industrial parks going out of business are completely ignored. Impacts in the form of blight as a result of project generated nuisance (e.g., traffic, reduction in essential services, air quality, and the like) are not analyzed in any substantive way and conclusions are rendered without factual support or analysis.

II. An Analysis of Urban Decay Must be Completed

The FEIR's conclusion that the project will not cause or contribute to any conditions of urban decay within the City of Moreno Valley is incomplete and unsupported by analysis and evidence. The lack of any analysis or conclusion concerning potentially significant urban decay impacts generated by the proposed project beyond the City is a glaring omission. Placing more than 40 million square feet of warehouse and distribution space in the City, has the real potential to cause and contribute to significant urban decay impacts related to both project generated nuisance (e.g., traffic, noise) as well as impacts resulting from changes in economic conditions as a result of the massive project. The latter category of urban decay-related impacts include but are not limited to depreciated or stagnant property values or impaired investments, abnormally high vacancies, low lease rates, high turnover, abandoned buildings, vacant lots within developed areas/warehouse/industrial parks; lack of essential facilities and increased crime. Incompatibility of adjacent uses can also prevent economic development and lead to blight of existing uses. Moreover, the scale of this project warrants impacts associated with urban decay to be analyzed for primary and secondary market and impacts areas extending well beyond the City of Moreno Valley (e.g., an area extending at least to Ontario and other regional warehouse/industrial hubs; inclusive of adjacent cities impacted by traffic and emissions such as Riverside).

A review of recent environmental impact reports¹ that address urban decay indicate that where a project would result in the impacts listed below, an urban decay study should be prepared:

- The proposed project is projected to result in project-related and/or cumulative economic or social changes that would cause substantial and adverse physical changes, or
- The proposed project alone or in combination with cumulative projects would cause or contribute to urban decay defined, among other characteristics, as visible symptoms of physical, deterioration that invite vandalism, loitering, graffiti and other impacts caused by a downward spiral of business closures and vacancies. The outward manifestation of urban decay include but are not limited to: boarded buildings, unsightly fenced off properties, long term unauthorized uses, graffiti, illegal dumping, dead landscaping, lack of building maintenance, homeless camps, unlawful long term parking of trucks, vehicles, as well as other signs of economic distress.

Based on the conclusions the FEIR reaches concerning the significant of nuisance related impacts that would impact existing areas of the City and beyond (e.g., City of Riverside), an urban decay analysis is warranted. The scale of the project and its potential to disrupt, delay or siphon off the market for existing similar uses and warehouse/industrial areas and hubs warrants a thorough analysis of urban decay that could result from rendering other areas stagnant and blighted.

¹ Santa Rosa Lowe's Home Improvement Warehouse Project EIR – Link: http://ci.santa-rosa.ca.us/doclib/Documents/CDP_Lowes_DEIR_Urban_Decay.pdf; Rocklin Crossings Project DEIR – Link: <https://www.rocklin.ca.us/civica/filebank/blobdload.asp?BlobID=8526>; Woodland Gateway Project – Link: <http://www.cityofwoodland.org/civicax/filebank/blobdload.aspx?blobid=7948>

III. Required Analysis Components

As described below, the required analysis for an adequate urban decay analysis has not been completed. Issues and components that must be analyzed in a recirculated environmental document include, but are not limited to the following:

- Identification of primary and secondary market areas for the proposed project and therefore potential impact areas.

The FEIR lacks the information needed to support an urban decay study. The DTA Study was focused on the fiscal and economic benefits to the City and not on local and regional impacts to existing businesses and land uses.

- Identification of existing similar space in the market areas as well as entitled space.

Table 6.R in the FEIR presents a partial list of potential alternative sites for the project. However, the table is incomplete and fails to include sites within the secondary market area as well as presents this information not for an urban decay study but for an alternative site study. Thus information is incomplete in the FEIR necessary to support an urban decay analysis.

- Proposed project demand capture.

The DTA study provides limited information, but again was not focused on supporting an urban decay analysis and therefore is incomplete.

- Leakage analysis to determine unmet demand;

The FEIR lacks a thorough inventory of existing and entitled warehouse and industrial parks in the primary and secondary market area as well as projections for demand. This information is essential to an analysis of potential urban decay as a result of oversaturation of the market and rendering existing uses/warehouse and industrial parks stagnant or vacant and as a result blighted.

- Maximum project related impacts on existing primary and secondary market area uses.

Again, the FEIR purports to evaluate urban decay, but in fact lacks any analysis of impacts on the warehouse/industrial market in the primary and secondary market areas.

- Assessment of the extent the proposed project may have on urban decay in the primary and secondary market areas, as a result of market disruption and of nuisances that render existing uses and warehouse and industrial parks stagnant or vacant (e.g., traffic, declining air quality)

The Fiscal and Economic Study prepared by DTA focuses on the net fiscal impacts of the project on the City's General Fund and to some extent on employment generation, economic output and earnings. As pointed out in the numerous letters from the City of Riverside, the project will generate significant traffic, noise and air quality impacts that have the potential to severely overburden and degrade the quality of existing neighborhoods. To the extent these impacts are not addressed and mitigated, urban

decay impacts on severely impacted areas could result. These impacts are not addressed by the FEIR. In addition, traffic congestion could render Riverside neighborhoods and commercial areas less competitive and attractive. Again, these “urban decay” type impacts are simply not addressed. Likewise, the potential for this massive project to stall the absorption of existing and entitled warehouse and industrial areas in the City as well as well beyond the City (e.g., Ontario’s distribution hub, Mira Loma, Centerpointe Business Park, Eastern Moreno Valley-Rancho Belago Area, as well as others) is high². Finally, the FEIR discounts the possibility that the Villages at Lakeview, though large enough, could accommodate similar uses is laughable since this project also requires a sweeping general plan amendment (“While the property [Villages of Lakeview] is large enough, it is already proposed for residential development so it would be infeasible to use the property to support development equivalent to the proposed project.”) FEIR at page 6-41. The Villages at Lakeview may not be an appropriate alternative location for this type of use, but the conclusory and unsupported nature of the FEIR text points to the lack of any rigorous analysis or critical thinking in this FEIR. The EIR is deficient for ignoring urban decay impacts and for asserting that urban decay impacts are insignificant without any substantive analysis.

Conclusion

For the foregoing reasons, the City must continue the matter for future consideration pending the completion of a thorough and adequate urban decay study in a recirculated CEQA document that addresses both the potential for significant unavoidable nuisance based decay and blight in the City, adjacent cities and region as well as market based decay and blight in primary and secondary market areas.

Sincerely,

Terry Watt

Terry Watt, AICP

² In addition to the business and warehouse parks identified in Table 6.R, the DTA Study describes numerous other business parks that are not fully described in Table 6.R. The DTA Study notes that many of these properties have significant remaining capacity. An urban decay study would assist the City in determining the optimal elements of its Economic Development Plan as well as gain a better understanding of the potentially offsetting impacts of the Center project on properties located both within and beyond the City.

Terrell Watt, AICP
Terrell Watt Planning Consultants

[REDACTED]
San Francisco, CA 94123
[REDACTED]
[REDACTED]

EXPERIENCE

- 1989 - **TERRELL WATT PLANNING CONSULTANTS**
Planning consulting firm owner
- 1981-1989 **SHUTE, MIHALY & WEINBERGER**
Planning Expert/Paralegal
- 1981-1983 **MUNDIE & ASSOCIATES**
Planning Consultant to public and private clients
- 1979-1980 **EDAW, INC.**
Project Management, Planning Consultant

PROFESSIONAL MEMBERSHIPS AND BOARDS

American Institute of Certified Planners (AICP)
American Planning Association (APA)
Board Member of the Conservation Biology Institute www.consbio.org

EDUCATION

USC GRADUATE SCHOOL OF URBAN AND REGIONAL PLANNING
Masters degree in City and Regional Planning

STANFORD UNIVERSITY
Bachelor's degree in Urban Studies

Since 1989, Terrell Watt, AICP, has owned Terrell Watt Planning Consultants. Ms. Watt's firm specializes in planning and implementation efforts focused on regionally-significant projects that promote sustainable development patterns. Prior to forming her own consulting group, she was the staff planning expert with the environmental and land use law firm Shute, Mihaly & Weinberger. She is an expert in general and specific planning, open space and agricultural land conservation and environmental compliance. Her skills also include public outreach, negotiation and facilitation.

Terrell works with a wide variety of clients throughout California including conservation organizations, government agencies and foundations. Her recent projects include:

- Project Coordinator for the Los Angeles Infill Potential Methodology study, funded by an Environmental Justice Grant from Caltrans and jointly sponsored by the City of Los Angeles, County of Los Angeles and Environment Now.
- Secretary Terry Tamminen's Representative to the California Infill Study Task Force, a Subcommittee to the State's Smart Growth Task Force.
- Primary consultant to the City of Livermore on the South Livermore Wine County Specific Plan and Transfer of Development Rights Program.
- Consultant to the Institute of Local Self Government for the development of A Local Official's Guide to Funding Open Space Acquisition.
- Consultant to the Planning and Conservation League led coalition of community and environmental groups on California High Speed Rail.
- Member of Mayor Gonzales' San Jose Coyote Valley Task Force on behalf of the Silicon Valley Conservation Council.
- Founder and Project Director of the newly forming Association of Infill Builders.

SUMMARY OF RECENT PROJECTS

South Livermore Valley Wine Country General Plan Amendment, Urban Growth Boundary, Specific Plan and Transfer of Development Rights projects. Assisted the City of Livermore in developing and adopting the South Livermore Valley Wine Country plan and implementing documents. The results include one of the highest per unit/per acre agricultural and open space mitigation fees in California, limited "final" urban development forming a permanent urban growth boundary and protection of over \$5,000 acres of prime agricultural and habitat land.

Santa Clara County Parks and Recreation Department: Assisted 2M Associates to prepare the Department's Strategic Plan for parks and open space development and protection. The Strategic Plan includes proposals for renewing the Park Charter fee for open space.

Planning and Conservation League: Coordinating comments from an informal network of environmental and conservation organizations on the proposed High Speed Rail project and related environmental review document (EIR/EIS). Funding is provided by the Resources Legacy Fund Foundation.

San Francisco Public Utilities Commission/Jones and Stokes Associates: Assisting with the community outreach program and the preparation of a Habitat Conservation Plan for the Alameda Watershed.

Caltrans, City of Los Angeles, County of Los Angeles and Environment Now: Coordinator of the Los Angeles Infill Working Group, which is tasked with preparing a report on infill potential and strategies for infill projects under an Environmental Justice Grant from Caltrans.

Mid-Peninsula Regional Open Space District: Assisted in the development of a service plan, LAFCO applications and environmental documents for the District's annexation of the San Mateo Coast.

The Nature Conservancy, California: Assisting TNC to develop conservation priorities and an Oak Woodland Protection program for Tulare County.

Infill Builders Association: Assisting a number of builder organizations and non-profits to form an Association to advance infill development in California.

Institute for Local Self Government (ILSG)/Local Government Commission: Assisting in the preparation of a guide for local governments on funding mechanisms for open space protection. Funding for the report is provided by the Resources Legacy Fund Foundation and the David and Lucile Packard Foundation.

Cambria Services District and Local Coalition: Prepared a toolbox of funding mechanisms and organizational options for protecting open space.

Open Space Fee Agreements with Landowners: Transfer tax for open space on new residential/resort development in Truckee and Placer County; Mello-Roos assessment on new residential and commercial development in Fairfield; agricultural conversion fees and dedication requirements in South Livermore; land dedications in return for development on the Newport Coast; Orange County NCCP/HCP fees.

Proposition 218 Campaign in Santa Clara County: Led the Silicon Valley Conservation Council effort to pass a Proposition 218 benefit assessment fee for open space funding in Santa Clara County.

Caltrans, The Nature Conservancy and Green Info Network: Assisted the team to evaluate how best to coordinate resource conservation and transportation planning. Work products include a computer application that illustrates potential conflicts between proposed transportation projects and TNC portfolio sites and a report outlining the transportation process in California.

Tejon Ranch Working Group/Environment Now Foundation: Coordinator of the Working Group to determine and advance the importance of protecting high value resources on the Tejon Ranch through comprehensive planning.

Sierra Watch: Planning consultant to Sierra Watch, a non-profit directed at sensible planning for the Sierra.

Humboldt County Watershed Council. Working with the Council and five other leading environmental groups to ensure that conservation policies are included in the Humboldt County General Plan update, which is currently underway. Funded is provided by the Resources Legacy Fund Foundation.

City of Moreno Valley Planning Commission Continued Public Hearing: World Logistics Center Planning Applications

The Planning Commission of the City of Moreno Valley is presently conducting a complex public hearing addressing a land-use project which, if ultimately approved, will have a significant role in the future of our City. A critical element of the evaluation process is the input of the public and especially the residents of the City of Moreno Valley. The public's input, along with technical analyses and the information offered by the applicant will be considered as the Planning Commission deliberates upon its recommendations to the City Council.

The following guide has been prepared to ensure that the community has a clear understanding on procedures that will guide this process:

1. All persons wishing to address the Planning Commission will, after properly completing a speaker form, be accorded the established speakers time of up to three minutes to address Planning Commissioners. Certain rules apply:
 - Those who have previously addressed the Planning Commission during the public hearing on this matter will not be provided a second opportunity to speak to readdress the Planning Commission, unless a future decision is made by the Planning Commission to allow additional comments.
 - Those who have already filled out a speaker form for the June 11, 2015 meeting will have that request honored, even if they had to leave that meeting prior to addressing the Planning Commission.
 - Those attending the June 25, 2015 continued public hearing who did not speak at the June 11th hearing and did not submit a request to speak on June 11 may do so.
 - When a public hearing is continued, the public has the right to join into their community's consideration on the matter under review. If the public hearing continues beyond June 25, 2015, interested parties who have not yet addressed the Planning Commission may, at a future hearing date, exercise their right to address the Planning Commission.
 - Written comments may also be submitted at any time before the Planning Commission closes the public input portion of the public hearing.
2. When the Planning Commission closes the public comment portion of the hearing, the applicant will be allowed to respond to issues raised by the public speakers.
3. The Planning Commission will then publicly deliberate upon all of the testimony and evidence that has been presented to it by the public, the applicant and the staff. Deliberation may continue from meeting to meeting and may require the Planning Commission to seek for clarification of any element related to the application before it. The Planning Commission's recommendations will then be forwarded to the City Council.
4. The City Council, in a new public hearing, will consider the Planning Commission's recommendation, as well as hearing the public's testimony and the applicant's presentation in support of its applications.

While the foregoing describes the process and the public's further right to address the City's Planning Commission, any additional questions may be addressed to Mark Gross of the Planning Division at 951.413.3206.

MEMORANDUM

DATE: June 10, 2015

TO: Mark Gross, Moreno Valley Planning Department

FROM: Kent Norton, AICP, Associate, LSA Associates, Inc.

SUBJECT: **Response to Letter from CARB dated June 8, 2015**

In a letter dated June 8, 2015, Heather Arias with the California Air Resources Board (CARB) submitted comments on the WLC Project FEIR. The specific comments are presented below, followed by responses to each comment.

Comment 1:

ARB reviewed the Draft Environmental Impact Report (DEIR) and provided comments to the City of Moreno Valley (City) in a letter dated April 16, 2013. ARB's comment letter expressed concern over the increase in health risk in the immediate area and the significant and unavoidable air quality and greenhouse gas related impacts caused by the proposed WLC. To address those concerns, ARB recommended actions to support the development, demonstration, and deployment of zero and near-zero emission technology at the WLC.

Unfortunately, ARB finds the FEIR to be legally inadequate and unresponsive to the comments ARB provided in its April 16, 2013 letter regarding the DEIR. ARB appreciates the opportunity to comment on the FEIR, as we have significant concerns with the analysis and mitigation currently outlined in the document. We urge the City to revise and recirculate the EIR, to reflect needed changes in mitigation and to bolster the analysis of potential health risks posed by the project, as required by California Environmental Quality Act (CEQA).

Response 1:

The air quality, health risk, and greenhouse gas analyses in the EIR are based on current scientific and regulatory guidance on the preparation of such studies, are legally adequate, and the EIR proposes appropriate mitigation based on the impacts identified in those studies. The EIR contains accurate and legally adequate information upon which decision-makers can make an informed decision. As outlined in Table 1.C of the Final EIR – Volume 1 – Response to Comments, recirculation is not necessary based on the results of the additional analyses and responses to the many comments on the Draft EIR.

Comment 2:

In addition, we are aware of the possibility that the City may opt to move the WLC decision to a ballot measure. Given the potential emissions impacts and increase in health risk associated with project construction and operation, we strongly urge CEQA compliance by the City, irrespective of whether or not this project becomes a ballot measure.

Response 2:

DEIR Section 4.4 fully evaluated the potential air quality and health risks of the WLC project. The many comments on the DEIR regarding air quality and health risks were addressed in Volume 1 of the Final EIR – Response to Comments.

Comment 3:

CEQA Background Regarding Responses to Comments and Need for EIR Recirculation. When a significant environmental issue is raised in comments that object to the draft EIR's analysis, the response must be detailed and must provide a reasoned, good faith analysis. (14 CCR § 15088(c).) The responses to comments on a draft

EIR must state reasons for rejecting suggestions and objections concerning significant environmental issues. (City of Maywood v. Los Angeles Unified Sch. Dist. (2012) 208 Cal.App.4th 362, 391.) The need for a reasoned, factual response is particularly acute when critical comments have been made by other agencies or by experts. (See Berkeley Keep Jets Over the Bay Comm. v. Board of Port Comm'rs (2001) 91 Cal.App.4th 1344, 1367,1371.).

If significant new information¹ is added to an Environmental Impact Report (EIR)² after notice of public review has occurred, but before final certification of the EIR, the lead agency must issue a new notice and recirculate the EIR for comments and consultation. (Pub. Res. Code § 21092.1; 14 CCR § 15088.5.) "Significant new information" triggering the need for EIR recirculation includes information showing that (1) a new or more severe environmental impact would result from the project, (2) a feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of a project but the project proponent declines to adopt it, or (3) the draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (14 CCR § 15088.5(a)(1)-(4).)

A decision not to recirculate an EIR must be supported by substantial evidence in the administrative record. (14 CCR § 15088.5(e).)

Response 3:

The comment above describes requirements of CEQA in regard to response to comments and recirculation. The FEIR for the WLC project meets the requirements of CEQA in regard to response to comments. In addition, the FEIR does not meet any of the criteria for recirculation: (1) there are no new or more severe environmental impacts, (2) there are no feasible project alternatives that would lessen the environmental impacts and all feasible mitigation has been adopted, and (3) it is neither inadequate nor conclusory.

Comment 4:

The Response to Comments Fails to Adequately Address ARB's Comments And Does Not Adopt All Feasible Mitigation Measures. In its previous comment letter, ARB recommended "actions to support the development, demonstration, and deployment of zero and near-zero emission technology to reduce localized health risk and regional emissions. We believe that use of these technologies is feasible within the build-out years of the Center." However, the FEIR discussion (in particular, responses to comment B-5-7 and B-5-8 and Master Response 3) regarding zero emission and hybrid electric trucks, vehicles, and equipment does not evaluate the current feasibility of hybrid technologies, or consider the potential for other zero and near-zero emission technologies to be feasible and commercially available, both at the present date and by project build-out in 2030. These technologies are feasible measures that would lessen the WLC's impacts on criteria and greenhouse gas emissions, as well as air toxics and health risk.³

Because these mitigation measures have not been fully adopted for the proposed project, the EIR must be recirculated to incorporate the feasible mitigation measures, or to make a supportable finding that the measures are infeasible. (See 14 CCR § 15088.5(a)(3).)

¹ "Information" triggering recirculation can include additional data or other information. (14 CCR § 15088.5(a).)

² Note that even if new information is not "added to an EIR," it can still trigger the need for recirculation. (See, e.g., Save Our Peninsula Comm. v. Monterey County Bd. of Supervisors (2001) 87 Cal.App.4th 99, 131 (information on important new mitigation measure, added to record after EIR was completed, should have been included in EIR and circulated for public review and comment given questions raised about its effectiveness and potential impacts).)

³ For the purposes of CEQA, "feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. (California Code of Regulations, title 14, section 15364)

Examples include battery electric and fuel cell electric forklifts, battery electric and hybrid electric medium-duty trucks, and plug-in hybrid electric transportation refrigeration units. For more information, please see ARB's Heavy-Duty Technology and Fuels Assessment: Overview, found at http://www.arb.ca.gov/msprog/tech/techreport/ta_overview_v_4_3_2015_final_pdf.pdf.

However, the FEIR discussion (in particular, responses to comment B-5-7 and B-5-8 and Master Response 3) regarding zero emission and hybrid electric trucks, vehicles, and equipment does not adequately evaluate the current feasibility of hybrid technologies, or consider the potential for other zero and near-zero emission technologies to be feasible and commercially available, both at the present date and by project build-out.

The response to comment B-5-7 states that "the project will support a variety of future users which are unknown at this time so it is not possible to specify or require future users to have zero emission or alternative fuel fleets since most logistics companies use independent contractors and truck drivers rather than maintain their own fleets." This response is contradictory and insufficient to show that the proposed mitigation measures are infeasible. This is particularly true given the FEIR's inclusion of several requirements that are applicable to all future tenants; specifically, that all medium and heavy-duty diesel trucks entering logistics sites shall meet or exceed 2010 engine emission standards and all yard trucks shall be powered by electricity, natural gas, propane, or an equivalent non-diesel fuel. If the mitigation measures can restrict access to the facility by truck engine year, there is no reason the mitigation measures cannot similarly restrict access by allowable technologies.

Furthermore, the response to comments rejected the proposed measure of requiring that trucks travelling between the project and any ports or rail yards within 100 miles use zero or near zero emission technology. The reasons for rejecting this measure are also unclear. The response to comments notes that "the Port of Los Angeles is testing various types of zero-emission technology solutions for heavy-duty vehicles," which the response to comments explains have a "range of travel between 100 miles and 200 miles per charge." (WLC Response to Comments at 234.) Therefore, it remains unclear why a measure requiring zero or near zero emission trucks for trips within 100 miles of the project would not be feasible, particularly by project build out in 2030.

With regard to onsite service vehicles and equipment, the response to comment B-5-8 further notes that the only included mitigation measure incorporated into the FEIR is prohibiting the use of diesel-powered onsite vehicles and equipment. (WLC Response to Comments at 185.) Again, the reasons for not including mitigation measures for these onsite vehicles remain unclear, since the response to comments does not clearly address why these types of vehicles and equipment are not available in zero or near-zero emission configurations.

The EIR should therefore be revised and recirculated to do the following:

- Fully evaluate mitigation measures for zero and near-zero emission technologies that are commercially available over the course of project development and by full build-out in 2030.
- Require all feasible mitigation measures and support the development, demonstration, and deployment of zero and near-zero emission technologies including requiring zero emission (such as battery electric or fuel cell electric) forklifts and battery electric and hybrid electric medium-duty trucks. These technologies are commercially available today. Additional advancements, especially for on-road trucks, are expected in the next three to five years; well before project build-out in 2030.

Response 4:

The WLC Project FEIR is a programmatic EIR that analyzes the environmental impacts and require mitigation for a long-term project that will be implemented in increments over many years. Each subsequent increment will be subject to further environmental review and may require additional mitigation if additional impacts are found or previously infeasible mitigation becomes feasible. Due to the programmatic nature of the document, it is not known who future users of the WLC will be or what their operational needs will require in terms of

equipment. As a result, all mitigation relies on commercially available technology that meets the most stringent environmental standards. As CARB knows, planning for zero-emission technology in the freight sector is incredibly difficult, as demonstrated by CARB's ongoing multi-year planning (not implementation) effort to on the Sustainable Freight Plan to lay out pathways to get to a zero-emission freight sector.

As CARB knows, there are no commercially available zero-emission on-road heavy-duty trucks available (See RTC Master Response-3). CARB's own progress report on heavy duty technology and fuels assessment (Draft Heavy-Duty Technology And Fuels Assessment: Overview, April 2015) overview states that the zero and non-zero emission technologies are still at the demonstration phase:

“Demonstrations are underway across the State in a wide array of heavy-duty applications including drayage trucks, delivery trucks, school buses, and some types of off-road equipment.”

“Achieving the successful transition to zero and near-zero emission technologies will be challenging and will take time and money to realize.”

“Staff is assessing additional zero emission vehicle and equipment platforms in the concept, demonstration, or pilot scale deployment stage in the heavy duty sector. Examples include drayage trucks, delivery trucks, and selected types of cargo handling equipment (CHE) such as yard trucks. These technologies are limited today by cost and in some cases performance. As these technologies mature, moving from demonstrations to pilots and early commercialization, costs will decrease and performance will improve.”

Not only are none currently available, it is not currently known when such trucks will become available, what technology they will rely (an important requirement for refueling/recharging requirements), or what operational capabilities such equipment might have such as range or load. The project can commit to requiring all trucks meet U.S. EPA 2010 standards (Mitigation Measure 4.3.6.3B) because it is not question of commercial availability – all new trucks must meet these standards – it is a question of what subset of the truck fleet will serve the WLC.

Similarly with off-road equipment, there is no zero-emission standard for such equipment. While some electrical equipment does exist, it does not exist in for all operational requirements. However, all onsite equipment is available in non-diesel technologies. Subsequent environmental review may require that specific technology that will work with future users be required as condition of approval, but a broad requirement that unknown future users use a specific technology is not currently feasible since current zero-emission technology is very limited.

Comment 5:

Recirculation Is Required Due To Fundamental Inadequacies in the Project's Health Risk Assessment. Several elements of the health risk assessment section of the FEIR are flawed and inadequate, and require revision and recirculation. As noted above, one of the circumstances triggering the need for EIR recirculation is the addition of information showing that the EIR was fundamentally inadequate and conclusory in nature that meaningful public review and comment were precluded. (14 CCR § 15088.5(a).)

In this case, this recirculation “trigger” is present. The FEIR analysis has been revised since the draft EIR was released to include a new study regarding health impacts from diesel engines, specifically, the Advanced Collaborative Emissions Study (ACES). The FEIR repeatedly references that the ACES study concludes that the “application of new emissions control technology to diesel engines have virtually eliminated the health impacts of diesel exhaust.” First, the use of only one study as the basis for this analysis is not sufficient for the purpose of providing a comprehensive analysis of health risk from project construction and operations. The ACES study is only one of many scientific studies related to health risk and emissions, and therefore, cannot serve as substantial evidence regarding the project impact to human health. In fact, there are many other studies that conclude that diesel particulate matter (PM) is a health hazard. For example, the International Agency for Research on Cancer evaluated the scientific literature as a whole and concluded in 2012 that diesel PM is

carcinogenic to humans (class 1). Second, and more importantly, the ACES study's methodology and findings render it inadequate for inclusion in an environmental document, and cannot serve as substantial evidence supporting a finding that the project will not result in significant cancer risk impacts.⁴ Therefore, use of and reference to the ACES study should be removed throughout the FEIR.⁵

Further, the air quality and health risk methodology and models used in the FEIR should be fully explained to ensure the information is accessible and understandable to the public. Specifically, the final document should include the presentation of all cancer and non-cancer health risks at the receptor locations of interest for all emissions from construction and operations at the WLC. The methodology should include the use of all the current Office of Environmental Health Hazard Assessment (OEHHA) approved risk assessment methodology contained in the OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines: Guidance Manual for the Preparation of Health Risk Assessments (February 2015).

Response 5:

The HEI is an independent non-profit research organization founded in 1980 to provide high-quality, impartial, and relevant science on the health effects of air pollution. Typically, HEI receives half of its core funds from the US Environmental Protection Agency and half from the worldwide motor vehicle industry. Other public and private organizations periodically support special projects or certain research programs. Organizations also participate as part of steering committees and peer reviewers including the California Air Resources Board and the Natural Resources Defense Council, among others.

It is important to note that the primary purpose of ACES, on which CARB was a member of the steering committee, was to evaluate the cancer risk from new technology diesel exhaust: “the first study to conduct a comprehensive evaluation of lifetime inhalation exposure to emissions from heavy-duty 2007-compliant engines” (HEI Statement p. 1).

While HEI ACES evaluated over 100 health endpoints, the FEIR only relied upon the report's conclusion in its discussion and analysis of cancer risk. The HEI ACES report was not relied upon in the FEIR's analysis of the chronic/acute hazard index or the mortality/morbidity analysis. In addition, CARB's comment requests that the approved risk assessment methodology contained in the OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines: Guidance Manual for the Preparation of Health Risk Assessments be used. A full assessment using those guidelines is provided in the FEIR. (FEIR Volume 3, Section 4.3.3.4) Based upon those guidelines, there would be no project-related cancer risk outside the project's boundaries. The FEIR concludes that based upon HEI ACES, that estimated risk is overestimated and that no cancer risk impact is expected from the WLC. The primary conclusion of the HEI ACES is “that NTDE would not cause an increase in tumor formation or substantial toxic health effects.” (HEI ACES Report p.3).

⁴ An EIR's CEQA significance findings must be supported by substantial evidence. “Substantial evidence” means enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached. (14 CCR § 15384(a).) Notably, argument, speculation, unsubstantiated opinion or narrative, evidence which is clearly erroneous or inaccurate, does not constitute substantial evidence. (Id.) In this case, the ACES study should not be used for the purposes of a CEQA analysis, as the exposure levels used in the ACES study were based on diluted NO₂ and not particulate matter and therefore actual exposure of particulate matter in this study is unknown. Additionally, during the lab exposure testing, two 2007 Detroit Diesel engines were used, one for a total of 10,090 hours and one for 4031 hours with oil changes at every 250 hours (250 hours = 5,000 miles). Therefore, the study results are based on the best-case scenario and did not account for potential real world wear and tear on diesel engines, poor maintenance, and failure rates of diesel particulate filters.

⁵ For more information regarding diesel engine exhaust health impacts, please see http://oehha.ca.gov/public_info/DEEposter.html.

Additionally, the study mentioned by CARB does not examine cancer health risk attributable to new technology diesel but have examined health effects from diesel trucks that emit between 10 to 100 times more emissions than the new technology that the project's mitigation will require. As ACES Phase 1 and 2 demonstrate, new technology diesel exhaust is substantially different from traditional diesel exhaust necessitating the HEI study to evaluate the health impacts of new technology diesel exhaust. All previous studies, including those evaluated by OEHHA and cited by CARB examined the health effects of traditional diesel exhaust which date back to research done in the 1990's and 2000's.

CEQA Guidelines Section 15088.5 states that "new information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect". The impacts described in the FEIR are similar to or less than the impacts described in the DEIR. New, though not significant, information added to the document responds to comments; merely clarifies or amplifies existing information; or adds new mitigation measures, any impacts of which have been fully evaluated in the FEIR. In addition, FEIR is neither inadequate nor conclusory

Comment 6:

Furthermore, we recommend the document include an evaluation of the potential health impacts at the major milestones identified for this project (e.g., beginning in 2015, 2022, and 2035) for each receptor of interest and appropriate exposure duration (i.e., resident would be 30 years). This analysis will allow the presentation of potential health impacts at key milestones and how the potential health risk estimates may change as the project is completed and the facility changes to full operation.

Response 6:

The OEHHA health risk assessment contained in the FEIR analyses the lifetime exposure as defined by OEHHA (30 years). (FEIR Volume 3, Section 4.3.3.4) Any period shorter than the lifetime exposure would show results less than those shown in the FEIR. While the OEHHA method overestimates the risk, based upon the conclusions of HEI ACES, it does show a worst case scenario with regard to duration. Further, as one moves into the future, the health impacts would be less than those described in the FEIR since emissions will be lower than in the early years of the project.

Comment 7:

Attainment of Federal Ambient Air Quality Standards. The FEIR determines that the proposed project would have significant long term air quality impacts. Specifically, the air quality analysis demonstrates that the project's operational nitrogen oxides (NOx) emissions far exceed the South Coast Air Quality Management District's significance threshold of 55 pounds per day. The projected rise in emissions of criteria pollutants may interfere with current strategy to bring the South Coast Air Basin into attainment with federal air quality standards. Given the level of impacts and the location in the South Coast Air Basin, the project needs to be revised to include substantial air quality mitigation by employing effective and feasible zero and near-zero emission technologies.

Response 7:

See Response to Comment 4. The FEIR has committed to require U.S. EPA 2010 compliant trucks well ahead of the State of California's requirements. There are no commercially available heavy-duty trucks and therefore such mitigation is infeasible. CARB's own planning efforts with regard to zero-emissions within the freight sector is incomplete. Additionally, without knowledge of who future users might be, it is not currently possible to specify what technology will meet their operational needs. Subsequent environmental review may require that specific technology that will work with future users be required as condition of approval.

Comment 8:

Use of Future Baseline in the Health Risk and Air Quality Analysis. Should the City re-circulate the EIR, ARB strongly recommends that the health risk and air quality analysis use both the existing conditions baseline (current conditions) and a future conditions baseline (full build out year, without the project.) This analysis will be useful to the public in understanding the full impacts of the project. Neighbors for Smart Rail v Exposition

Metro Line Construction Authority (2013) 57 C4th 439 confirmed that the lead agency has discretion on how to best define a baseline under the circumstances of rapidly changing environmental conditions. In this situation, the project site is located in a federal nonattainment area and is adjacent to residences; given the timeframe for full build out, those conditions may be significantly different from current conditions.

Specifically, it is important to analyze whether anticipated regional air quality improvements in future years as the result of State, federal, and local air quality programs, may be reduced or negated as the result of this project. For those reasons, it is important to ensure that the public has a complete understanding of the environmental impacts of the WLC, as compared to both existing conditions and future conditions.

Response 8:

The FEIR contains an exhaustive analysis of the impacts of the proposed project and the cumulative analysis shows the project's impacts when combined with the impacts of reasonably foreseeable past, present, and future projects. (FEIR Volume 3, Section 4.3)

Comment 9:

Charging Infrastructure to Support Zero and Near-Zero Emission Technology. Should the City re-circulate the EIR, ARB recommends including mitigation measures that detail more robust plans for charging and fueling infrastructure, which will be necessary to support increased zero emission vehicles and equipment used on the project site. Mitigation measure 4.3.6.3C indicates that one alternative fueling station will be publicly available prior to the issuance of building permits for more than 25 million square feet. This mitigation measure should include a more comprehensive description of the fueling station, including how that fueling station will adequately meet the needs of the zero and near-zero emission equipment used on site.

Furthermore, mitigation measure 4.3.6.4A indicates two electric vehicle-charging stations for automobiles or light duty trucks shall be provided at each building. The project description does not include an estimation of how many buildings are expected to be developed on site. While the FEIR does provide an estimation of the number of daily trips by passenger vehicles and light duty trucks (54,714 and 2,385 daily trips, respectively), mitigation measure 4.3.6.4A and the associated analysis does not contain an estimation of how many of those trips will be made by electric vehicles and does not provide enough information to evaluate whether mitigation measure 4.3.6.4A satisfies potential charging demand. Given Governor's Executive Order B-16-2012 target of reaching 1.5 million zero emission vehicles on California roadways by 2025 and the Governor's goal of cutting petroleum use in half by 2030, mitigation measure 4.3.6.4A should be expanded to ensure that the charging infrastructure required on-site will meet the needs of the growing numbers of zero emission vehicles that will be accessing the project site.

Response 9:

The project does not make an estimate of the number of electric vehicles arriving at the project because such an estimate would be pure speculation. The State of California has had a zero emission vehicle (ZEV) requirement for decades with little success. That is beginning to change; however, the rate of penetration for ZEV is unknown. As a result, the project is using the highest planning standards in setting a minimum for electrical charging stations. Since this is a programmatic EIR and there will be subsequent environmental evaluation as the project is implemented, it is possible that the electric vehicle charging requirements will increase due to changing real-world circumstances, rather than hopeful speculation. Finally as noted, the project requires that construction and operation of an alternative fueling station to encourage the use of alternative heavy-duty technologies.

Comment 10:

Statewide Air Quality, Climate and Health Drivers to Reduce Emissions from Freight Hubs. To achieve California's air quality, climate and sustainability goals, and to reduce the health risk from diesel PM in communities located near freight hubs, the State, including public and private partners, must take effective action to transition to a zero and near-zero emission freight system. This effort is laid out in ARB's Sustainable

Freight Pathways to Zero and Near-Zero Emissions Discussion Draft, which can be found at http://www.arb.ca.gov/gmp/sfti/Sustainable_Freight_Draft_4-3-2015.pdf.

Response 10:

As CARB notes in its comment, the Sustainable Freight Strategy is still draft and subject to change. In addition, the document acknowledges that much of the technology that CARB has recommended in its comment letter is still not commercially available.

Comment 11:

Given the scale of the project, the substantial increases in criteria pollutants and greenhouse gas emissions, as well as the potential impact to health risk, it is critical that the FEIR require the use of zero and near-zero emission technologies. Furthermore, the health risk analysis must be revised to ensure that the potential impacts are fully analyzed and disclosed. We would be pleased to provide assistance to help develop the analysis and mitigation measures to ensure that this state-of-the-art facility is able to serve the region's distribution needs, while protecting air quality and public health, as well as minimizing the project's contribution to greenhouse gas emissions. Please include ARB on any further notifications related to the WLC.

Response 11:

Please see previous Responses 1 through 10.

MEMORANDUM

DATE: June 10, 2015

TO: Mark Gross, Moreno Valley Planning Department

FROM: Kent Norton, AICP, Associate, LSA Associates, Inc.

SUBJECT: **Response to Letter from Duncan Bush dated June 6, 2015**

In a letter dated June 6, 2015, Duncan Bush submitted comments on the WLC Project FEIR. The specific comments are presented below, followed by responses to each comment.

Comment 1:

Having received and reviewed the above mentioned report I was amazed to find out that the already significant proposed impacts to my property were increased by 25%. The purpose of an environmental report is to attempt to minimize the project impacts to adjoining properties, no to increase the impacts. I am speaking specifically about the building height limitations being increased along Gilman Springs Road from a "Draft EIR" height of 60 feet to 80 feet high in the Final Programmatic EIR, (Aesthetics, Section 4.1-63 middle of last paragraph). This change will block the already proposed impacted views from my house on Gilman Springs Road and those of the other homes in the Moreno Knolls Homeowners Association.

Response 1:

The Final EIR does correct a typographic error in the Draft EIR that cited 60 feet along the eastern boundary, but the Specific Plan and DEIR Figure 3-9 have always showed building heights along the eastern portion of the project to be 80 feet. See also Response 2 below for more information which describes a 250-foot wide buffer which was added along the west side of Gilman Springs Road to help address this issue.

Comment 2:

Just because the properties are outside of the limits of Moreno Valley does not give the City or developer the right to ignore our rights or the impacts to our properties with no attempts at mitigation. The City ignoring the rights of those outside of the City but not treating them equally to those properties within the city limits is a clear violation of EPA's Environmental Justice, "EPA's goal is to provide an environment where all people enjoy the same degree of protection from environmental and health hazard and equal access to the decision-making process to maintain a healthy environment in which to live, learn, and work." This is only location where the perimeter heights above 60 feet. Even the adjoining San Jacinto Wildlife Area has limits of 60 foot building heights plus a 400 foot landscaped setback. I would like to have the same consideration as the other species adjoining this proposed project.

Response 2:

Figure 3-9 in the Draft EIR clearly shows a building height limit of 80 feet along the eastern boundary of the project, so it is consistent with the current FEIR documentation (Figure 3-9 in the Revised DEIR). The City's CEQA procedures are based on the City's responsibilities as a lead agency under CEQA, a state law, while the EPA's EJ goal is guidance for federal agencies under the National Environmental Policy Act which applies to federal actions, so there no violation of any federal law or regulation involved. While the land and people within the City's boundaries are its primary responsibility, certainly the City wishes to protect environmental resources and minimize impacts on people outside of or adjacent to the City to the degree it can effectively. The commenter should be aware that splays of the San Jacinto Fault run along the west side of Gilman Springs Road within the WLC property, and the actual location of buildings west of GSR will ultimately depend on future

fault location studies when specific development is proposed along the west side of GSR (Planning Areas 7, 8, 9, and 12). These physical constraints will doubtlessly affect future building locations and setbacks.

In addition, page 4.1-65 of the DEIR states the following:

Views from the East. Permanent views from existing residences east of Gilman Springs Road will fundamentally change. The views they now have of the agricultural fields on the project site will eventually be replaced by a view of an urbanized area consisting of warehouse buildings, parking areas, streets, and ornamental landscaping. The proposed buildings will not block views of the Mount Russell Range to the southwest but may block or partially block views of the Mystic Lake area.

Transient/Motorist Views along Gilman Springs Road. Transient views for travelers on Gilman Springs Road will fundamentally change over time, as future buildings within the WLCSP will be visible to travelers in both directions, replacing existing views of agricultural fields. Eventually buildings within the Specific Plan may block or partially block views of the lower slopes of the Mount Russell Range, as well as distant views of Mystic Lake for southbound drivers. This is a potentially significant impact requiring mitigation.

Based on that analysis, the following mitigation measures were proposed which include views along the eastern boundary of the project (i.e., just west of and adjacent to Gilman Springs Road):

- 4.1.6.1A** Each Plot Plan application for development along the western, southwestern, and eastern boundaries of the project (i.e., adjacent to existing or planned residential zoned uses) shall include a minimum 250-foot setback measured from the City/County zoning boundary line and any building or truck parking/access area within the project. The setback area shall include landscaping, berms, and walls to provide visual screening between the new development and existing residential areas upon maturity of the landscaping materials. The existing olive trees along Redlands Blvd. shall remain in place as long as practical to help screen views of the project site. This measure shall be implemented to the satisfaction of the Planning Official.
- 4.1.6.1C** Prior to the issuance of a certificate of occupancy for buildings adjacent to the western, southwestern, and eastern boundaries of the project (i.e., adjacent to existing residences at the time of application) the screening required in Mitigation Measure 4.1.6.1A shall be installed in substantial conformance with the approved plans to the satisfaction of the Planning Official.

Even with implementation of these measures, the EIR concludes both project and cumulative visual impacts of the WLC project will be significant, and requires adoption of a Statement of Overriding Considerations under CEQA.

Comment 3:

My house (14670 Gilman Springs Road) is closer to the proposed project than any other property on Gilman Springs Road yet no noise impact study was performed on that location for this project.

Response 3:

Ambient noise monitoring for the project noise study was conducted at Site 2 (shown in DEIR Figure 4.12.2) which is relatively close to the commenter's residence. Section 4.12.6.2, Long-Term Noise Impacts, evaluates noise impacts of the WLC project, including along Gilman Springs Road. Page 4.12-53 of the DEIR noise analysis specifically states the following relative to noise along the east side of Gilman Springs Road near the commenter's residence:

Gilman Springs Road (between Eucalyptus Avenue and Street C, and between Jack Rabbit Trail and Bridge Street). There are three single-family homes scattered along these roadway segments. All of the houses are set back from the roadway, but none has soundwalls. A significant noise increase is projected for at least one of these segments in three of the four case years. Homes that are widely separated from other homes cannot be effectively mitigated with a soundwall. Therefore, the significant impact cannot be feasibly mitigated and it will remain significant and unavoidable.

The EIR acknowledges these impacts, recommends feasible mitigation, and some noise impacts are still significant. This will require adoption of a Statement of Overriding Considerations under CEQA.

Comment 4:

I also wrote two letters, one on March 13, 2012 and another on April 5, 2013. Only the first letter appears in the report and the responses to both letters were non-existent or sketchy at the best; not addressing the issues.

Response 4:

The commenter's March 13, 2012 letter actually commented on the Notice of Preparation issued for the WLC EIR in 2012, and that letter was acknowledged in Table 2.A , *NOP Comments Received*, in the Draft EIR. The issues raised by the commenter were addressed in appropriate sections of the DEIR (e.g., aesthetics, noise). The April 5, 2013 letter commenting on the Draft EIR was included in the Final EIR as Letter G-55 in FEIR Volume 1 - Response to Comments, on pages 1309-10 and the commenter's ten comments were each addressed in that section.

Comment 5:

This is also a significant impact to the designated "Scenic" Gilman Springs Road and increases this impact. The WIR writers are aware that this is the case, yet there is also no mention of increased impacts to the adjoining Moreno Knolls neighbors are mentioned, (like we don't exist).

Response 5:

CEQA involves the evaluation of impacts to public views, not private views, so impacts to views from individual residences are outside of the scope of the CEQA document. However, impacts to public views along Gilman Springs Road are addressed in Section 4.1.6 of the DEIR. Page 4.1-65 specifically states:

***Impact Summary: Scenic Vistas.** The implementation of the proposed project will obstruct and/or substantially affect scenic views for residents living within, or in the vicinity of, the project, and for travelers on SR-60, Gilman Springs Road, Redlands Boulevard, Theodore Street, and Alessandro Boulevard. Many of the views of the motoring public while on local roadways will fundamentally change; instead of views of open agricultural land, these residents and motorists will view new logistics buildings and the associated parking areas, roadways, infrastructure, and landscaping. Therefore, the project will have a significant visual impact. The degree to which these buildings may block views of major scenic resources (i.e., Mount Russell, the Badlands, and Mystic Lake) will depend on the location and heights of buildings.[emphasis added]*

Information on mitigation relative to view impacts along the east side of the project are outlined in Response 2.

Comment 6:

The project is in the wrong location and has significant cumulative failures in so many areas that I am unable to adequately respond to them all. Placing a project of this size with the truck traffic that comes with it should have been located along an Interstate Highway not a State Highway. Federal funding for such things as freeway widening, interchanges, and maintenance, flow easier to the Interstate System than the State Highway System.

Response 6:

The Final EIR and subsequent correspondence can only respond to specific comments made on the Final EIR documents. DEIR Section 4.15, *Traffic and Circulation*, evaluated the impacts of the proposed WLC project on local and regional streets, as well as the surrounding freeway system (i.e., SR-60 and I-215). While improvements have been made and are planned for both freeways, these improvements will not reduce levels of service during peak hours to within local or Caltrans standards, now or in the future, either with or without the proposed WLC project. This is why traffic impacts of the WLC project were identified in the DEIR as significant and unavoidable as potential mitigation was outside the control of the City (i.e., the lead agency).

Comment 7:

More than 70 percent of the commuters from Moreno Valley use Route 60 not the I-215. Why do we want this here and not East of I-215 as outlined in the existing General Plan?

Response 7:

The industrial area in the southwestern portion of the City, adjacent to the I-215 Freeway, is largely built out and would not support a project the size of the WLCSP. Landowners may propose changes to established General Plan land use designations if they can demonstrate the proposed change meets the overall intent of the General Plan and is generally consistent with its goals, policies, and objectives. DEIR Section 4.10, *Land Use and Planning*, determined the WLC project's was largely consistent with applicable land use policies. In addition, other sections of the DEIR evaluate various goals and objectives of the General Plan as they pertain to various environmental issues addressed in the EIR and as they relate to the proposed WLC project and the WLC project site. It is up to the City's decision-makers if the benefits of the project outweigh its significant environmental impacts. If so, they must adopt a Statement of Overriding Considerations to document that decision.

In addition, the traffic study for the WLC project indicates that new jobs created within the WLC would help incrementally reduce the commute distances and direction of traffic on the SR-60 freeway as the WLC project builds out. This is due to the City's historically low jobs/housing ratio which the WLC project would improve as new jobs were added in the City relative to the amount of housing.

MEMORANDUM

DATE: June 10, 2015

TO: Mark Gross, Moreno Valley Planning Department

FROM: Kent Norton, AICP, Associate, LSA Associates, Inc.

SUBJECT: **Response to Letter from Inland Empire Waterkeeper dated June 5, 2015**

In a letter dated June 5, 2015, Garry Brown with the Inland Empire Waterkeeper submitted comments on the WLC Project FEIR. The specific comments are presented below, followed by responses to each comment.

Comment I-A:

The Proposed Detention Basins Will Not Be Able to Adequately Control Runoff. Detention basins are designed to control peak flows and infiltrate some water, but are not the same as infiltration basins. Detention basins are used to slow down stormwater runoff, not to infiltrate large amounts of water. As the FEIR notes, water flows from the Badlands and the 60 freeway into the project site, where it then continues through the San Jacinto Wildlife Area and wetlands. To contain this large amount of water, large infiltration basins will be needed. The FEIR estimates the soil type and infiltration rate, but has not adequately examined it. WLC has presented no analysis of the effects of the large amounts of runoff that would flow into the San Jacinto Wildlife Area. To adequately mimic the natural condition of runoff flow, velocity, and volume, a more thorough analysis of the size, number, and location of infiltration basins must be conducted.

Response I-A:

The proposed detention basins will adequately control runoff. As stated in Section 4.9.6.1 on page 4.9-39, paragraph 2 of the FEIR, the detention basins are designed not only as detention basins but as combined infiltration and detention basins. The bottom two feet in depth of the basin is designed as an infiltration basin, i.e., the water will infiltrate in the ground because there is no outlet. Only when the water level rises above two feet will the water flow downstream. Table 4.9.J outlines the basin volumes for both detention and infiltration for each of the 11 basins.

As stated on page 4.9-47 of the FEIR the project's impacts will be mitigated with the implementation of infiltration basins and bioretention areas. The volume of runoff after the project is constructed will be less than the existing volume of runoff and the amount of infiltration will increase. A hydrologic analysis was performed for the pre and post project conditions based on historical runoff. The basins have been designed to ensure that the runoff matches the pre-project condition. The hydrologic analysis was based on conservative estimates of soil type and infiltration rates and will be updated with site specific information as each project is developed.

To the degree possible, the project will site basins in areas of cut that do not require over excavation, this should result in acceptable infiltration rates. In the event the soil at a basin site does not meet the required infiltration rate, dry wells, hybrid bioretention/dry wells or infiltration trenches will be used to achieve the target infiltration rate. All three of these BMP's will reach past impervious clay or compacted fill area to deeper more pervious soils. Dry wells are considered Class V wells and require submission of an "Inventory Form" to the EPA. Infiltration tests will be done prior to design of basins so that the proper BMP's can be incorporated into the basins. It should also be noted that groundwater levels in the project area are in excess of 100 feet below ground surface (DEIR Section 4.6.5.4, Geology and Soils). If infiltration declines, dry wells or other options can be used to improve infiltration better and allow habitat to co-exist in or around the basin.

The amount of runoff that will flow to the San Jacinto Wildlife Area will mimic pre-project conditions as outlined in **Mitigation Measures 4.9.6.1A and 4.9.6.1B.**

Comment I-B:

The Proposed Detention Basins Will Not Be Able to Capture a 100-year Storm Event. In the FEIR, WLC calculates that their proposed system of detention basins with limited infiltration capacity will be enough to hold the stormwater from a 3-hour and 24-hour 100-year storm event. However, it is unlikely that detention basins will be able to withstand such large storms. Even if the detention basins were able to hold back a significant portion of the runoff from a 100-year storm, detention basins are not designed to infiltrate large volumes of water. This means that while the volume of water exiting the project site may be similar to natural condition during a 100-year storm event, the duration of the discharge and its velocity would likely result in significant hydromodification of the downstream area that is not thoroughly considered in this FEIR. The project proponents must conduct a comprehensive analysis of the capacity of the facility to capture the stormwater from a 100-year storm event and the impacts of the discharge, if any, from such an event to the receiving waters.

Response I-B:

The detention basins are sized to contain the flow from the 100-year and smaller storms to mimic pre-project conditions as stated on page 4.9-39 of the FEIR. As stated in Comment 1-A the detention basins are designed as both infiltration and detention basins by allowing not outflow from the bottom of the basin. The duration and volume of water leaving the site will mimic the pre-project condition based on the combined infiltration and detention basin capacities. An analysis of the capacity of the infiltration and detention basins was performed and is contained in the Master Plan of Drainage Report. The analysis will be updated with site specific information as each project is designed.

Comment II:

The Proposed Detention Basins Will Likely Not Be Able to Adequately Control Pollutants Because They Will Likely Not Provide Enough Infiltration Capacity or Pretreatment. The project may result in surface water pollution during operation. The 40 million square foot project will turn thousands of acres of natural area into impervious roofs and roads. Storm water runoff from the roadways, parking lots, and commercial and industrial buildings can carry a variety of pollutants such as sediment, petroleum hydrocarbons, commonly utilized construction materials, landscaping chemicals, and pesticides; as well as metals such as iron, aluminum, cadmium, and toxic metals such as copper, lead, and zinc, which may lead to the degradation of downstream receiving waters. Runoff from landscaped areas may contain elevated levels of phosphorous, nutrients and suspended solids. WLC has not adequately shown that they are taking steps to control these pollutants and account for their potentially significant effect on the wildlife area that lies directly downstream from the project site. The California Stormwater Quality Association's (CASQA's) New Development and Redevelopment BMP Handbook (Handbook) shows that the only listed pollutant that detention basins remove with a "high" level of efficiency is trash.¹ This means that for virtually all other pollutants, even detention basins with some infiltration capacity are insufficient to remove all pollutants discharged to surface waters. The CASQA Handbook also adds that detention basins are relatively ineffective at removing soluble pollutants. The CASQA Handbook does not assert that the limited infiltration capability of some detention basins is enough to mitigate detention basins' ineffective removal rate of virtually all pollutants. Since the pollutants would be flowing into San Jacinto Wildlife Area and wetlands, the water flowing from the project site should not be contaminated by pollutants at all. Therefore, WLC must take steps to control pollutants, such as installing large infiltration basins with adequate pretreatment. WLC provides no analysis of the significant impact that polluted water would have upon the San Jacinto Wildlife Area and wetlands.

Specifically, detention basins only remove 40-60% of Oil and Grease. The CASQA Handbook says that detention basins have only "moderate" removal effectiveness for Oil and Grease.¹ The CASQA Handbook does

¹ California Stormwater Quality Association, *Stormwater Best Management Practice Handbook: New Development and Redevelopment*, TC-22, p.1 (2003).

not assert that the limited infiltration capability of some detention basins is enough to mitigate detention basins' ineffective removal rate of Oil and Grease. As WLC would be one of the largest master-planned warehousing complex in the world, there would be a large number of trucks delivering shipments every day. This means a significant amount of Oil and Grease would need to be removed prior to any stormwater discharging from the site or entering detention basins. Detention basins are not sufficient to remove this Oil and Grease. Pretreatment BMP's to control Oil and Grease prior to discharge into detention or infiltration basins are needed. WLC does not provide analysis of the significant effect that runoff polluted with Oil and Grease would have on the San Jacinto Wildlife Area and wetlands. Further, WLC does not provide BMPs or mitigation measures to deal with Oil and Grease.

Finally, the CASQA Handbook rated detention basins' nutrient removal capabilities as "low".¹ The CASQA Handbook does not assert that the limited infiltration capability of some detention basins is enough to mitigate detention basins' ineffective removal rate of nutrients. In addition, runoff from the WLC would enter the impaired waters of Canyon Lake and Lake Elsinore. Those two water bodies have Total Maximum Daily Loads (TMDL's) for nutrients. WLC explained in its FEIR that nutrients would be present in the stormwater from its facility. The proposed detention basins will not be able to rid the water of these nutrients, and would therefore be inadequate to satisfy the TMDL's of the impaired receiving water bodies. Waterkeeper notes that the proposed WLC discharges nutrient laden stormwater into receiving waters that are already impaired water bodies with a nutrient TMDL. This new discharge of nutrient laden stormwater to a waterbody with a nutrient TMDL would undoubtedly cause or contribute to a violation of water quality standards. Such a discharge would most likely be prohibited under the Clean Water Act. Again, for WLC to be in compliance with the TMDL's, they would have to use BMPs that are effective for removing nutrients, such as infiltration basins, not just detention basins with some infiltration capacity. In order for the environmental review process to be meaningful, and for the public and relevant agencies to be aware of significant impacts per CEQA, the method of water quality treatment of nutrients should be discussed in the FEIR.

Response II:

As stated in Section 4.9.6.3, page 4.9-55 of the FEIR, the treatment control BMP strategy for the project is to select LID BMPs that promote infiltration and evapotranspiration, including the construction of infiltration basins, bioretention facilities and extended detention basins ” The CASQA 2003 Handbook states that infiltration is rated high for treating nutrients.

As stated in Section 4.9.6.3, page 4.9-56 of the FEIR the project will comply with the Water Quality Management Plan for the Santa Ana Region of Riverside County (approved by the Santa Ana Regional Water Quality Control Board October 22, 2012), which requires the use of Low Impact Development (LID) BMPs that maximize infiltration, harvest and use, evapotranspiration and/or bio-treatment. Flows from the project will be treated first by LID BMPs where the flow will be infiltrated, evapotranspired, or treated. AS required by Mitigation Measure 4.9.6.1A, the treated flows will then be reduced to below or equal to pre-development conditions by routing the on-site storm water flows through a series of on-site detention and infiltration basins before flows are released off site. These basins will provide incidental infiltration and secondary treatment downstream of the LID BMPs. All runoff from the site will be treated by LID BMPs and then routed through the detention and infiltration basins before it leaves the project area and into Mystic Lake and the San Jacinto Wildlife Area. The project will comply with the Nutrient TMDL for Lake Elsinore and Canyon Lake by implementing LID-based BMPs.”

Mitigation Measures **4.9.6.3A** and **4.9.6.3B** in the FEIR, treatment BMPs consisting of infiltration, bioretention and low impact development will be implemented. The Water Quality Management Plan complies with the NPDES and TMDL requirements and the project will direct runoff from impervious surfaces into bioretention facilities before the flow is routed to the infiltration/detention basins. The bioretention areas consist of landscaped areas that provide treatment and infiltration. Bioretention facilities will treat the runoff by infiltration, filtration through the soil media, and evapotranspiration. The detention/infiltration basins will provide additional treatment and infiltration after the flow is treated by the bioretention facilities. Note that the detention basins are not being designed as “detention basins with some infiltration capacity”, but are being

designed as infiltration basins and detention basins. As noted, the water will be treated by bioretention facilities first as the primary means of treatment, and that the infiltration basins provide an additional level of treatment beyond what is required by the NPDES permit.

Comment III:

WLC Provides No Analysis of the Significant and Inevitable Impacts of Polluted Stormwater Runoff into the San Jacinto Wildlife Area and Wetlands. The WLC project site lies directly in the middle of a sub-watershed that directs water from the Badlands open space area and the 60 freeway through the San Jacinto Wildlife Area, wetlands, and Mystic Lake. The construction of the WLC and conversion of this mostly natural area to impervious surfaces on a scale yet experienced in the United States will influence the water quality in the San Jacinto Wildlife Area and wetlands, as well as other receiving waters. WLC has calculated that the natural flows of the drainage areas will continue. However, by converting the pervious surfaces to impervious and conducting shipping and transportation activities onsite, it is inevitable that the site will discharge more stormwater after construction than it is currently discharging and pollutants will be transported from the site to the San Jacinto Wildlife Area and wetlands, as well as other receiving waters.

With approximately ninety percent of the ephemeral water bodies that once covered huge areas of inland California are now gone, it is especially important that ephemeral water bodies like Mystic Lake protected from pollution and alteration.

The hydraulic conditions of wetlands, such as the San Jacinto Wildlife Area, are strongly influenced by sources and distribution of water. The project may result in the discharge of polluted surface water during operation. Storm water runoff from the roadways, parking lots, and commercial and industrial buildings can carry a variety of pollutants such as sediment, petroleum hydrocarbons, construction materials, landscaping chemicals, nutrients and metals. Releasing contaminated storm water at a controlled rate after a storm event will change the hydrology of downstream areas such as Mystic Lake by providing a more regular flow of water into the ephemeral lake. The FEIR is insufficiently detailed in its description of the type of treatment captured water will undergo, if any, before it is released into Mystic Lake. The FEIR must specify the type of treatment captured storm water will undergo prior to release into Mystic Lake and the San Jacinto Wildlife Area.

WLC provides no analysis of the effects of pollution or extra runoff on the San Jacinto Wildlife Area, wetlands, or ephemeral water bodies like Mystic Lake. The baseline water quality conditions on the project site, especially the southern border that abuts the San Jacinto Wildlife Area, should be established before any development on the project site is approved because a study conducted after the approval of a project “will inevitably have diminished influence on decision making.”²

This is not only a potential significant effect of the project, it is inevitable. Therefore, if WLC does not conduct such an analysis, they would be violating CEQA by not providing the public and relevant agencies with a highly likely significant impact of the project.

Specifically, WLC needs to provide data on the impact of additional stormwater runoff and/or polluted stormwater on the San Jacinto Wildlife Area and wetlands, as well as their proposed mitigation. In addition, WLC needs to explain the monitoring system designed to determine whether additional stormwater runoff or polluted stormwater is discharging to the San Jacinto Wildlife Area. Since WLC proposes to have one of the world’s largest master-planned warehousing complexes drain directly into a protected wildlife area and wetlands, WLC cannot simply claim that their BMPs will never fail. The importance of a clean, natural flow of water to the Wildlife Area and wetlands, combined with the massive scale of the project, necessitates that WLC take steps to ensure that inevitable impact of BMP failure on the Wildlife Area and wetlands is known.

² *Communities for a Better Environment et al., v. City of Richmond*, 184 Cal.App.4th 70, 73 (2010). Page 5 of 6.

Response III:

As stated in Response to Comments I-A, I-B, and II the water will match pre-project conditions and will be treated prior to release downstream. After the bioretention treatment, there is infiltration basins that both treat and conserve stormwater flows, there are also spreading areas that further treat, slow down the flow and release the flow similar to natural conditions. There will be no extra runoff leaving the site as indicated on page 4.9-47 of the FEIR. In addition, WLC has committed to developing and implementing a water quality management plan that test the water quality of the runoff both pre and post project and will implement adaptive management strategies to ensure that water quantity and quality leaving the site mimic pre-project conditions.

DEIR Section 4.9, *Hydrology and Water Quality*, demonstrates that the basins are adequate for detention and infiltration and their result will be to maintain pre-development replenishment of groundwater. This section also demonstrates the basins and BMPs will ensure that the runoff into the SJWA will not exceed pre-development levels in amount, velocity or pollutant loading.

Comment IV:

The Proposed BMPs Will Not Ensure that Groundwater is Adequately Recharged. As noted above, the proposed detention basin system will not be able to infiltrate water at the levels currently seen by the natural site (90%). Although detention basins can infiltrate some water, this is not their purpose. Therefore, unless WLC builds infiltration basins, there will not be groundwater recharge at natural levels. WLC does not provide an analysis of what impacts would occur were they to further deplete groundwater in the area. Given that the project area will undergo a massive increase in impervious surface area, it is overly speculative to assume that the loss of groundwater recharge will be offset by irrigation of the project's drought tolerant landscaped areas.

In light of the serious statewide drought and the arid region of the project site, virtually any groundwater depletion would constitute a significant impact. Therefore, per CEQA, WLC must conduct a groundwater depletion impact analysis. Given the gravity of the water shortage in California and the region, WLC cannot simply claim that its BMP system will always result in full groundwater recharge. Given the potentially very significant impact if the proposed BMPs do not result in full groundwater recharge, WLC must give an analysis of this situation per CEQA.

Response IV:

WLC is implementing infiltration basins. As stated in the comments above the proposed detention basins include infiltration basins and a hydrologic analysis was performed that shows that pre and post project conditions will infiltrate the same amount of water. The groundwater will be recharged to natural levels and will mimic natural conditions. The groundwater analysis was performed and is based on historical runoff and infiltration rates. See the analysis outlined in the Master Plan of Drainage Report.

Comment V:

Detention Basins are Not Habitat Mitigation. In the FEIR, WLC explains that their detention basins will also be used as low-quality habitat mitigation. Detention basins must be scraped clean periodically, and do not provide even low-quality habitat mitigation for impacts to wetlands. In addition, habitat mitigation credit cannot be given for a facility taking measures that they are required to do. The installation of detentions basins is the result of an analysis by the project proponent of the LID prioritization arising out of the County of Riverside's Municipal Separate Storm Sewer System Permit. WLC cannot receive mitigation credit for installing BMPs which are otherwise required and provide marginal habitat benefit, at best.

Response V:

Since this is a programmatic EIR, it will ultimately be up to the resource agencies to determine the actual habitat value of basins planned for actual future development. However, it is anticipated each basin will have a forebay that would be engineered and regularly maintained, plus a central area for detention and infiltration which would have a maintained low flow channel but otherwise it would be sized and designed to allow habitat as well as detention/infiltration which connects to an engineered and maintained outlet. **Mitigation Measures**

4.4.6.1A and B (buffer/basin design), 4.4.6.3A-C (permitting), 4.4.6.4F-K (basin management process) outline various basin design and management requirements for future development.

Comment VI:

Construction Related Water Quality Impacts Will Be Significant. A proposed project of this size and nature in this location will require massive grading and construction likely to threaten downstream water quality. The Environmental Protection Agency has cited sediment-laden runoff from construction projects as one of the most potentially damaging forms of water pollution. Sediment leaving construction sites may deliver toxic chemicals and nutrients into waterways. The threat of increased sedimentation to Mystic Lake must be analyzed in the FEIR. Treatment Control BMPs listed in the FEIR do not include treatment for sediment. Instead, the FEIR relies on the future acquisition of an NPDES permit to address the control of sediment discharges from the project site. This is inadequate, and an assessment of the significant impacts of construction-related polluted runoff is necessary.

Response VI:

As stated in Section 4.9.6.2 on page 4.9-51 of the FEIR the implementation of NPDES permits, including the General Construction permit, ensures that the Federal and State standard for clean water are met. Enforcement of required NPDES permit requirements will prevent sedimentation and soil erosion through implementation of an SWPPP and periodic inspections by RWQCB staff.

As outlined in **Mitigation Measures 4.9.6.2A and 4.9.6.2B**, a stormwater pollution prevention plan that includes treatment control BMPs for sediment will be implemented in accordance with the California Construction General permit. These BMPs are designed to control sediment discharging from the site and include sand bags, silt fences, straw wattles, check dams, fiber rolls and debris basins.

Comment VII:

The Cumulative Impacts of Development in the Region are Not Adequately Addressed in the FEIR. Development within the watershed will result in an increase in impervious surfaces, in addition to changes in land use and associated pollutant runoff characteristics. Increased impervious surfaces are likely to alter existing hydrology and increase potential pollutant loads. The FEIR does not contemplate other reasonably foreseeable future projects that may have direct or indirect impacts on receiving waters and the adjacent San Jacinto Wildlife Area. WLC argues publicly that its proposal will create economic development in the area, and so the potential impacts of this project economic stimulus need to be addressed in the FEIR.

Response VII:

DEIR Section 4.9.7 *Hydrology and Water Quality – Cumulative Impacts*, acknowledges that development of the WLC project and other planned projects in the surrounding areas will add impervious surfaces and may alter existing drainages. However, similar to the proposed WLC project, each development project is required to design and mitigate its own impacts on area hydrology and water quality such that there should be no significant cumulative water quality impacts as long as future development, including warehousing within the WLCSP, meet existing laws and regulations regarding water quality and pollutant discharge limitations. While the cumulative traffic impact analysis did identify a large number of potential development projects in the surrounding area, these are included in and accounted for in the overall growth projection methodology used for the cumulative analysis for most other environmental issues (including hydrology and water quality) as it is not possible to quantify or sum the specific drainage or water quality-related impacts of each project to determine specific cumulative water quality impacts for the region. Rather, a more programmatic approach was used because the WLC EIR is a programmatic document, and subsequent development within the WLCSP will have to evaluate its own specific hydrological and water quality impacts at the time such development is proposed.

Comment VIII:

Conclusion. Waterkeeper supports responsible development and encourages the adoption of a comprehensive FEIR that more specifically addresses how the direct and indirect impacts of the project to the region's water quality, wildlife areas and wetlands will be mitigated.

Response VIII:

The FEIR does demonstrate that it has addressed both direct and indirect impacts of the proposed WLC project regarding hydrology, water quality, and biological resources to the degree possible in this programmatic document. Subsequent development within the WLCSP will have to evaluate its own specific hydrological, water quality, and biological impacts at the time such development is proposed, and will have to mitigate those impacts consistent with the programmatic measures outlined in the WLC EIR.

RESPONSE SUMMARY: The conclusions contained in the FEIR regarding hydrology and water quality are based upon the project-specific hydrology and water quality reports prepared in compliance with City and County guidelines. These issues were analyzed in detail in EIR Section 4.9, *Hydrology and Water Quality*, which determined programmatic impacts and cumulative impacts would be less than significant with implementation of project specific mitigation and design requirements on future development, both within and outside of the WLC Specific Plan (i.e., for cumulative impacts).

In addition, the conclusions contained in the FEIR regarding biological resources are based upon a number of project-specific biological studies. EIR Section 4.4, *Biological Resources*, determined that programmatic impacts and cumulative impacts on biological resources would be less than significant with implementation of project specific mitigation on future development as outlined in the Multiple Species Habitat Conservation Plan for Western Riverside County (i.e., for cumulative impacts).

MEMORANDUM

DATE: June 10, 2015

TO: Mark Gross, Moreno Valley Planning Department

FROM: Kent Norton, AICP, Associate, LSA Associates, Inc.

SUBJECT: **Response to Letter from T. Paulek & S. Nash dated June 9, 2015**

In a letter dated June 9, 2015, Tom Paulek and Susan Nash submitted comments on the WLC Project FEIR. The specific comments are presented below, followed by responses to each comment.

Comment 1:

The Attachments to our April 5, 2013 Draft EIR comment letter (FEIR letter G-89) were wrongly detached and excluded from the Final EIR. These attachments were obtained as a result of our citizen public Records Act request to the state Wildlife Conservation Board (WCB) and the western Riverside County Regional Conservation Authority (RCA) [Responsible for MSHCP Implementation].

Response 1:

The commenters are incorrect - the seven attachments to the April 5 comment letter were in fact included in the Final EIR on the flash drive that was distributed with all the EIR documents – it was in the Final EIR Volume 1 – Response to Comments – Comment Letter Appendices labeled Letter G-89. The City website and several flash drives were randomly checked and all contained all seven of the cited attachments.

Comment 2:

The attachments are once again being submitted to project decision makers to disclose the fraudulent project description of the public lands of the San Jacinto Wildlife Area (SJWA) immediately south of the World Logistics Center Specific Plan as the “CDFG Conservation Buffer Area”. The attachments appended include:

ATTACHMENT #1: *State Wildlife Conservation Board (WCB) minutes of May 18, 2001 Agenda Item 31 – San Jacinto Wildlife Area Expansions 15 through 19.*

ATTACHMENT #2: *Excerpts from text of Proposition 12 approved by voters in 2000 indicated the subject land was purchased by the public “for the restoration or acquisition from a willing seller, of habitat for threatened or endangered species or for the purpose of promoting the recovery of those species.”*

ATTACHMENT #3, 4, 5, and 6: *documents the SJWA public lands erroneously designed “CDFW Conservation Buffer Area” were included in the 2004 MSHCP Conservation Area and counted toward Additional Reserve lands by the Regional Conservation Authority (RCA) [see Attachment #6]*

ATTACHMENT #7: *The Department of Fish and Game Management Authorization (May 6, 1996) implementing the Stephen’s Kangaroo Rat Habitat Conservation Plan (SKRHCP). Both the SKRHCP as well as the subsequent MSHCP issued under the Natural Community Conservation Planning Act (NCCP Act). The NCCP Act does not exempt a project in a natural community conservation planning area from the California Environmental Quality Act or alters or affects the applicability of CEQA (see Fish and Game Code: 2826).*

The City’s change of the land use designation on the public lands of the San Jacinto Wildlife Area to “Open Space” does not obviate the need to analyze and mitigate the impacts of the World Logistics Center on these MSHCP designated wildlife conservation lands. In addition, we object to the fraudulent project description and

the improper use of a Program EIR for this Project. The City's consideration of this Project must be deferred pending public review of a legally adequate environmental document.

Response 2:

Draft EIR Section 4.4.1.10, *Wildlife in the SJWA and Mystic Lake* (DEIR pages 4.4-16 and 17) goes into detail on the classification of this open space land and cites the same material submitted by the commenters. In fact, Attachment #1 submitted by the commenters clearly states the following (regarding expansions 15 through 19)...*"The DFG has identified the subject properties as being within a Significant Natural Area and has recommended the purchase of the property as an addition to the existing WLA. The acquisition of the subject properties are important to the wildlife area as they will serve as a buffer from development north of the WLA and adds significant wildlife benefits to the WLA."* [emphasis added, citation from page 56 of Attachment 1]. Further, it should be noted the WLC EIR requires a 250-foot additional buffer with no development and an additional 150-foot buffer with no buildings both located along the southern boundary of the WLCSP adjacent to the San Jacinto Wildlife Area. The rest of the attachments submitted by the commenters appear to have been submitted to support the contention that the SJWA is an established conservation area, including the property designated in the WLC EIR as the CDFG Conservation Buffer Area. This term was meant to accurately characterize the approved and actual use of the site as an upland buffer between development to the north and the wetland resources of the SJWA to the south. The EIR clearly acknowledges this area is part of the SJWA, and provides an additional 400 feet of buffer area adjacent to the SJWA.

Regarding the use of a programmatic EIR, the Draft and Final EIR documents clearly explain why a programmatic document is appropriate for the WLCSP in that no specific buildings have been proposed at this time. Additional CEQA analysis and documentation will be done as specific development is proposed in the future. The City considers the EIR for the WLC project to be legally adequate and provides appropriate information for local decision-makers.

LSA ASSOCIATES, INC.

MEMORANDUM

DATE: June 10, 2015

TO: Mark Gross, Moreno Valley Planning Department

FROM: Kent Norton, AICP, Associate, LSA Associates, Inc.

SUBJECT: Response to Letter from RCTC dated June 9, 2015

In a letter dated June 9, 2015, Anne Mayer with the Riverside County Transportation Commission (RCTC) submitted comments on the WLC Project FEIR.

COMMENTS

...After reviewing the Project's recently released Final Environmental Impact Report (FEIR), the Commission is concerned the Project's significant traffic impacts have not been adequately addressed or mitigated...The FEIR demonstrates that the Project's traffic impact to State Route 60 will be significant. Here, the proposed fair share payment mitigation is not only inadequate to mitigate for the Project's interim traffic impacts that will occur until improvements are constructed but fair share payments are not even possible for improvements to SR-60. This is because a fair share program does not exist. The Commission believes it is insufficient for the FEIR to simply conclude "[i]f no fair share program exists or if the existing programs are not consistent with the requirements below, then no payment of fees shall be required." (FEIR at 4.15-235.) A more proactive approach is warranted and feasible under these circumstances so the Project's significant impacts do not go unmitigated.

Furthermore, although the FEIR does call for widening of Gilman Springs Road to up to six lanes, there do not appear to be any plans to make adequate improvements to SR-79, a four-lane road, to handle the influx of traffic that will enter SR-79 from Gilman Springs Road. In short, the approval of the proposed Project would result in far-reaching traffic impacts to surrounding local and regional transportation corridors. It is for these reasons the Commission strongly urges the City to work with regional and state partners to develop an appropriate fair share program that would mitigate for the Project's proportional impacts to SR-60 and SR-79, as well as other nearby regional road networks that will be impacted by the Project.

The FEIR also makes clear the Project's traffic impacts to Gilman Springs Road would be significant. As you are aware, Gilman Springs Road is a narrow two-lane road, such that extensive improvements will be needed for it to adequately handle the truck traffic that is anticipated by the Project. To mitigate for the Project's impacts, the FEIR indicates the Project developer will be required to pay the Project's fair share for improvements to Gilman Springs Road. Unfortunately, a fair share payment does not ensure adequate mitigation of the Project's impacts because there is no assurance of when the necessary improvement will be built, if ever.

More specifically, the Commission is concerned about the interim traffic impacts that will occur until such time as the improvements required to adequately mitigate the Project's impacts are actually completed. Because the Project will cause a significant increase in traffic, and because there is no assurance the Project's traffic impacts will be adequately mitigated prior to Project construction, the Commission urges the City to restrict Project construction approvals until such time as the City and Project developer can demonstrate all traffic improvements necessary to fully mitigate the impacts related to any particular building's construction or occupancy are completed. Such assurance might be achieved through the imposition of a mitigation measure restricting the approval of any site-specific plans or the issuance of any construction permits until the physical

LSA ASSOCIATES, INC.

improvements necessary to mitigate for the development's proportionate impacts are actually constructed. Although the Commission understands the construction of transportation improvements may need to occur on a phased basis, the mere payment of the Project's fair share toward traffic improvements is meaningless mitigation if improvements are not built concurrently with the development that merits them.

Finally, the Commission has concerns regarding the FEIR's analysis of the Project's long-term traffic impacts. Although traffic impacts to SR-50 and Gilman Springs Road are considered significant and unavoidable, this conclusion is based solely on the City's lack of authority to implement improvements to these roadways. That is, the FEIR indicates all traffic impacts would be fully mitigated, but for this lack of authority.

The Commission greatly appreciates the City's thoughtful consideration of its comments and concerns, and we would be pleased to meet with you to further discuss our comments. We respectfully request:

- *The City require the development of a fair share contribution plan for SR-60, SR-79, and Gilman Springs Road, as a mitigation measure for any Project approval.*
- *The City impose a mitigation measure requiring the City and the applicant to work with the Commission, Caltrans, the county of Riverside, and other local and regional stakeholders to develop a regional transportation improvement plan for the area encompassing SR-50, SR-79, and Gilman Springs Road.*
- *The City add the Commission to the World Logistics Center, including City's notification list for all Brown any hearing notices and any Notice Act and CEQA notices related to of Determination.*

RESPONSE

Since the City cannot guarantee that improvements outside of its jurisdiction will be made, it has no choice but to find impacts outside the City as significant and unavoidable under CEQA. The City has no ability to compel regional and State agencies to take the necessary actions required to improve regional infrastructure. What the City can do is ensure that developments within the City pay their fair share when such actions by regional and State agencies do occur. The FEIR contains a series of mitigation measures to ensure that traffic impacts are addressed (Mitigation Measures 4.15.7.4A-4.15.7.4G). These measures require the improvement of right-of-way within the City's jurisdiction, the payment of fair share costs to jurisdictions outside the City, payment of TUMF fees (estimated at \$34.1 million in TUMF fees), and coordination with outside jurisdictions regarding constructing improvements outside the City's jurisdiction. The City will work with TMLA, RCTC, and WRCOG to ensure that improvements of regional benefit are constructed. However, it is unreasonable to restrict development until such time that regional agencies are prepared to construct necessary and needed regional infrastructure. Doing so would effectively give agencies outside the City a veto on any City development.

The FEIR identified impacts (increased delay) and mitigation (signalization) at the intersections of SR-79 and Gilman Springs Road (FEIR Volume 3, Section 4.15 & Appendix L – Traffic Impact Analysis). Since those intersections are outside the jurisdiction of the City, mitigation will be subject to requirements found in Mitigation Measures 4.15.7.4A-4.15.7.4G. The FEIR did not identify any impacts to road sections along SR-79 itself because the project did not generate 50 or more trips on any segment of SR-79 to warrant further review. RCTC requests that the City require the development of a fair share contribution plan for SR-60, SR-79, and Gilman Springs Road as a mitigation measure for any Project approval. However, only those agencies responsible for the identified infrastructure can develop a fair share contribution plan. The FEIR requires the payment of fair share and identifies the formula for doing so. (Mitigation Measures 4.15.7.4D, E and F)

RCTC requests that the City require the applicant and City to work with regional and State agencies to develop a regional transportation improvement plan. Such a requirement is beyond the scope of any single project. The FEIR identifies all the transportation-related impacts that the project would generate, identifies the necessary mitigation, and requires the payment of fair share costs for such impacts. Those are the actions that are within

LSA ASSOCIATES, INC.

the jurisdiction of the City. Regional and State agencies must be responsible for implementation of projects within their jurisdiction.

RCTC requests that the City include the RCTC on all notices for the project. The City has done so.

LSA ASSOCIATES, INC.

MEMORANDUM

DATE: June 10, 2015

TO: Mark Gross, Moreno Valley Planning Department

FROM: Kent Norton, AICP, Associate, LSA Associates, Inc.

SUBJECT: Response to RivCo TLMA Letter dated June 8, 2015

In a letter dated June 8, 2015, Juan Perez with the Riverside County Transportation and Land Management Agency (TLMA) submitted comments on the WLC Project FEIR. The specific comments are presented below, followed by responses to each comment.

COMMENTS

The County of Riverside Transportation and Land Management Agency (TLMA) appreciates the opportunity to submit our comments regarding the project and the Final Environmental Impact Report (FEIR).

Our concerns are primarily focused on the expected traffic impacts of the project, particularly impacts identified on Gilman Springs Road, which is under shared County-City jurisdiction from SR 60 to about a mile south of Alessandro Blvd. and then within County jurisdiction south easterly to Lambs Canyon (S.R. 79)/Sanderson Avenue. We are also concerned about the project's regional impacts on SR 60. The project traffic study estimates that it will generate 68,721 total vehicle trips of which 14,007 are a mix of trucks. When converting to Passenger Car Equivalents (PCE), as the EIR does in conformance with standard practice, this results in adding the equivalent of 89,975 surface street trips and 75,724 freeway trips. (EIR 4.15-47)

Gilman Springs Road in its current configuration is a two-lane rural road that extends from SR 60 to Lambs Canyon/Sanderson Avenue (and then further south to State Street). It provides the primary direct connection between the City of Moreno Valley, SR 60, and the San Jacinto Valley. It is a critical regional connector that, according to the EIR, carries approximately 14,400 vehicle trips per day at its peak location.

The County has made significant improvements to this roadway over the years to enhance operations and safety, such as curve realignments, a passing lane, repaving, enhanced pavement markings, and use of radar speed feedback signs. However, the road is operating at its practical capacity as a two-lane road, and adding significant traffic volumes to it as this project would do, without further significant improvements including road widening, would be highly detrimental to traffic safety and mobility. We are particularly concerned about the addition of a significant number of trucks anticipated with this project given its rural two-lane character, without further improvements being done in conjunction.

Our analysis of the EIR data indicates that the project will add an estimated 6,019 autos and 420 trucks daily to Gilman Springs Road. The EIR identifies that the project would have a significant cumulative impact on Gilman Springs Road from Alessandro Blvd. to Bridge St., and on Gilman Springs Road between SR 60 and Alessandro Blvd. These impacts occur under Phase 1 of the project based on existing conditions (EIR 4.15-103), at year 2022 (EIR 4.15-153), and at project build-out under cumulative 2035 conditions. We note that the EIR does not address the segment of Gilman Springs Road from Bridge Street south-easterly to Lambs Canyon/Sanderson. Although some project traffic can be expected to use Bridge Street to access the Ramona Expressway as a direct connection, it is still expected that a significant amount would continue on to the San Jacinto Valley, and some even to the Pass area through Lambs Canyon to the north, by using Gilman Springs Road down to Lambs Canyon/Sanderson Avenue.

LSA ASSOCIATES, INC.

We appreciate that the EIR identifies that "Gilman Springs Road from Alessandro Blvd. to Bridge St. (S-16) is already deficient and needs to be widened to four lanes and will need to be widened to six lanes in the future. In accordance with General Plan Policy 5.5.7, the City will require the developer to widen Gilman Springs Road to provide three southbound lanes and one northbound lane along the frontage of the WLC project. The developer will receive a TUMF credit for the portion of the cost of this improvement that exceeds the project's fair share contribution." (EIR 4.15-194).

However, we are highly concerned by the statements that follow, which are also reflected in the mitigation measures: "However because Gilman Springs Road is partially a Riverside County facility and is thus partially outside the jurisdiction of the City of Moreno Valley the City cannot ensure that the identified improvements would be made outside of its jurisdiction. Moreover there are right-of-way constraints involving sensitive environmental areas that may limit widening to four lanes between Alessandro Blvd. and Bridge St., or even preclude any widening at all. The project's impacts in the Existing Plus Project scenario on Gilman Springs Road must therefore be considered significant and unavoidable. The City will work with Riverside County to find funding for improvements that would provide an acceptable LOS on this road to the extent feasible.

We also note that the EIR identifies that Gilman Springs Road will be widened from 2 to 6 lanes by 2022 south of Alessandro, within County jurisdiction (EIR Fig 4.15.5). We note that the County does not have any active projects on Gilman Springs Road to accomplish this as a feasible goal given the state of our regional and local funding programs. Moreover, since much of the land adjacent to Gilman Springs Road is identified to be set aside for open space, it is not feasible to anticipate that other future development projects would cause major widening improvements to be done within the foreseeable future.

Our position is that improving Gilman Springs Road to a minimum of 4 lanes from SR 60 to Lambs Canyon/Sanderson Avenue is critically important for safety and mobility, and to mitigate direct project impacts. Improvements will be needed at the Gilman Springs Road/SR 60 Interchange consistent with the road widening. Rather than 3 southbound lanes and 1 northbound lane as stated in the EIR, the road needs to be widened to 4 lanes with 2 through lanes and adequate shoulders in each direction. This requirement needs to be tied to the issuance of building permits for the project to assure that project traffic does not degrade conditions on the road.

As the responsible agency for the segments of Gilman Springs Road not in City jurisdiction, County TLMA is willing to work with the applicant and the City of Moreno Valley to provide that the necessary improvements are constructed. This project is expected to generate a very substantial amount of Transportation Uniform Mitigation Fees (TUMF) given its vast size, and Gilman Springs Road is a TUMF eligible facility. It would be a benefit to all users of the road, including the project traffic, to directly construct improvements on Gilman Springs Road for which the project would receive appropriate TUMF fee credit, rather than merely the payment of TUMF fees as has been included in the mitigation measures.

The EIR identifies that, for truck traffic, 82% would be to/from the west via one or more freeways (EIR 4.15-49), which would primarily be SR 60, and that 44% of daily passenger autos would use SR 60. Applying these percentages to the overall trip generation, we estimate that the project would add the equivalent (PCE) of 41,302 passenger trips to SR 60 to the west, and 6,815 trips on SR 60 to the east. Although the traffic study states that, because of a counter peak hour traffic pattern (eastbound in the am and westbound in the pm) the project will be served by some of the underutilized peak hour capacity of SR 60, a more rigorous analysis would show that given the sheer volume of project traffic generation there would be project impacts on SR 60.

Unlike other freeways in Western Riverside County, mainline improvements to SR 60 between I-215 and Gilman Springs Road are not, to our knowledge, included in the Measure "A" expenditure plan. Given the vast scale of this project, it is important that it serve as a catalyst for Caltrans, the Riverside County Transportation Commission (RCTC), affected Cities and the County to come together in a discussion of how to address this need and jointly develop a plan. We do recognize that funding of freeway improvements needs to be

LSA ASSOCIATES, INC.

to a great degree a Federal and State responsibility. However, as we have seen on other freeway projects, our regional and local agencies, under the leadership of RCTC, have had to play an active role through Measure A and other means to secure complimentary funding for freeway improvements.

Requested Conditions of Approval. We therefore urge the Planning Commission to incorporate the following measures as Conditions of Approval for the project:

1. Require that the phased issuance of project building permits be tied to the construction of improvements on Gilman Springs Road to 4-lanes, at a minimum, between SR 60 and Lambs Canyon/Sanderson Avenue, and of improvements to the SR 60/Gilman Springs Road interchange. This would be done in accordance with a phasing improvement plan jointly developed by the applicant, the City, and the County of Riverside.
2. Require that a regional improvement plan be prepared to address needed improvements to SR 60 between I-215 and Gilman Springs Road that is tied to Phase 2 of the project proceeding. This would allow some reasonable time for affected agencies to work together and develop an overall funding strategy. The improvement plan would include a mix of Federal, State, regional, and other potential funds, including an appropriate fair share of development contributions from projects in proximity to SR 60 that directly and significantly impact the segment between I-215 and Gilman Springs Road.
3. The County and Caltrans are working on the design of a traffic signal/roadway safety improvement project at the Gilman Springs/Lambs Canyon/Sanderson Avenue ramps. Require a fair-share contribution, via an agreement between the applicant, City, County, and Caltrans, towards construction of these facilities to mitigate project impacts.
4. Require a fair-share contribution, via an agreement between the applicant, City, and County, to mitigate project impacts at the intersection of San Timoteo Road/Live Oak Canyon (EIR 4.15-237).
5. Require a fair-share contribution, via an agreement between the applicant, City, and County to mitigate project impacts at the intersection of Bridge Street/Ramona Expressway (EIR 4.15-3). Although this intersection may potentially have a different configuration or be grade separated in the future as the EIR states, the project will create significant impacts that could be alleviated through an interim improvement project if it proceeds ahead of other future improvements.

We are available to meet with the applicant and City staff to discuss our comments, and to work towards the implementation of the improvements necessary to address project impacts and improve regional transportation safety and mobility.

RESPONSE

Since the City cannot guarantee that improvements outside of its jurisdiction will be made, it has no choice but to find impacts outside the City as significant and unavoidable under CEQA. As noted in the comment, the FEIR contains a series of mitigation measures to ensure that traffic impacts are addressed (Mitigation Measures 4.15.7.4A-4.15.7.4G). These measures require the improvement of right-of-way within the City's jurisdiction, the payment of fairshare costs to jurisdictions outside the City, payment of TUMF fees (estimated at \$34.1 million in TUMF fees), and coordination with outside jurisdictions regarding constructing improvements outside the City's control. The City will work with TMLA, RCTC, and WRCOG to ensure that improvements of regional benefit are constructed.