Appendix A.2

Comments Received in Response to the Notice of Preparation

State of California -The Natural Resources Agency
DEPARTMENT OF FISH AND GAME
1416 9th Street
Sacramento, CA 95814
http://www.dfg.ca.gov

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

May 1, 2012

Mr. Kris Flanigan
Riverside County Flood Control and Water Conservation
1995 Market Street
Riverside, CA 92501

Re: Notice of Preparation of Draft Program Environmental Impact Report for the Moreno Master Drainage Plan Revision
SCH# 2012041013

Dear Mr. Flanigan:

The Department of Fish and Game (Department) appreciates this opportunity to comment on the Notice of Preparation (NOP) for the Draft Program Environmental Impact Report for the Moreno Master Drainage Plan Revision Project. The Department is responding as a Trustee Agency for fish and wildlife resources [Fish and Game Code Sections 711.7 and 1802 and the California Environmental Quality Act (CEQA) Guidelines Section 15386], and as a Responsible Agency regarding any discretionary actions (CEQA Guidelines Section 15381), such as a Lake or Streambed Alteration Agreement (Fish and Game Code Sections 1600 *et seq.*) and/or a Permit for Incidental Take of Endangered, threatened, and/or Candidate species (Incidental Take Permit) [Fish and Game Code Sections 2080 and 2080.1].

The Project is a revision of the plans originally adopted in 1980 and revised in 1991. The revision consists of the following: 1) preparation and adoption of the Moreno Master Drainage Plan (MDP) as a long-range planning document, 2) reasonably predictable impacts of new facility construction, and, 3) categorization of open channel streams as lined and unlined. New facilities include underground storm drain channels, four detention basins and two debris basins, and maintenance of facilities.

The maintenance of earthen channels involves removal of deposition, repair of eroded slopes, and reduction of fire hazard by annual mowing and application of herbicides. The maintenance of concrete-lined channels and storm drains involves clearing of debris and sediment, repairs to access roads and fences, and removal of graffiti.

Multiple Species Habitat Conservation Plan (MSHCP)

The Department is responsible for ensuring appropriate conservation of fish and wildlife resources, including rare, threatened, and endangered plant and animal species, pursuant to the CESA, and administers the Natural Community Conservation Planning Program (NCCP Program). On June 22, 2004, the Department issued NCCP approval and take Authorization for the Western Riverside County MSHCP per Section 3800 *et seq.* of the Fish and Game Code. The MSHCP establishes a multiple species conservation program to minimize and mitigate habitat

loss and the incidental take of covered species in association with activities covered under the permit.

The proposed Project occurs within the MSHCP and is subject to the provisions and policies of the MSHCP. The Project is located in the Reche Canyon/Badlands Area Plan of the MSHCP. The Riverside County Flood Control and Water Conservation District (RCFC) is a department of the County of Riverside and the County is signatory to the Implementing Agreement of the MSHCP. Compliance with approved habitat plans, such as the MSHCP, is discussed in CEQA. Specifically, Section 15125(d) of the Guidelines for the Implementation of CEQA requires that an environmental impact report (EIR) discuss any inconsistencies between a proposed Project and applicable general plans and regional plans, including habitat conservation plans and NCCPs. An assessment of the impacts to the MSHCP as a result of this Project is necessary to address CEQA requirements.

As per Section 15168 of the CEQA Statute, the use of a Program Environmental Impact Report (PEIR) for this Project is appropriate. Subsection "c" of Section 15168 provides that activities subsequent to the PEIR must be examined to determine whether additional environmental documents must be prepared. Section 15168(c)(1) states that if a later Project has effects that were not examined in the PEIR, a new initial study would have to be completed, leading to a negative declaration or environmental impact report. Two of the advantages of a PEIR are: to ensure consideration of cumulative impacts and to allow the lead agency to consider broad policy alternatives and program-wide mitigation measures.

An assessment of future actions in this programmatic EIR is problematic because of the nature and complexity of the Project(s). It is important for the DPEIR to include a list of potential mitigation measures for categories of general Project impacts that will require mitigation, i.e., for narrow endemic plants, wildlife movement north to south, revegetation measures, impacts to riparian vegetation and streams and other measures. A crucial factor in the Department's permitting of the plan components will be implementation of a monitoring program to track Projects' impacts and mitigation to ensure that mitigation occurs on the Project as a whole and not just on the Project components. A discussion and accounting of cumulative impacts should be addressed in subsequent CEQA documents for specific projects.

Biological Impacts and Mitigation

The Project has the potential to impact riparian habitat and the following species: burrowing owl, least Bell's vireo, southwestern willow flycatcher, over 100 species of birds, Stephen's kangaroo rat, the orange-throated whiptail, San Diego horned lizard, willows, sycamores, cottonwoods, mule fat and alkaline plants. The least Bell's vireo, southwestern willow flycatcher and Stephen's kangaroo rat are all listed as threatened or endangered. There may also be patches of Riversidean sage scrub and alluvial fan sage scrub associated with streams.

State Jurisdictional Waters

The Department is concerned about the continuing loss of jurisdictional waters of the State and the encroachment of development into areas with native habitat values. The MSHCP has a process for reviewing projects that involve riparian habitat (Section 6.1.2 Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools). However, the 1600 Lake and Streambed Alteration Agreement Process is more detailed and comprehensive. A 1600 Lake and Streambed Alteration Agreement will be required for this Project. According to the Urban Wildlands Interface, projects are required to ensure that the quality and quantity of runoff

discharged to the MSHCP Conservation Area is not altered in an adverse way when compared to existing conditions. The Department is concerned the Project may affect water quality, fish and wildlife resources, and jurisdictional habitats in this area. The CEQA document should contain sufficient, specific, and current biological information on the existing habitat and species at the Project site; measures to minimize and avoid sensitive biological resources; and mitigation measures to offset the loss of native flora and fauna and State waters. If the Project site contains Federally- or State-listed species, the CEQA document should include measures to avoid and minimize impacts to these species as well as mitigation measures to compensate for the loss of biological resources. The CEQA document should not defer impact analysis and mitigation measures to future regulatory discretionary actions, such as a Lake or Streambed Alteration Agreement, CESA Permit, or Federal Endangered Species Act (FESA) Permit.

Analyses of the Potential Project-Related Impacts on Biological Resources

This particular Project has the potential to have significant environmental impacts on sensitive flora and fauna resources. Therefore, the CEQA document should include cumulative impacts analysis and an alternatives analysis which focuses on environmental resources and ways to avoid or minimize impacts to those resources.

To enable Department staff to adequately review and comment on the proposed Project, we suggest that updated biological studies be conducted prior to any environmental or discretionary approvals. The following information should be included in any focused biological report or supplemental environmental report:

1. A summary of the structure, purpose and obligations of the Lead Agency under the MSHCP and an analysis of the Project in relation to the Area Plan and Criteria Cell biological goals and objectives.

    a. Reserve Assembly. The Project is located within the MSHCP Criteria Area and is subject to the conservation requirements for reserve assembly. A discussion of the applicable Area Plan and whether the Project includes Criteria Cells should be addressed. Documents processed through the Resource Conservation Agency (RCA) of the MSHCP should be included in the CEQA document.

    b. Goals and Objectives. A discussion of the Area Plan biological goals and objectives for species and habitats and an analysis of the Project's species and habitats in relation to those goals and objectives.

    c. MSHCP Policies. A discussion of the applicability of MSHCP policies and procedures, including: the Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools policy (MSHCP Section 6.1.2); Protection of Narrow Endemic Plan Species (MSHCP Section 6.1.3); Additional Survey Needs and Procedures (MSHCP Section 6.3.2); Fuels Management (MSHCP Section 6.4), and the Guidelines Pertaining to the Urban Wildlands Interface (MSHCP Section 6.1.4).

    d. Special Survey Areas. A discussion of what the survey requirements are of the Project site and the results of general and focused surveys. Surveys should be

conducted within one year of submittal of the CEQA document. Survey requirements and results should be included in the CEQA document.

e. Biological Resources. A list of the biological resources found on the site and an analysis of how the Project implementation would impact those resources.

f. Mitigation Measures. A list of proposed mitigation measures required by the MSHCP to offset impacts to site species and habitats, including payment of fees or other measures.

2. Please provide a complete assessment of the flora and fauna within and adjacent to the Project area, with particular emphasis upon identifying endangered, threatened, and locally unique species and sensitive habitats.

a. Please provide a thorough assessment of rare plants and rare natural communities, following the Department's November 2009 guidance for Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. The guidance document can be found at the following link:
http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/Protocols_for_Surveying_and_Evaluating_Impacts.pdf

b. A thorough assessment of sensitive fish, wildlife, reptile, and amphibian species. Seasonal variations in use of the Project area should also be considered. Focused species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with the Department and the U.S. Fish and Wildlife Service.

c. The Department's California Natural Diversity Data Base in Sacramento should be contacted at (916) 327-5960 to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the California Fish and Game Code.

3. A thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts.

a. CEQA Guidelines, 15125(a), direct that knowledge of the regional setting is critical to an assessment of environmental impacts and that special emphasis should be placed on resources that are rare or unique to the region.

b. Project impacts should be analyzed relative to their affects on off-site habitats. Specifically, this should encompass adjacent public lands, open space, adjacent natural habitats, and riparian ecosystems. In addition, impacts to and maintenance of wildlife corridor/movement areas, including access to undisturbed habitat in adjacent areas, should be fully evaluated and provided.

c. The zoning of areas for development Projects or other uses that are nearby or adjacent to natural areas may inadvertently contribute to

wildlife-human interactions. A discussion of possible conflicts and mitigation measures to reduce these conflicts should be included in the environmental document.

d. A cumulative effects analysis should be developed as described under CEQA Guidelines, 15130. General and specific plans, as well as past, present, and anticipated future Projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.

e. The document should include an analysis of the effect that the Project may have on the Western Riverside Multiple Species Habitat Conservation Plan or on other regional and/or subregional conservation programs in San Diego or Orange Counties. Under Sections 2800-2835 of the California Fish and Game Code, the Department, through the Natural Communities Conservation Planning (NCCP) program is coordinating with local jurisdictions, landowners, and the Federal Government to preserve local and regional biological diversity.

4. A range of alternatives should be analyzed to ensure that alternatives to the proposed Project are fully considered and evaluated (CEQA Guidelines 15126.6). A range of alternatives which avoid or otherwise minimize impacts to sensitive biological resources should be included. Specific alternative locations should also be evaluated in areas with lower resource sensitivity where appropriate.

a. Mitigation measures for Project impacts to sensitive plants, animals, and habitats should emphasize evaluation and selection of alternatives which avoid and/or otherwise minimize Project impacts. Off-site compensation for unavoidable impacts through acquisition and protection of high-quality habitat should be addressed.

b. The Department considers Rare Natural Communities as threatened habitats having both local and regional significance. Thus, these communities should be fully avoided and otherwise protected from Project-related impacts.

c. The Department generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species. Department studies have shown that these efforts are experimental in nature and largely unsuccessful.

5. Although the proposed Project is within the MSHCP and could be subject to Section 6.1.2, Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools, a Lake and Streambed Alteration Agreement Notification is still required by the Department should the site contain jurisdictional waters. The Department's criteria for determining the presence of jurisdictional waters are generally more comprehensive than the MSHCP criteria in Section 6.1.2. The CEQA document should include a jurisdictional delineation if there are impacts to riparian vegetation or State waters.

A CESA Permit must be obtained if there are impacts to State or Federal listed species and the applicant chooses not to process the Project through the Resource Conservation Agency of the MSHCP.

a. If the Project has the potential to result in "take" of species of plants or animals listed under CESA, either during construction or over the life of the Project. CESA Permits are issued to conserve, protect, enhance, and restore State-listed threatened or endangered species and their habitats. Early consultation is encouraged, as significant modification to the proposed Project and mitigation measures may be required in order to obtain a CESA Permit. Revisions to the California Fish and Game Code, effective January 1998, require that the Department issue a separate CEQA document for the issuance of a CESA permit unless the Project CEQA document addresses all Project impacts to listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of a CESA permit. For these reasons, the following information is requested:

b. Biological mitigation, monitoring,and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a CESA Permit.

c. A Department-approved Mitigation Agreement and Mitigation Plan are required for plants listed as rare under the Native Plant Protection Act.

6. Although the proposed Project is within the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) and could be subject to Section 6.1.2, Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools, a Lake and Streambed Alteration Agreement Notification is still required by the Department should the site contain jurisdictional waters. The Department's criteria for determining the presence of jurisdictional waters are generally more comprehensive than the MSHCP criteria in Section 6.1.2. The CEQA document should include a jurisdictional delineation if there are impacts to riparian vegetation or State waters.

The Department opposes the elimination of watercourses and/or their channelization or conversion to subsurface drains. All wetlands and watercourses, whether intermittent or perennial, must be retained or mitigated for and provided with substantial setbacks which preserve the riparian and aquatic values and maintain their value to on-site and off-site wildlife populations.

a. Under Section 1600 *et seq.* of the California Fish and Game Code, the Department requires the Project applicant to notify the Department of any activity that will divert, obstruct or change the natural flow or the bed, channel or bank (which includes associated riparian resources) of a river, stream or lake, or use material from a streambed prior to the applicant's commencement of the activity. Streams include, but are not limited to, intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams, and watercourses with subsurface flow. The Department's issuance of a Lake and Streambed Alteration Agreement for a project that is subject to CEQA will require CEQA compliance actions by the Department as a responsible agency. The Department, as a responsible agency under CEQA, may consider the local jurisdiction's (lead agency) Negative Declaration or Environmental Impact Report for the Project. However, if the CEQA document does not fully identify potential impacts to lakes, streams, and associated resources (including, but not limited to riparian and alluvial fan sage scrub habitat) and provide adequate avoidance, mitigation, monitoring, and reporting commitments, additional CEQA documentation will be

required prior to execution (signing) of the Streambed Alteration Agreement. In order to avoid delays or repetition of the CEQA process, potential impacts to a lake or stream, as well as avoidance and mitigation measures need to be discussed within this CEQA document. The Department recommends the following measures to avoid subsequent CEQA documentation and project delays:

(i) Incorporate all information regarding impacts to lakes, streams and associated habitat within the DEIR. Information that should be included within this document includes: (a) a delineation of lakes, streams, and associated habitat that will be directly or indirectly impacted by the proposed Project; (b) details on the biological resources (flora and fauna) associated with the lakes and/or streams; (c) identification of the presence or absence of sensitive plants, animals, or natural communities; (d) a discussion of environmental alternatives; (e) a discussion of avoidance measures to reduce Project impacts, (f) a discussion of potential mitigation measures required to reduce the Project impacts to a level of insignificance; and (g) an analysis of impacts to habitat caused by a change in the flow of water across the site. The applicant and lead agency should keep in mind that the State also has a policy of no net loss of wetlands.

(ii) The Department recommends that the Project applicant and/or lead agency consult with the Department to discuss potential Project impacts and avoidance and mitigation measures. 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 Streambed Alteration Agreement Notification package, please visit our website at: http://www.dfg.ca.gov/habcon/1600.html.

Thank you for this opportunity to comment. Please contact Robin Maloney-Rames at (909) 980-3818, if you have any questions regarding this letter.

Sincerely,

Jeff Brandt
Senior Environmental Scientist

cc: State Clearinghouse, Sacramento

Department of Toxic Substances Control

Matthew Rodriquez
Secretary for
Environmental Protection

Deborah O. Raphael, Director
5796 Corporate Avenue
Cypress, California 90630

Edmund G. Brown Jr.
Governor

April 25, 2012

Mr. Kris Flanigan
Riverside County Flood and Water Conservation
1995 Market Street
Riverside, California 92501

NOTICE OF PREPARATION (NOP) FOR MORENO MASTER DRAINAGE PLAN REVISION (SCH# 2012041013)

Dear Mr. Flanigan:

The Department of Toxic Substances Control (DTSC) has received your submitted Notice of Preparation Report for the above-mentioned project. "The DPEIR for the revisions to the Moreno MDP will evaluate three separate components: Administration of the MDP, Future Construction of the MDP facilities, and Future Operations and Maintenance of the MDP facilities, hereinafter collectively referred to as the "Project."".

Based on the review of the submitted document DTSC has the following comments:

1) The EIR should evaluate whether conditions within the project area may pose a threat to human health or the environment. Following are the databases of some of the regulatory agencies:

- National Priorities List (NPL): A list maintained by the United States Environmental Protection Agency (U.S.EPA).
- Envirostor (formerly CalSites): A Database primarily used by the California Department of Toxic Substances Control, accessible through DTSC's website (see below).
- Resource Conservation and Recovery Information System (RCRIS): A database of RCRA facilities that is maintained by U.S. EPA.
- Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS): A database of CERCLA sites that is maintained by U.S.EPA.

- Solid Waste Information System (SWIS): A database provided by the California Integrated Waste Management Board which consists of both open as well as closed and inactive solid waste disposal facilities and transfer stations.

- GeoTracker: A List that is maintained by Regional Water Quality Control Boards.

- Local Counties and Cities maintain lists for hazardous substances cleanup sites and leaking underground storage tanks.

- The United States Army Corps of Engineers, 911 Wilshire Boulevard, Los Angeles, California, 90017, (213) 452-3908, maintains a list of Formerly Used Defense Sites (FUDS).

2) The EIR should identify the mechanism to initiate any required investigation and/or remediation for any site that may be contaminated, and the government agency to provide appropriate regulatory oversight. If necessary, DTSC would require an oversight agreement in order to review such documents.

3) Any environmental investigations, sampling and/or remediation for a site should be conducted under a Workplan approved and overseen by a regulatory agency that has jurisdiction to oversee hazardous substance cleanup. The findings of any investigations, including any Phase I or II Environmental Site Assessment Investigations should be summarized in the document. All sampling results in which hazardous substances were found above regulatory standards should be clearly summarized in a table. All closure, certification or remediation approval reports by regulatory agencies should be included in the EIR.

4) If buildings, other structures, asphalt or concrete-paved surface areas are being planned to be demolished, an investigation should also be conducted for the presence of other hazardous chemicals, mercury, and asbestos containing materials (ACMs). If other hazardous chemicals, lead-based paints (LPB) or products, mercury or ACMs are identified, proper precautions should be taken during demolition activities. Additionally, the contaminants should be remediated in compliance with California environmental regulations and policies.

5) Future project construction may require soil excavation or filling in certain areas. Sampling may be required. If soil is contaminated, it must be properly disposed and not simply placed in another location onsite. Land Disposal Restrictions (LDRs) may be applicable to such soils. Also, if the project proposes to import soil to backfill the areas excavated, sampling should be conducted to ensure that the imported soil is free of contamination.

6) Human health and the environment of sensitive receptors should be protected during any construction or demolition activities. If necessary, a health risk assessment overseen and approved by the appropriate government agency should be conducted by a qualified health risk assessor to determine if there are, have been, or will be, any releases of hazardous materials that may pose a risk to human health or the environment.

7) If it is determined that hazardous wastes are, or will be, generated by the proposed operations, the wastes must be managed in accordance with the California Hazardous Waste Control Law (California Health and Safety Code, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (California Code of Regulations, Title 22, Division 4.5). If it is determined that hazardous wastes will be generated, the facility should also obtain a United States Environmental Protection Agency Identification Number by contacting (800) 618-6942. Certain hazardous waste treatment processes or hazardous materials, handling, storage or uses may require authorization from the local Certified Unified Program Agency (CUPA). Information about the requirement for authorization can be obtained by contacting your local CUPA.

8) DTSC can provide cleanup oversight through an Environmental Oversight Agreement (EOA) for government agencies that are not responsible parties, or a Voluntary Cleanup Agreement (VCA) for private parties. For additional information on the EOA or VCA, please see www.dtsc.ca.gov/SiteCleanup/Brownfields, or contact Ms. Maryam Tasnif-Abbasi, DTSC's Voluntary Cleanup Coordinator, at (714) 484-5489.

If you have any questions regarding this letter, please contact me at ashami@dtsc.ca.gov, or by phone at (714) 484-5472.

Sincerely,

Al Shami
Project Manager
Brownfields and Environmental Restoration Program

cc: Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044
state.clearinghouse@opr.ca.gov

CEQA Tracking Center
Department of Toxic Substances Control
Office of Environmental Planning and Analysis
P.O. Box 806
Sacramento, California 95812
nritter@dtsc.ca.gov.

CEQA # 3512

DEPARTMENT OF TRANSPORTATION
DISTRICT 8
PLANNING
464 WEST 4th STREET, 6th Floor MS 725
SAN BERNARDINO, CA 92401-1400
PHONE (909) 383-4557
FAX (909) 383-5936
TTY (909) 383-6300

Flex your power!
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April 16, 2012

Kris Flangan
Riverside County Flood Control and Water Conservation
1995 Market Street
Riverside, CA 92501

Moreno Master Drainage Plan SCH# 2012041013

Ms. Flangan,

We have completed our review for the Notice of Preparation (NOP) for the Moreno Master Drainage Plan Revision Draft Environmental Report (EIR). The project is located south of State Route 60 (SR-60) in the City of Moreno Valley crossing Lassalle Street and Theodore Street.

As the owner and operator of the State Highway System (SHS), it is our responsibility to coordinate and consult with local jurisdictions when proposed development may impact our facilities. As the responsible agency under the California Environmental Quality Act (CEQA), it is also our responsibility to make recommendations to offset associated impacts with the proposed project. Although the project is under the jurisdiction of the City of Moreno Valley due to the Project's potential impact to State facilities it is also subject to the policies and regulations that govern the SHS.

We recommend the following to be provided:

Drainage

• All tributary runoff areas, existing area drainage facilities, and proposed project drainage design should be clearly identified and analyzed in a comprehensive project drainage study. To the extent possible, the drainage study should include impacts associated with drainage facilities to be constructed.

Traffic control Plan

• A Traffic Control Plan or construction traffic impact study may be required by the developer for approval by the lead agency and Caltrans prior to construction. The plans shall be prepared in accordance with Caltrans's Manual of Traffic Controls for Construction and Maintenance Work Zones. For more information, contact the District Traffic Manager, Al Afaneh, at (909) 383-4917.

Permit Requirements

Any proposed alterations to existing improvements within State right-of-way may only be performed upon issuance of a valid encroachment permit and must conform to current Caltrans design standards and construction practices.

Review and approval of street, grading and drainage construction plans will be necessary prior to permit issuance. Information regarding permit application and submittal requirements may be obtained by contacting:

Office of Encroachment Permits
Department of Transportation
464 West 4th Street, 6th Floor, MS-619
San Bernardino, CA 92401-1400
(909) 383-4526

We appreciate the opportunity to offer comments concerning this project. If you have any questions regarding this letter, please contact Talvin Dennis at (909) 383-6908 or myself at (909) 383-4557 for assistance.

Sincerely,

DANIEL KOPULSKY
Office Chief
Community Planning/IGR-CEQA

U.S. Department of Homeland Security
FEMA Region IX
1111 Broadway, Suite 1200
Oakland, CA. 94607-4052

FEMA

April 5, 2012

Kris Flanigan, P. E., Senior Engineer
Riverside County Flood Control and Water
Conservation District
1995 Market Street
Riverside, California 92501

Dear Ms. Flanigan:

This is in response to your request for comments on the Notice of Public Agency Scoping Meeting for The Moreno Master Drainage Plan Revision and Notice of Preparation of Draft Programmatic Environmental Impact Report.

Please review the current effective countywide Flood Insurance Rate Maps (FIRMs) for the County of Riverside (Community Number 060245) and City of Moreno Valley (Community Number 065074), Maps revised August 28, 2008. Please note that the City of Moreno Valley, Riverside County, California is a participant in the National Flood Insurance Program (NFIP). The minimum, basic NFIP floodplain management building requirements are described in Vol. 44 Code of Federal Regulations (44 CFR), Sections 59 through 65.

A summary of these NFIP floodplain management building requirements are as follows:

- All buildings constructed within a riverine floodplain, (i.e., Flood Zones A, AO, AH, AE, and A1 through A30 as delineated on the FIRM), must be elevated so that the lowest floor is at or above the Base Flood Elevation level in accordance with the effective Flood Insurance Rate Map.

- If the area of construction is located within a Regulatory Floodway as delineated on the FIRM, any ***development*** must not increase base flood elevation levels. **The term *development* means any man-made change to improved or unimproved real estate, including but not limited to buildings, other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, and storage of equipment or materials.** A hydrologic and hydraulic analysis must be performed *prior* to the start of development, and must demonstrate that the development would not cause any rise in base flood levels. No rise is permitted within regulatory floodways.

- Upon completion of any development that changes existing Special Flood Hazard Areas, the NFIP directs all participating communities to submit the appropriate hydrologic and hydraulic data to FEMA for a FIRM revision. In accordance with 44 CFR, Section 65.3, as soon as practicable, but not later than six months after such data becomes available, a community shall notify FEMA of the changes by submitting technical data for a flood map revision. To obtain copies of FEMA's Flood Map Revision Application Packages, please refer to the FEMA website at http://www.fema.gov/business/nfip/forms.shtm.

Please Note:

Many NFIP participating communities have adopted floodplain management building requirements which are more restrictive than the minimum federal standards described in 44 CFR. Please contact the local community's floodplain manager for more information on local floodplain management building requirements. The Riverside County floodplain manager can be reached by calling Michael Lara, Director, Building and Safety Division, at (951) 955-2514. The Moreno Valley floodplain manager can be reached by calling Chris Vogt, City Engineer, at (951) 413-3100.

If you have any questions or concerns, please do not hesitate to call Frank Mansell of the Mitigation staff at (510) 627-7191.

Sincerely,

Gregor Blackburn, CFM, Branch Chief
Floodplain Management and Insurance Branch

cc:
Michael Lara, Director, Building and Safety Division, Riverside County
Chris Vogt, City Engineer, City of Moreno Valley
Garret Tam Sing/Salomon Miranda, State of California, Department of Water Resources, Southern Region Office
Frank Mansell, NFIP Planner, DHS/FEMA Region IX
Alessandro Amaglio, Environmental Officer, DHS/FEMA Region IX

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

Notice of Preparation

April 3, 2012

To: Reviewing Agencies

Re: Moreno Master Drainage Plan Revision
SCH# 2012041013

Attached for your review and comment is the Notice of Preparation (NOP) for the Moreno Master Drainage Plan Revision draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Kris Flanigan
Riverside County Flood Control and Water Conservation
1995 Market Street
Riverside, CA 92501

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2012041013
Project Title Moreno Master Drainage Plan Revision
Lead Agency Riverside County Flood Control and Water Conservation

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Type NOP Notice of Preparation

Description Note: Reference SCH# 1991022073.

The DPEIR for the revisions to the Moreno MDP will evaluate three separate components: Administration of the MDP, Future Construction of the MDP facilities, and Future Operations and Maintenance of MDP facilities, hereinafter collectively referred to as the "Project".

Lead Agency Contact

Name Kris Flanigan
Agency Riverside County Flood Control and Water Conservation
Phone 951 955-8581 **Fax**
email
Address 1995 Market Street
City Riverside **State** CA **Zip** 92501

Project Location

County Riverside
City Moreno Valley
Region
Cross Streets Lassalle and Street and Theodore Street
Lat / Long 33° 56' 57" N / 117° 11' 58" W
Parcel No.
Township 2S **Range** 2W **Section** 30/31 **Base** SBB&M

Proximity to:

Highways Hwy 60
Airports Rialto Airport
Railways
Waterways San Jacinto River/Canyon Lake/Lake Elsinore
Schools ES: Moreno, Ridge, Crest;MS: Landmark, Mountain View; Valley...
Land Use The proposed project will affect properties in portions of Moreno Valley, and portions of unincorporated Riverside County. Portions lie within an area designated by Moreno Valley as Residential (R1, R2, R3, R5, R10, R15, R20, and R5/15), Rural Residential, Hillside Residential Residential/Office, Office, Commercial, Business Park/Light Industrial, Open Space, Floodplain, and Public Facilities land use designations. Portions lie within an area designated by Riverside County as Rural Residential, Rural Mountainous, Rural Community-Very Low Density Residential, Conservation Habitat, Open Space Rural, and Open Space Recreation land use designations.

Project Issues Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Noise; Water Quality; Cumulative Effects

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Reviewing Agencies Resources Agency; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Game, Region 6; Native American Heritage Commission; Caltrans, District 8; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 8

Date Received 04/03/2012 **Start of Review** 04/03/2012 **End of Review** 05/02/2012

Note: Blanks in data fields result from insufficient information provided by lead agency.

NOP Distribution List

County: Riverside SCH# 2012041021

Resources Agency

- [x] Resources Agency
  Nadell Gayou
- [ ] Dept. of Boating & Waterways
  Nicole Wong
- [ ] California Coastal Commission
  Elizabeth A. Fuchs
- [ ] Colorado River Board
  Gerald R. Zimmerman
- [ ] Dept. of Conservation
  Elizabeth Carpenter
- [ ] California Energy Commission
  Eric Knight
- [ ] Cal Fire
  Allen Robertson
- [ ] Central Valley Flood Protection Board
  James Herota
- [ ] Office of Historic Preservation
  Ron Parsons
- [x] Dept of Parks & Recreation
  Environmental Stewardship Section
- [ ] California Department of Resources, Recycling & Recovery
  Sue O'Leary
- [ ] S.F. Bay Conservation & Dev't. Comm.
  Steve McAdam
- [ ] Dept. of Water Resources Resources Agency
  Nadell Gayou

Fish and Game

- [ ] Depart. of Fish & Game
  Scott Flint
  Environmental Services Division
- [ ] Fish & Game Region 1
  Donald Koch
- [ ] Fish & Game Region 1E
  Laurie Harnsberger
- [ ] Fish & Game Region 2
  Jeff Drongesen
- [ ] Fish & Game Region 3
  Charles Armor
- [ ] Fish & Game Region 4
  Julie Vance
- [ ] Fish & Game Region 5
  Leslie Newton-Reed
  Habitat Conservation Program
- [ ] Fish & Game Region 6
  Gabrina Gatchel
  Habitat Conservation Program
- [ ] Fish & Game Region 6 I/M
  Brad Henderson
  Inyo/Mono, Habitat Conservation Program
- [ ] Dept. of Fish & Game M
  George Isaac
  Marine Region

Other Departments

- [ ] Food & Agriculture
  Sandra Schubert
  Dept. of Food and Agriculture
- [ ] Depart. of General Services
  Public School Construction
- [ ] Dept. of General Services
  Anna Garbeff
  Environmental Services Section
- [ ] Dept. of Public Health
  Bridgette Binning
  Dept. of Health/Drinking Water
- [ ] Delta Stewardship Council
  Kevan Samsam

Independent Commissions,Boards

- [ ] Delta Protection Commission
  Michael Machado
- [ ] Cal EMA (Emergency Management Agency)
  Dennis Castrillo
- [x] Native American Heritage Comm.
  Debbie Treadway
- [ ] Public Utilities Commission
  Leo Wong
- [ ] Santa Monica Bay Restoration
  Guangyu Wang
- [ ] State Lands Commission
  Jennifer Deleong
- [ ] Tahoe Regional Planning Agency (TRPA)
  Cherry Jacques

Business, Trans & Housing

- [ ] Caltrans - Division of Aeronautics
  Philip Crimmins
- [ ] Caltrans - Planning
  Terri Pencovic
- [ ] California Highway Patrol
  Suzann Ikeuchi
  Office of Special Projects
- [ ] Housing & Community Development
  CEQA Coordinator
  Housing Policy Division

Dept. of Transportation

- [ ] Caltrans, District 1
  Rex Jackman
- [ ] Caltrans, District 2
  Marcelino Gonzalez
- [ ] Caltrans, District 3
  Bruce de Terra
- [ ] Caltrans, District 4
  Lisa Carboni
- [ ] Caltrans, District 5
  David Murray
- [ ] Caltrans, District 6
  Michael Navarro
- [ ] Caltrans, District 7
  Dianna Watson
- [x] Caltrans, District 8
  Dan Kopulsky
- [ ] Caltrans, District 9
  Gayle Rosander
- [ ] Caltrans, District 10
  Tom Dumas
- [ ] Caltrans, District 11
  Jacob Armstrong
- [ ] Caltrans, District 12
  Marlon Regisford

Cal EPA

Air Resources Board

- [ ] Airport/Energy Projects
  Jim Lerner
- [ ] Transportation Projects
  Douglas Ito
- [ ] Industrial Projects
  Mike Tollstrup
- [ ] State Water Resources Control Board
  Regional Programs Unit
  Division of Financial Assistance
- [ ] State Water Resources Control Board
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] State Water Resouces Control Board
  Phil Crader
  Division of Water Rights
- [x] Dept. of Toxic Substances Control
  CEQA Tracking Center
- [ ] Department of Pesticide Regulation
  CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- [ ] RWQCB 1
  Cathleen Hudson
  North Coast Region (1)
- [ ] RWQCB 2
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [ ] RWQCB 3
  Central Coast Region (3)
- [ ] RWQCB 4
  Teresa Rodgers
  Los Angeles Region (4)
- [ ] RWQCB 5S
  Central Valley Region (5)
- [ ] RWQCB 5F
  Central Valley Region (5)
  Fresno Branch Office
- [ ] RWQCB 5R
  Central Valley Region (5)
  Redding Branch Office
- [ ] RWQCB 6
  Lahontan Region (6)
- [ ] RWQCB 6V
  Lahontan Region (6)
  Victorville Branch Office
- [ ] RWQCB 7
  Colorado River Basin Region (7)
- [x] RWQCB 8
  Santa Ana Region (8)
- [ ] RWQCB 9
  San Diego Region (9)

- [ ] Other _____
- [ ] _____
  Conservancy

Last Updated 2/29/2012

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Office of the General Manager

MWD Inland Feeder
Sta. 1050+00 to 1054+00
Substr. Job No. 4055-12-001

May 4, 2012

Mr. Kris Flanigan, P.E.
Riverside County Flood Control
and Water Conservation District
1995 Market Street
Riverside, CA 92501

Dear Mr. Flanigan:

Moreno Master Drainage Plan Revision

Thank you for your notice of preparation of a draft programmatic environmental impact report dated April 3, 2012, and a map showing the various locations of your Moreno Master Drainage Plan for the Moreno Valley area of Riverside County.

As shown on the enclosed map, our 12-foot-inside-diameter Inland Feeder pipeline is located along the north side of Eucalyptus Street and in Theodore Street, outside the eastern boundary of your project area.

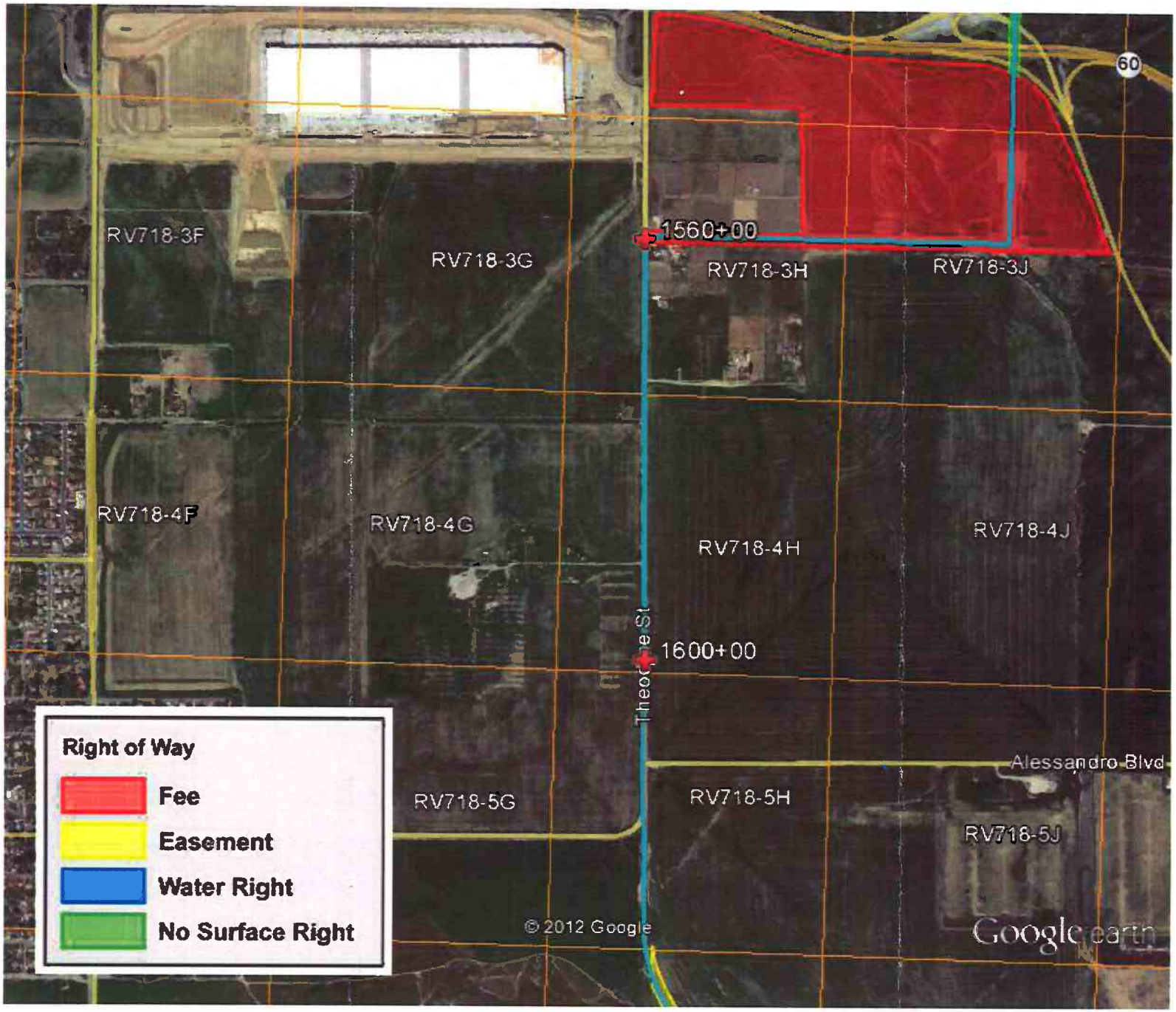
For any further correspondence with Metropolitan relating to this project, please make reference to the Substructures Job Number located in the upper right-hand corner of this letter. Should you require any additional information, please contact Kathy Meyer at (213) 217-7663.

Very truly yours,

Shoreh Zareh, P.E.
Engineer, Substructures Team

KJM/ly
DOC#: 4055-12-001

Enclosure



Google earth

miles 1

km 2

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

April 6, 2012

Kris Flanigan, P.E., Senior Engineer
Riverside County Flood Control and Water Conservation District
1995 Market Street
Riverside, CA 92501

Re: SCH#2012041013 CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the **"Moreno Master Drainage Plan Revision Project;"** located in the City of Moreno Valley; Riverside County, California

Dear Kris Flanigan:

The Native American Heritage Commission (NAHC) is the State of California 'Trustee Agency' for the protection and preservation of Native American cultural resources pursuant to California Public Resources Code §21070 and affirmed by the Third Appellate Court in the case of EPIC v. Johnson (1985: 170 Cal App. 3rd 604). The court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources, impacted by proposed projects including archaeological, places of religious significance to Native Americans and burial sites. The NAHC wishes to comment on the proposed project.

This letter includes state and federal statutes relating to Native American historic properties of religious and cultural significance to American Indian tribes and interested Native American individuals as 'consulting parties' under both state and federal law. State law also addresses the freedom of Native American Religious Expression in Public Resources Code §5097.9.

The California Environmental Quality Act (CEQA – CA Public Resources Code 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ...objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect.

The NAHC Sacred Lands File (SLF) search resulted as follows: **Native American cultural resources were not identified** within the project area identified. Also, the absence of archaeological resources does not preclude their existence. . California Public Resources Code §§5097.94 (a) and 5097.96 authorize the NAHC to establish a Sacred Land Inventory to record Native American sacred sites and burial sites. These records are exempt from the provisions of the California Public Records Act pursuant to. California Government Code §6254(r). The purpose of this code is to protect such sites from vandalism, theft and destruction. The NAHC

"Sacred Sites,' as defined by the Native American Heritage Commission and the California Legislature in California Public Resources Code §§5097.94(a) and 5097.96. Items in the NAHC Sacred Lands Inventory are confidential and exempt from the Public Records Act pursuant to California Government Code §6254 (r).

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries of cultural resources or burial sites once a project is underway. Culturally affiliated tribes and individuals may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). We strongly urge that you make contact with the list of Native American Contacts on the list of Native American contacts, to see if your proposed project might impact Native American cultural resources and to obtain their recommendations concerning the proposed project. Special reference is made to the *Tribal Consultation* requirements of the California 2006 Senate Bill 1059: enabling legislation to the federal Energy Policy Act of 2005 (P.L. 109-58), mandates consultation with Native American tribes (both federally recognized and non federally recognized) where electrically transmission lines are proposed. This is codified in the California Public Resources Code, Chapter 4.3 and §25330 to Division 15.

Furthermore, pursuant to CA Public Resources Code § 5097.95, the NAHC requests that the Native American consulting parties be provided pertinent project information. Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). Pursuant to CA Public Resources Code §5097.95, the NAHC requests that pertinent project information be provided consulting tribal parties pursuant to CA Public Resources Code §5097.95. The NAHC recommends *avoidance* as defined by CEQA Guidelines §15370(a) to pursuing a project that would damage or destroy Native American cultural resources and Section 2183.2 that requires documentation, data recovery of cultural resources.

Consultation with tribes and interested Native American consulting parties, on the NAHC list, if the project is under federal jurisdiction, should be conducted in compliance with the requirements of federal NEPA and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 *et seq*), 36 CFR Part 800.3 (4)(f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq.* and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.'

Confidentiality of "historic properties of religious and cultural significance" should also be considered as protected by California Government Code §6254(r) and may also be protected under Section 304 of he NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APEs and possibility threatened by proposed project activity.

Furthermore, Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for accidentally

discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery'.

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. Regarding tribal consultation, a relationship built around regular meetings and informal involvement with local tribes will lead to more qualitative consultation tribal input on specific projects.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton
Program Analyst

Cc: State Clearinghouse

Attachment: Native American Contact List

Native American Contacts
Riverside County
April 6, 2012

Los Coyotes Band of Mission Indians
Shane Chapparosa, Chairman
P.O. Box 189 Cahuilla
Warner , CA 92086
(760) 782-0711
(760) 782-2701 - FAX

Morongo Band of Mission Indians
Michael Contreras, Cultural Heritage Prog.
12700 Pumarra Road Cahuilla
Banning , CA 92220 Serrano
(951) 201-1866 - cell
mcontreras@morongo-nsn.gov
(951) 922-0105 Fax

Pechanga Band of Mission Indians
Paul Macarro, Cultural Resources Manager
P.O. Box 1477 Luiseno
Temecula , CA 92593
(951) 770-8100
pmacarro@pechanga-nsn.gov
(951) 506-9491 Fax

San Manuel Band of Mission Indians
Ann Brierty, Policy/Cultural Resources Departmen
26569 Community Center. Drive Serrano
Highland , CA 92346
(909) 864-8933, Ext 3250
abrierty@sanmanuel-nsn.gov
(909) 862-5152 Fax

Ramona Band of Cahuilla Mission Indians
Joseph Hamilton, Chairman
P.O. Box 391670 Cahuilla
Anza , CA 92539
admin@ramonatribe.com
(951) 763-4105
(951) 763-4325 Fax

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Rroad Cahuilla
Banning , CA 92220 Serrano
(951) 849-8807
(951) 755-5200
(951) 922-8146 Fax

Santa Rosa Band of Mission Indians
John Marcus, Chairman
P.O. Box 391820 Cahuilla
Anza , CA 92539
(951) 659-2700
(951) 659-2228 Fax

Serrano Nation of Indians
Goldie Walker
P.O. Box 343 Serrano
Patton , CA 92369

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2012041013; CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the Moreno Master Drainage Plan Revision Project; located in the City of Moreno Valley; Riverside County, California.

Native American Contacts
Riverside County
April 6, 2012

Cahuilla Band of Indians
Chairperson
PO Box 391760 Cahuilla
Anza , CA 92539
tribalcouncil@cahuilla.net
915-763-5549

Pechanga Cultural Resources Department
Anna Hoover, Cultural Analyst
P.O. Box 2183 Luiseño
Temecula , CA 92593
ahoover@pechanga-nsn.gov
951-770-8104
(951) 694-0446 - FAX

Ernest H. Siva
Morongo Band of Mission Indians Tribal Elder
9570 Mias Canyon Road Serrano
Banning , CA 92220 Cahuilla
siva@dishmail.net
(951) 849-4676

SOBOBA BAND OF LUISENO INDIANS
Joseph Ontiveros, Cultural Resource Department
P.O. BOX 487 Luiseno
San Jacinto , CA 92581
jontiveros@soboba-nsn.gov
(951) 663-5279
(951) 654-5544, ext 4137

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2012041013; CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the Moreno Master Drainage Plan Revision Project; located in the City of Moreno Valley; Riverside County, California.

SOBOBA BAND OF LUISEÑO INDIANS

EST. JUNE 19, 1883

April 5, 2012

Attn: Kris Flanigan, P.E., Senior Engineer
Riverside County Flood Control and Water Conservation District
1995 Market Street
Riverside, CA 92501

Re: Notice of Preparation of a Draft Programmatic Environmental Impact Report for the Moreno Master Drainage Plan Revision

The Soboba Band of Luiseño Indians appreciates your observance of Tribal Cultural Resources and their preservation in your project. The information provided to us on said project has been assessed through our Cultural Resource Department, where it was concluded that although it is outside the existing reservation, the project area does fall within the bounds of our Tribal Traditional Use Areas. This project location is in close proximity to known village sites and is a shared use area that was used in ongoing trade between the Luiseno and Cahuilla tribes. Therefore it is regarded as highly sensitive to the people of Soboba.

Soboba Band of Luiseño Indians is requesting the following:

1. To initiate a consultation with the Project Developer and Land owner.
2. The transfer of information to the Soboba Band of Luiseno Indians regarding the progress of this project should be done as soon as new developments occur.
3. Soboba Band of Luiseño Indians continues to act as a consulting tribal entity for this project.
4. Working in and around traditional use areas intensifies the possibility of encountering cultural resources during the construction/excavation phase. For this reason the Soboba Band of Luiseño Indians requests that a Native American monitoring component be included as a mitigation measure in the Environmental Impact Report. The Tribe requesting that a Treatment and Dispositions Agreement between the developer and The Soboba Band be provided to the Riverside County Flood Control and Water Conservation District prior to the issuance of a grading permit and before conducting any additional archaeological fieldwork.
5. Request that proper procedures be taken and requests of the tribe be honored (Please see the attachment)

The Soboba Band of Luiseno Indians is requesting a face-to-face meeting between the Riverside County Flood Control and Water Conservation District and the Soboba Cultural Resource Department. Please contact me at your earliest convenience either by email or phone in order to make arrangements.

Sincerely,

Joseph Ontiveros
Soboba Cultural Resource Department
P.O. Box 487
San Jacinto, CA 92581
Phone (951) 654-5544 ext. 4137
Cell (951) 663-5279
jontiveros@soboba-nsn.gov

Cultural Items (Artifacts). Ceremonial items and items of cultural patrimony reflect traditional religious beliefs and practices of the Soboba Band. The Developer should agree to return all Native American ceremonial items and items of cultural patrimony that may be found on the project site to the Soboba Band for appropriate treatment. In addition, the Soboba Band requests the return of all other cultural items (artifacts) that are recovered during the course of archaeological investigations. When appropriate and agreed upon in advance, the Developer's archeologist may conduct analyses of certain artifact classes if required by CEQA, Section 106 of NHPA, the mitigation measures or conditions of approval for the Project. This may include but is not limited or restricted to include shell, bone, ceramic, stone or other artifacts.

The Developer should waive any and all claims to ownership of Native American ceremonial and cultural artifacts that may be found on the Project site. Upon completion of authorized and mandatory archeological analysis, the Developer should return said artifacts to the Soboba Band within a reasonable time period agreed to by the Parties and not to exceed (30) days from the initial recovery of the items.

Treatment and Disposition of Remains.

A. The Soboba Band shall be allowed, under California Public Resources Code § 5097.98 (a), to (1) inspect the site of the discovery and (2) make determinations as to how the human remains and grave goods shall be treated and disposed of with appropriate dignity.

B. The Soboba Band, as MLD, shall complete its inspection within twenty-four (24) hours of receiving notification from either the Developer or the NAHC, as required by California Public Resources Code § 5097.98 (a). The Parties agree to discuss in good faith what constitutes "appropriate dignity" as that term is used in the applicable statutes.

C. Reburial of human remains shall be accomplished in compliance with the California Public Resources Code § 5097.98 (a) and (b). The Soboba Band, as the MLD in consultation with the Developer, shall make the final discretionary determination regarding the appropriate disposition and treatment of human remains.

D. All parties are aware that the Soboba Band may wish to rebury the human remains and associated ceremonial and cultural items (artifacts) on or near, the site of their discovery, in an area that shall not be subject to future subsurface disturbances. The Developer should accommodate on-site reburial in a location mutually agreed upon by the Parties.

E. The term "human remains" encompasses more than human bones because the Soboba Band's traditions periodically necessitated the ceremonial burning of human remains. Grave goods are those artifacts associated with any human remains. These items, and other funerary remnants and their ashes are to be treated in the same manner as human bone fragments or bones that remain intact.

Coordination with County Coroner's Office. The Lead Agencies and the Developer should immediately contact both the Coroner and the Soboba Band in the event that any human remains are discovered during implementation of the Project. If the Coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, the Coroner shall ensure that notification is provided to the NAHC within twenty-four (24) hours of the determination, as required by California Health and Safety Code § 7050.5 (c).

Non-Disclosure of Location Reburials. It is understood by all parties that unless otherwise required by law, the site of any reburial of Native American human remains or cultural artifacts shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, parties, and Lead Agencies, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code § 6254 (r).
Ceremonial items and items of cultural patrimony reflect traditional religious beliefs and practices of the Soboba Band. The Developer agrees to return all Native American ceremonial items and items of cultural patrimony that may be found on the project site to the Soboba Band for appropriate treatment. In addition, the Soboba Band requests the return of all other cultural items (artifacts) that are recovered during the course of archaeological investigations. Where appropriate and agreed upon in advance, Developer's archeologist may conduct analyses of certain artifact classes if required by CEQA, Section 106 of NHPA, the mitigation measures or conditions of approval for the Project. This may include but is not limited or restricted to include shell, bone, ceramic, stone or other artifacts.

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 • www.aqmd.gov

April 25, 2012

Kris Flanigan, P.E., Senior Engineer
Riverside County Flood Control and Water Conservation District
1995 Market Street
Riverside, CA 92501

Notice of Preparation of a CEQA Document for the
Moreno Master Drainage Plan Revision

The South Coast Air Quality Management District (SCAQMD) appreciates the opportunity to comment on the above-mentioned document. The SCAQMD's comments are recommendations regarding the analysis of potential air quality impacts from the proposed project that should be included in the draft CEQA document. Please send the SCAQMD a copy of the Draft EIR upon its completion. Note that copies of the Draft EIR that are submitted to the State Clearinghouse are not forwarded to the SCAQMD. Please forward a copy of the Draft EIR directly to SCAQMD at the address in our letterhead. **In addition, please send with the draft EIR all appendices or technical documents related to the air quality and greenhouse gas analyses and electronic versions of all air quality modeling and health risk assessment files. These include original emission calculation spreadsheets and modeling files (not Adobe PDF files). Without all files and supporting air quality documentation, the SCAQMD will be unable to complete its review of the air quality analysis in a timely manner. Any delays in providing all supporting air quality documentation will require additional time for review beyond the end of the comment period.**

Air Quality Analysis

The SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. The SCAQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from the SCAQMD's Subscription Services Department by calling (909) 396-3720. The lead agency may wish to consider using land use emissions estimating software such as the recently released CalEEMod. This model is available on the SCAQMD Website at: http://www.aqmd.gov/ceqa/models.html.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, that is, sources that generate or attract vehicular trips should be included in the analysis.

The SCAQMD has developed a methodology for calculating PM2.5 emissions from construction and operational activities and processes. In connection with developing PM2.5 calculation methodologies, the SCAQMD has also developed both regional and localized significance thresholds. The SCAQMD requests that the lead agency quantify PM2.5 emissions and compare the results to the recommended PM2.5 significance thresholds. Guidance for calculating PM2.5 emissions and PM2.5 significance thresholds can be found at the following internet address: http://www.aqmd.gov/ceqa/handbook/PM2_5/PM2_5.html.

In addition to analyzing regional air quality impacts the SCAQMD recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LST's can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore, when preparing the air quality analysis for the proposed project, it is recommended that the lead agency perform a localized significance analysis by either using the LSTs developed by the SCAQMD or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at http://www.aqmd.gov/ceqa/handbook/LST/LST.html.

In the event that the proposed project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the lead agency perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis") can be found on the SCAQMD's CEQA web pages at the following internet address: http://www.aqmd.gov/ceqa/handbook/mobile_toxic/mobile_toxic.html. An analysis of all toxic air contaminant impacts due to the decommissioning or use of equipment potentially generating such air pollutants should also be included.

Mitigation Measures

In the event that the project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize or eliminate significant adverse air quality impacts. To assist the Lead Agency with identifying possible mitigation measures for the project, please refer to Chapter 11 of the SCAQMD CEQA Air Quality Handbook for sample air quality mitigation measures. Additional mitigation measures can be found on the SCAQMD's CEQA web pages at the following internet address: www.aqmd.gov/ceqa/handbook/mitigation/MM_intro.html Additionally, SCAQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook contain numerous measures for controlling construction-related emissions that should be considered for use as CEQA mitigation if not otherwise required. Other measures to reduce air quality impacts from land use projects can be found in the SCAQMD's Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. This document can be found at the following internet address: http://www.aqmd.gov/prdas/aqguide/aqguide.html. In addition, guidance on siting incompatible land uses can be found in the California Air Resources Board's Air Quality and Land Use Handbook: A Community Perspective, which can be found at the following internet address: http://www.arb.ca.gov/ch/handbook.pdf. CARB's Land Use Handbook is a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. Pursuant to state CEQA Guidelines §15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed.

Data Sources

SCAQMD rules and relevant air quality reports and data are available by calling the SCAQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available via the SCAQMD's World Wide Web Homepage (http://www.aqmd.gov).

The SCAQMD staff is available to work with the Lead Agency to ensure that project-related emissions are accurately identified, categorized, and evaluated. If you have any questions regarding this letter, please call Ian MacMillan, Program Supervisor, CEQA Section, at (909) 396-3244.

Sincerely,

Ian MacMillan
Program Supervisor, CEQA Inter-Governmental Review
Planning, Rule Development & Area Sources

IM
RVC120403-07
Control Number

Appendix A.3

Late Comments Regarding Preparation of the Draft PEIR

Devlin Engineering

1120 Pepper Drive, #32 · El Cajon, California 92021 · Tel (619) 966-9589

March 21, 2013

Mr. Kris Flanigan
Riverside County Flood Control
and Water Conservation District
1995 Market Street
Riverside, California 92501

Subject: Comments to be considered during the preparation of a DEIR for the Moreno Master Drainage Plan (MMDP) revision and the World Logistics Center (WLC) Draft EIR (SCH #2012021045).

Dear Kris,

My client, Multivac, Inc. objects to the process Flood Control has used to develop the proposed revision to the Moreno Master Drainage Plan (MMDP). My clients like so many other property owners did not receive any notification of the initial proceedings. We feel that notification of the Draft EIR review should be handled more appropriately with adequate notification given to each property owner that is affected by the project. Putting a notice in the paper and hoping that the thousands of affected property owners would get word is completely inadequate. This is particularly true of the Drainage Basins proposed on the revision to the Moreno Master Drainage Plan. In our phone conversation, you mentioned that there was a very low turnout at the kickoff meeting for this project. We believe this is a direct result of inadequate notification to the affected land owners.

We also feel Flood Control has located the drainage basins on the proposed master drainage study inappropriately. We have been told that the location of the basins is conceptual only and that the location could vary. However in the past, engineers and contractors have argued strongly on the location of the facilities as to what side of the street the line is drawn, and on what portion of what lot the facility was drawn. We feel the drainage basins will be no different. In fact, World Logistics Center, a 3,914 acre project abutting Merwin Street seems to have utilized your revised Moreno MDP plans as if it is already adopted and exempts its site from building the Cactus basin. Drawing these "conceptual" basins over one property versus another amounts to a taking of the land without compensation.

In regards to the Cactus Basin, it is our opinion that the city has requested this Basin location in order to facilitate the World Logistics Center project. The Cactus Basin is basically a relocation of a 30+ acre basin that exists at the Northeast Corner of Alessandro Blvd and Merwin Street. World Logistics Center will be grading over the existing basin

and as a result, the City needs to relocate this basin. This may be the reason the other four drainage basins have been requested on the revised MMDP. The Moreno Master Drainage Plan becomes a convenient instrument to accomplish these changes. World Logistics Center does not have to discuss the effects of grading out and moving the drainage basins. Notification to the public is limited and the World Logistics Center is not viewed as the bad guy nor is the City of Moreno Valley. Isn't this a violation of CEQA guidelines?

There are several locations for the Cactus Basin. One location is for it to remain in its existing location at the Northeast corner of Alessandro and Merwin Street. A second location would be to relocate it south of Alessandro Blvd, but North of Brodiaea Ave, which would keep it on World Logistics Center property. A third alternative is to move it to the location suggested on the revision to the Moreno Master Plan of Drainage, which is an area bounded on the east by Redlands Blvd, on the west by Wilmot Street, on the south by Cactus Ave and on the north by Brodiaea Ave.

In regards to the Cactus Basin placed as shown on the proposed MMDP, Flood Control has missed the most feasible, logical and reasonable location on the East side of Merwin Street at Brodiaea Ave. World Logistics Center has a 3,918 acre project along the east side of Merwin Street. They will be responsible for providing drainage fees to RCFCD for their 3,918 acres. They could gain credit toward these fees for design and building the Cactus basin within their project. In this way, the basin can be provided at the very beginning of the construction of World Logistics Center and would help mitigate their increased runoff from the impervious building and pavement they will be constructing.

To leave this area out of the discussions for location of the Cactus drainage basin is to ignore the best possible site, one which is immediately accessible to build the facilities. Additionally, it would add greenbelt area to a project of warehouses that could blight the area indefinitely. Lastly, 30+ acres out of 3,918 or so would not have a significant effect on their project, unlike my clients property which will be taken completely if the revision to the Moreno Master Drainage Plan is approved.

I am enclosing a copy of a letter to the City of Moreno Valley regarding the DEIR on World Logistics Center. It has bearing on the location of the Cactus drainage basin shown on the proposed revision to the MMDP and as attached is made a part of this letter.

Sincerely,

Devlin Engineering

James R. Devlin

James R. Devlin, RCE 24655

attachment: Letter to City of Moreno Valley
cc: C. Moothart, Multivac Inc.

Devlin Engineering

1120 Pepper Drive, #32 · El Cajon, California 92021 · Tel (619) 966-9589

March 21, 2013

Mr. John C. Terell, Planning Official
City of Moreno Valley
14177 Frederick Street
Moreno Valley, CA 92552

Subject: Objections and comments regarding drainage impacts of the World Logistics Center (WLC)that should be, but are not addressed in the Draft EIR (SCH #2012021045) and conditions for the project regarding drainage onsite and downstream. Planning Cases PA 12-0011, 0012, 0013, and 0015.

Dear John,

The World Logistics Center will have many more impervious surfaces than the residential uses that were part of the existing general plan for this area. As a result, it will greatly increase the size of the drainage facilities that will be required downstream if World Logistics Center does not provide adequate drainage basins onsite. The increased runoff will greatly affect the size of the drainage facilities in this area. Therefore, a portion of the Draft EIR (DEIR)should discuss the impacts on drainage on adjacent properties and all downstream projects and drainage facilities.

The Draft EIR should also discuss the affect of changes to the existing drainage basins brought about by the World Logistics Center. As one example, the World Logistics Center will grade out the existing 30+ acre drainage basin located at the Northeast corner of Alessandro Blvd and Merwin Street. The City of Moreno Valley has asked that County of Riverside Flood Control move the drainage basin to properties located at the Northeast corner of Wilmot Street and Cactus Ave. This location is on property owned y Multivac Inc., my client. This location is also shown on the revised Moreno Master Drainage Plan as the Cactus Basin. Riverside County Flood Control is presently preparing a Draft EIR for the revisions to the Moreno Master Drainage Plan.

Wrongfully, the World Logistics Center DEIR has utilized a proposed change to the Moreno Master Drainage Plan as if it has been passed and accepted by the Riverside County Board of Supervisors. It also utilizes this change to the Master Drainage Plan to avoid discussing these changes as an effect of their development. Of particular note this preliminary drainage plan shows a 30 acre debris basin relocated from the Northeast corner of Alessandro Blvd and Merwin Street to the Cactus Basin location, which is on Multivac Inc.'s, property. No mention of the relocation of this drainage basin is mentioned in the Draft EIR for World Logistics Center nor is it mentioned in any of the appendices. There are five such drainage basins shown relocated on

revised Moreno Master Drainage Plan. Are the locations of all five of the basins designated in the revised Moreno Master Drainage Plan actually the relocation of existing basins caused by construction of the World Logistics Center project?

I was told by City Engineering staff that the location of the Cactus Basin on the revised Moreno Master Drainage Plan is merely conceptual and would vary in location. I was also told that the City of Moreno Valley had no intention of taking Multivac's property without due compensation.

In talking with Kris Flanagan of Riverside County Flood Control I was told the same thing, that the input for the basin locations came from the City of Moreno Valley and the intent was that unlike pipelines, channels and box structures, these basins were located only conceptually and the text of the DEIR for the basin would reflect this. Kris advised me that the actual location would be wherever the City and Flood Control could purchase the appropriate land for the basin. However, I disagree, because in reality, engineers always fight over which side of the street a pipe is shown or on which portion of which particular property the drainage structure is shown. The Drainage Basins proposed as part of the revised Moreno Master Drainage Plan are no different. In fact the fighting has already begun. WLC is utilizing the proposed Moreno MDP as if it has already been passed. Therefore, they are not addressing the impact of their grading out the existing basins and requiring others to provide property for these basins.

The staff of the City of Moreno Valley and the County of Riverside Flood Control seem to have made an error and allowed CEQA to be by-passed by WLC. As to my clients property, they have ignored the most feasible sites for the Cactus Drainage Basin. World Logistics Center is a very large project covering over 3,900 acres. It makes more sense that the location for such a drainage basin be on WLC property. The WLC would get credits against its drainage fees and should be in a position to build and provide the facilities for the drainage basin during its grading operations. It is only appropriate that if World Logistics Center is allowed to grade out the existing 30+ acre basin, it provide the area for a new 30+ acre basin on its property east of Merwin Street at Brodiaea Ave or leave it in the existing location.

Additionally, WLC construction could precede all development in the area, making the basin functional from the beginning of any development. For the WLC sites to be left out in the discussions for the location and the feasibility of the Cactus Basin is to ignore the best possible site for such a basin. If the CEQA process continues without a discussion of the WLC site as a possible location of the Cactus Basin, as well as leaving the basin in its present location at Alessandro Boulevard all owners downstream of the intersection of Brodiaea Ave and Merwin Street will be detrimentally affected to the great benefit of World Logistics Center.

We do not feel that the City is or should be biased toward the WLC project. Therefore, the DEIR for World Logistics Center should include discussion of the existing location and the WLC property located adjacent and east of Merwin Street as possible locations for the Cactus Basin. If this basin is sized correctly, it would mitigate all increased runoff from the World Logistics Center property and keep all downstream drainage facilities the same size as indicated on the present Moreno Area Drainage Plan. To not discuss this area as a possible location of such a basin is to require larger drainage facilities and loss of property by smaller property owners downstream of WLC. To not discuss leaving the Cactus drainage basin and the other drainage

basins in their present location and any other location on the WLC property is also in our opinion, a violation of the CEQA requirements to discuss all effects of the proposed development. We think the other four drainage basins as shown on the revised Moreno Master Drainage Plan also need to be discussed.

We think this process of putting the relocation of drainage basins on the revised Moreno Master Drainage Plan also violates due process by inadequately informing property owners of the effect to their lands. The initial meeting to kick off the revised Master Drainage Plan was noticed in some local newspaper, which few land owners read . As a result there was little to no public turn out or input at the meeting. My clients object to this lack of notice. If we hadn't seen a copy of the revised MMDP in the appendices of WLC's DEIR we would not have known about the deleterious affect on the Multivac Inc. property. To this day, we have not received written notice of the proposed changes to the Moreno Master Drainage Plan. **We feel it is inappropriate to utilize the revision to the Moreno Master Drainage Plan as a vehicle to move drainage basins onto other people's lands without proper notification.**

Additionally, there is at this time, no mention in the DEIR for the World Logistics Center of a double 10 by 10 reinforced concrete box structure crossing Merwin Street north of Brodiaea as shown on the existing Moreno Master Drainage Plan. There is also a double 10 by 10 box culvert required in the existing MMDP crossing Alessandro Boulevard at Merwin Street that is not discussed. These items are shown on the present Moreno Area Drainage Plan and are facilities that would be the responsibility of World Logistics Center. Accordingly, the DEIR should discuss the requirement that World Logistics Center construct all facilities shown on the existing Moreno Master Drainage Plan.

We ask that all of the above drainage impacts be made a part of the DEIR text and discussions. We also ask that the following requirements be made a condition on the development of the World Logistics Center:

1. All runoff leaving World Logistics Center shall be designed to match the existing Moreno Master Area Drainage Plan of this area. There should be no increases in runoff from this property that could affect any downstream properties or require downstream properties to install increased or larger drainage facilities.

2. World Logistics Center must be conditioned to construct all new drainage basins within their property and to replace all basins they are removing by construction of their project.

3. WLC must be conditioned to replace the 30+ acre Cactus Basin on their property.

My client, Multivac Inc. is very concerned not only about the taking of their property, but about the affect of increased runoff on its properties downstream of WLC and asks that the City be fair and impartial when locating drainage facilities. We are afraid that some bias or favoritism may enter the system as World Logistics Center is a project favored by the City Council.

Thank you for your consideration of this matter we look forward to the discussions to follow that will be part of the EIR process.

Attached and made a part hereof, please see a letter addressed to Riverside County Flood Control objecting to the process used to develop the revised Moreno Master Drainage Plan and the notifications to property owners.

Thank you.

Sincerely,

Devlin Engineering

James R. Devlin

James R. Devlin, RCE 24655

Contact information:
James Devlin
Devlin Engineering
1120 Pepper Drive, #32
El Cajon, CA 92021
Tel. (619) 966-9589
Cell (858) 442-9549

Attachment: Letter to RCFCD

cc: C. Moothart, Multivac

Appendix B

Air Quality and Greenhouse Gas Impact Analysis for the Moreno Master Drainage Plan Revision

AIR QUALITY AND GREENHOUSE GAS IMPACT ANALYSIS

FOR THE

MORENO MASTER DRAINAGE PLAN REVISION

Prepared for:

Riverside County Flood Control and Water Conservation District
1995 Market Street
Riverside, CA 92501

Prepared by:

Albert A. Webb Associates
3788 McCray Street
Riverside, CA 92506

April 2014

TABLE OF CONTENTS

Section 1 – Introduction 1
Purpose and Methods of Analysis 1
Project Description 1
Section 2 – Setting 5
Background and Physical Setting 5
Regulatory Setting 9
Section 3 – Emissions Estimates 10
Regional Significance Threshold Analysis 10
Short-Term Analysis 10
Long-Term Analysis 13
Conclusion 13
Localized Significance Threshold Analysis 13
Background 13
Methodology 13
Short-Term Analysis 14
Long-Term Analysis 15
Conclusion 16
Recommended Mitigation Measures 16
Impacts After Mitigation 17
Conclusion 18
Section 4 – Greenhouse Gas Analysis 19
Background 19
Regulatory Setting 22
Federal 22
State 23
Regional 28
Emissions Estimates 29
Short-Term Analysis 29
Long-Term Analysis 30
Conclusion 30
Section 5 – References 31
References Cited 31
Document Preparation Staff 34

LIST OF FIGURES

Figure 1 – Proposed Project 3
Figure 2 – Analyzed Facilities 4
Figure 3 – Wind Rose 6

LIST OF TABLES

Table 1 – Source Receptor Area (SRA) 24, Air Quality Monitoring Summary – 2002–2011 8
Table 2 – SCAQMD CEQA Regional Significance Thresholds 10
Table 3 –Unmitigated Estimated Daily Construction Emissions 12
Table 4 – Unmitigated LST Results for Construction Emissions 15
Table 5 – Mitigated Estimated Maximum Daily Construction Emissions 17
Table 6 – Global Warming Potentials and Atmospheric Lifetimes 21
Table 7 – Construction Equipment GHG Emissions 30

APPENDICES

A – CalEEMod Output Files
B – LST Analysis Information

Section 1 – Introduction

Purpose and Methods of Analysis

The following air quality/greenhouse gas (GHG) assessment was prepared to evaluate whether the expected criteria air pollutant emissions generated as a result of construction and operation of the proposed Moreno Master Drainage Plan Revision would exceed the South Coast Air Quality Management District's (SCAQMD) significance thresholds for air quality and whether the Project-related GHG emissions would exceed the SCAQMD draft GHG thresholds. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000 et seq.). The criteria air pollutant methodology follows the *CEQA Air Quality Handbook* prepared by the SCAQMD (SCAQMD 1993) for quantification of emissions and evaluation of potential impacts to air quality. The methodology used in the GHG analysis is consistent with SCAQMD GHG Guidance (SCAQMD 2008a). As recommended by SCAQMD and the Riverside County Flood Control and Water Conservation District (District) staff, the **Cal**ifornia **E**missions **E**stimator **Mod**el version 2011.1.1 (CalEEMod) was used to quantify Project-related emissions.

Project Description

The proposed Moreno Master Drainage Plan Revision (Project or Moreno MDP) includes land within the city of Moreno Valley and unincorporated Riverside County (**Figure 1 – Proposed Project**). The proposed Project is generally bounded by Lasselle Street on the west, Theodore Street on the east, Reche Canyon and San Timoteo Badlands foothills to the north, and Mount Russell foothills to the south.

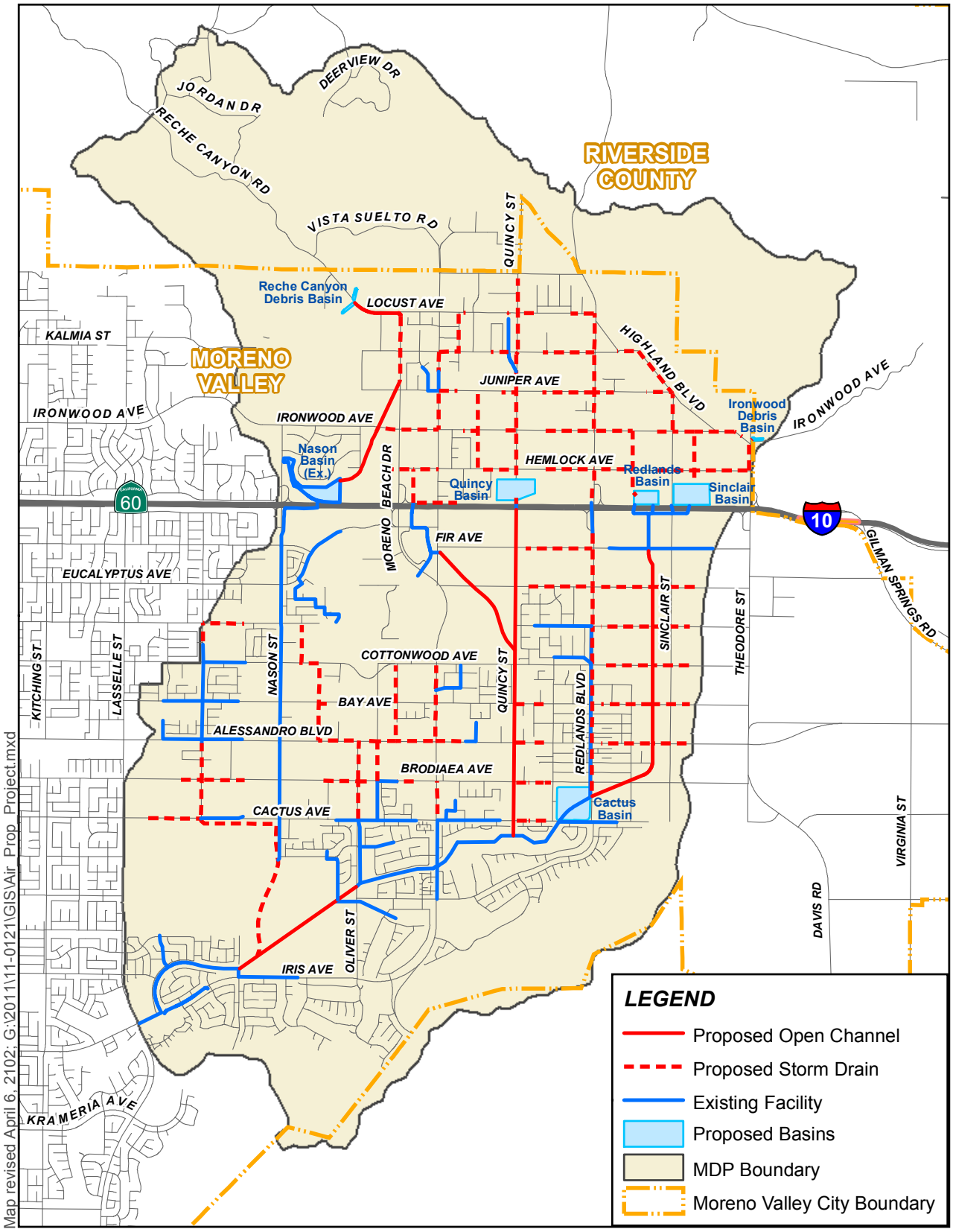
Master Drainage Plans (MDPs) are conceptual planning documents that address the current and future drainage needs of a given community. The boundary of the plan usually follows regional watershed limits. The proposed drainage facilities may include channels, storm drains, levees, basins, dams, or any other conveyance capable of feasibly relieving flooding problems within the plan area. The plan includes an estimate of facility capacity, sizes, and costs.

Proposed drainage facilities within the plan area were originally described in the Moreno MDP dated October 1980 (Revised April 1991). The proposed revision is the result of the re-evaluation of the original plans. After adoption, the newly revised Moreno MDP will supersede the 1991 MDP.

The proposed Project consists of revisions to the Moreno MDP and identifies conceptual locations for the future installation of drainage facilities in response to the existing and planned land use within the drainage boundary of the Moreno MDP.

For the purpose of this analysis, emissions resulting from a reasonably foreseeable representative project were evaluated. To provide a worst-case analysis of a "typical" MDP Facility, a representative project was identified consistent with maximum funding that the District may have available for projects under the MDP. This representative project entails a typical construction scenario, including anticipated phasing, construction equipment, area disturbed during grading activities, and export of excavated material. The representative project consists of site preparation, grading, and installation during construction of a storm drain, a trapezoidal channel (partially concrete-lined), and a detention basin. Construction scenario assumptions were based on anticipated construction of and along Line F and Line F-2, which include the Cactus Basin (**Figure 2 – Analyzed Facilities**). The evaluation of Line F and Line F-2 facilities were chosen as a representation of a typical MDP project, and the analysis is intended to represent a maximum, or worst-case, scenario associated with MDP Facility construction. Therefore,

while actual construction could differ from the scenario analyzed in this Draft PEIR, the modeled analysis and estimated maximum daily emissions included herein would represent a conservative assessment of air quality impacts associated with anticipated construction of MDP Facilities. The representative project represents a “worst-case” scenario, which means that any other MDP Facility emissions are expected to be equal to or less than the estimated construction emissions modeled.

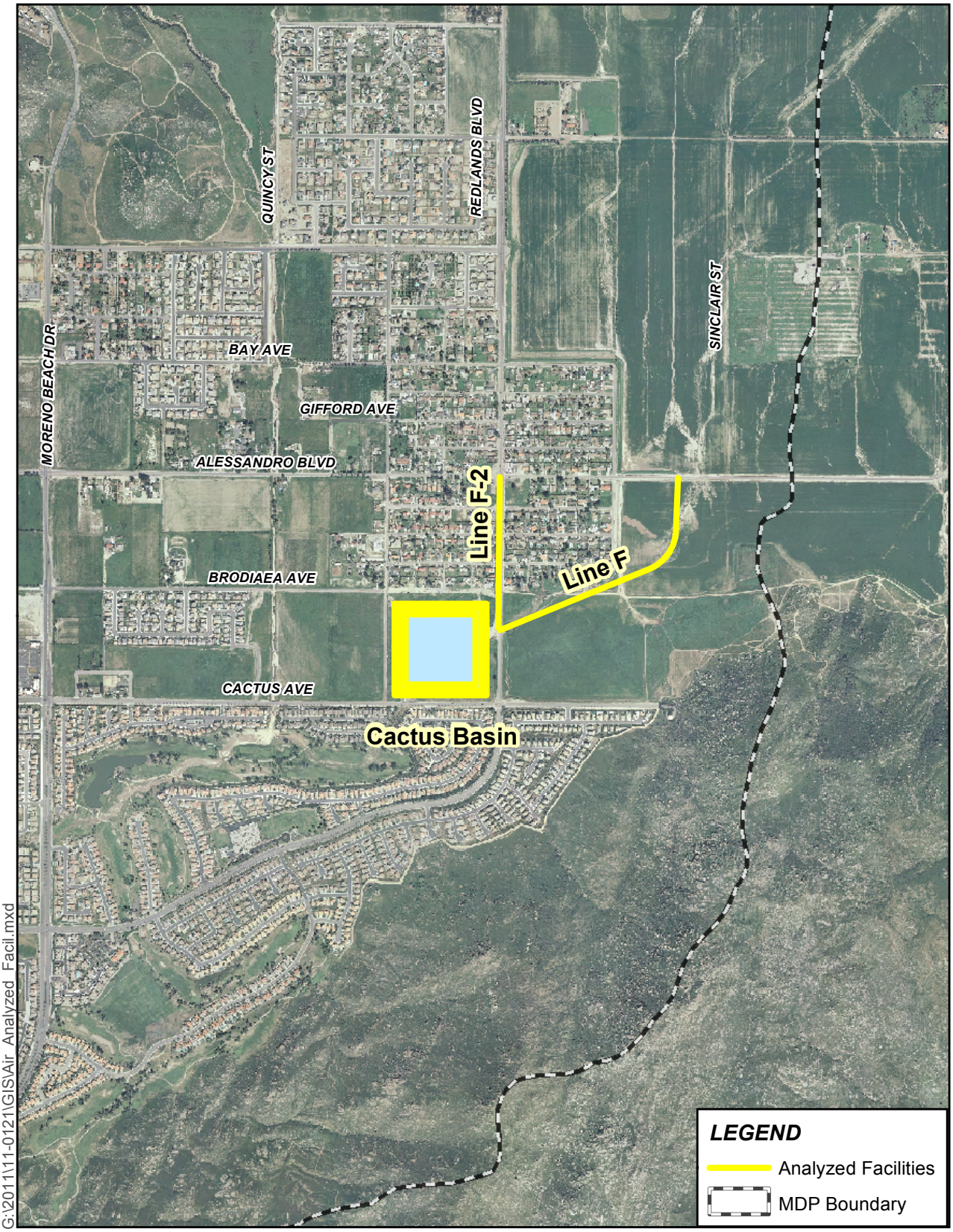


Source: County of Riverside GIS, 2012.

Figure 1 - Proposed Project

Moreno Master Drainage Plan Revision

Albert A. WEBB Associates



G:\2011\11-0121\GIS\Air_Analyzed_Facil.mxd

Source: County of Riverside GIS, 2012;
Eagel Aerial, 2010.

Figure 2 - Analyzed Facilities

Moreno Master Drainage Plan Revision

0 1,000 2,000 3,000 Feet

Section 2 – Setting

Background and Physical Setting

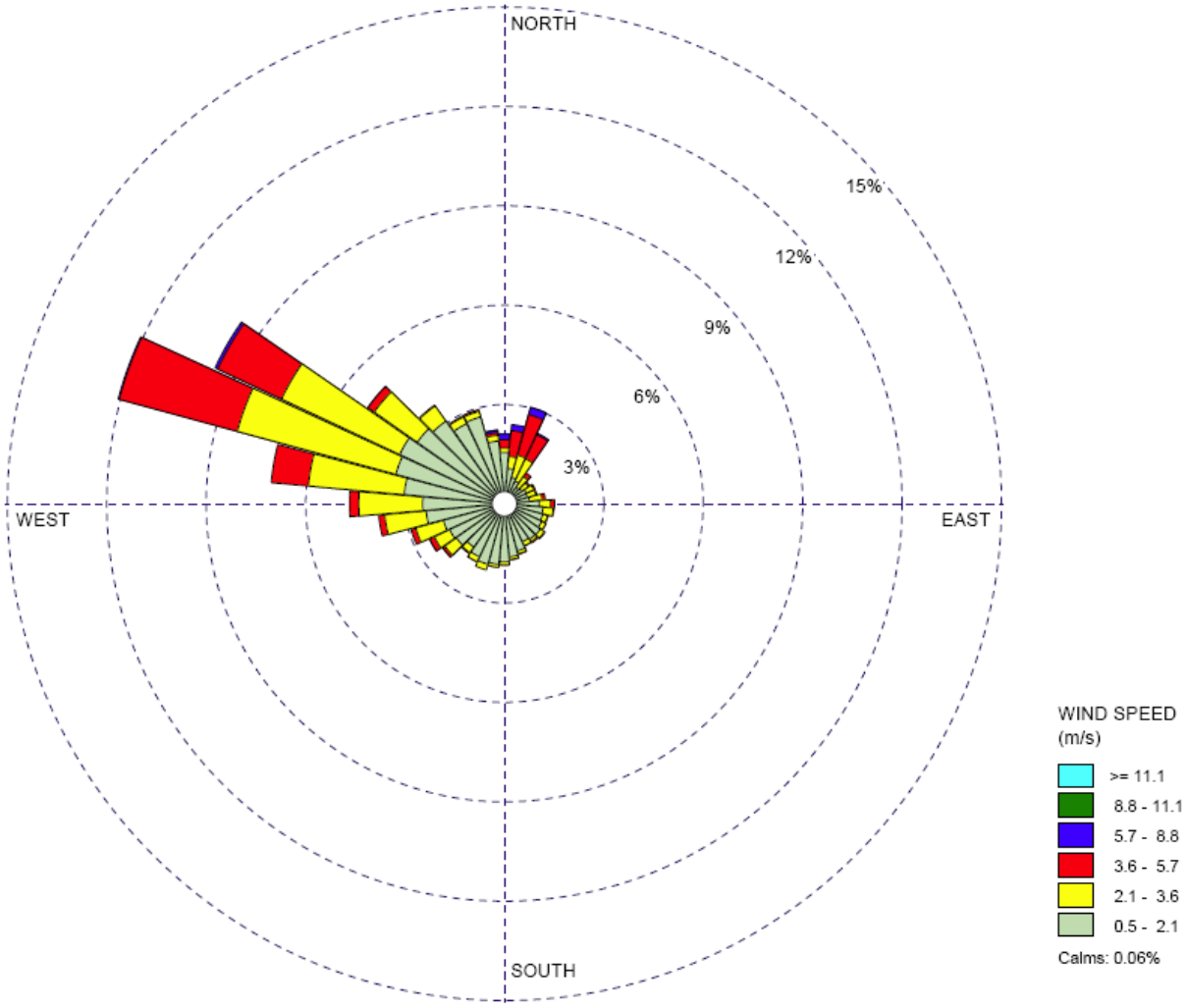
Air quality impacts can be described in a short-term and long-term perspective. Short-term impacts will occur during site grading and Project construction. Long-term air quality impacts will occur once the Project is in operation.

Many air quality impacts from dispersed mobile sources (cars and trucks), i.e., the dominant pollution generators from the proposed Project, often occur hours later and miles away after photochemical processes have converted primary exhaust pollutants into secondary contaminants such as ozone. The incremental regional air quality impact of an individual source is generally immeasurably small. The SCAQMD has therefore developed suggested surrogate significance thresholds based on the volume of pollution emitted rather than on actual ambient air quality because the direct air quality impact of a project is not quantifiable on a regional scale. Air quality impacts can be analyzed on a regional and localized level. Regional air quality thresholds examine the effect of project emissions on the air quality of the South Coast Air Basin (Basin), while localized air quality impacts examine the effect of project emissions on the neighborhood around the project site. This report contains analysis of both regional and local air quality impacts from Project construction (short-term) and operation (long-term).

The Project site is located within the city of Moreno Valley and unincorporated western Riverside County within the Basin, under the jurisdiction of the SCAQMD. The Basin consists of Orange County, together with the coastal and mountain portions of Los Angeles, Riverside, and San Bernardino counties. Regionally, the interaction of land (offshore) and sea (onshore) breezes control local wind patterns in the area. Daytime winds typically flow from the coast to the inland areas, while this pattern usually reverses in the evenings, flowing from the inland areas to the ocean (SCAQMD 1993). Air stagnation may occur during the early evening and early morning due to periods of transition between day and nighttime flows. The region also experiences periods of hot, dry winds from the desert, known as Santa Ana winds. Locally, the prevailing wind is generally from west to east (**Figure 3 – Wind Rose**).

Regional and local air quality within the Basin is affected by topography, atmospheric inversions, and dominant onshore flows. Topographic features such as the San Gabriel and San Bernardino Mountains form natural barriers to the dispersion of air contaminants. The presence of atmospheric inversions limits the vertical dispersion of air pollutants. Due to expansional cooling, the temperature usually decreases with increasing altitude. However, at some elevation, this trend reverses and temperature begins to increase as altitude increases, this transition establishes the effective mixing height of the atmosphere and acts as a barrier to vertical dispersion of pollutants. A dominant onshore flow provides the driving mechanism for both air pollution transport and pollutant dispersion.

Riverside, California – 2005–2007
January 1-December 31; Midnight - 11PM



Note: Data taken from the Riverside Monitoring Station, from January 1, 2005 to December 31, 2007.
Calm winds: 0.06%. Average wind speed: 2.03%. Direction of the colored bars show the direction the wind is blowing from, colors represent various wind speeds, and percentages marked on rings indicate the percentage that the wind blows from that direction and at that particular wind speed.

Figure 3 – Wind Rose

Air pollution generated in coastal areas is transported east to inland receptors by the onshore flow during the daytime until a natural barrier (the mountains) is reached, limiting the horizontal dispersion of pollutants. This results in a gradual degradation of air quality from coastal areas to inland areas, which is most evident with photochemical pollutants like ozone. The greatest ozone levels are registered at the SCAQMD's monitoring stations located at the base of the San Gabriel and San Bernardino mountains, ranging from the city of Santa Clarita, east to the city of San Bernardino.

The Project area is located within SCAQMD Source Receptor Area (SRA) 24. The most recent published data for SRA 24 is presented in **Table 1 – Source Receptor Area (SRA) 24, Air Quality Monitoring Summary – 2000–2009**. This data indicates that the baseline air quality conditions in the Project area include occasional events of very unhealthy air. However, the frequency of smog alerts has dropped significantly in the last decade. Atmospheric concentrations of ozone and particulate matter are the two most significant air quality concerns in the Project area. It is encouraging to note that ozone levels have decreased in the last few years with approximately one-fifth or less days each year experiencing a violation of the state hourly ozone standard since 2000. Locally, no second stage alert (0.35 parts per million (ppm)/hour) has been called by SCAQMD in the last twenty years. In fact, the last second stage alert was in 1988 in Upland.

The California Air Resources Board (CARB) established a new 8-hour average California ozone standard of 0.07 ppm, effective May 17, 2006. The federal 1-hour ozone standard was revoked and replaced by the 8-hour average ozone standard of 0.08 ppm effective in June 2005. The federal 8-hour ozone standard was recently revised from 0.08 ppm to 0.075 ppm and became effective on May 27, 2008.

The California NO_2 (nitrogen dioxide) standards were amended and lowered the 1-hour standard from 0.25 ppm to 0.18 ppm and established a new annual standard of 0.030 ppm. The new standards became effective on March 20, 2008. A new federal 1-hour NO_2 standard of 0.100 ppm was established and became effective January 22, 2010.

Monitoring for PM-2.5 (particulate matter less than 2.5 microns in diameter) did not begin until 1999. Since then, the annual standard has been consistently exceeded as shown in **Table 1**. The 1997 Federal Annual Average Standard for PM-2.5 (15 $\mu g/m^3$) was upheld by the U.S. Supreme Court in February 2001. Effective in December 2006, the federal 24-hour PM-2.5 standard was revised from 65 $\mu g/m^3$ to 35 $\mu g/m^3$.[1] The state annual average standard for PM-2.5 (12 $\mu g/m^3$) was finalized in 2003 and became effective on July 5, 2003. Additionally, the Federal Annual PM-10 (particulate matter less than 10 microns in diameter) Standard was revoked in December 2006.

[1] $\mu g/m^3$ = micrograms per cubic meter

Table 1 – Source Receptor Area (SRA) 24, Air Quality Monitoring Summary – 2002–2011

	Pollutant/Standard	Monitoring Year									
	Source: SCAQMD	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
No. Days Exceeded	**Ozone:**										
	Health Advisory - 0.15 ppm	1	1	0	0	3	0	0	0	0	0
	California Standard:										
	1-Hour - 0.09 ppm	59	67	37	11	76	66	65	53	42	44
	8-Hour - 0.07 ppm [a]	--	--	47	18	84	88	94	88	82	77
	Federal Primary Standards:										
	8-Hour - 0.08 ppm (0.075 ppm)[a]	41	47	19	3	53	37(73)	41(77)	(67)	(50)	(54)
	Max 1-Hour Conc. (ppm)	0.147	0.155	0.128	0.126	0.17	0.139	0.142	0.125	0.122	0.125
	Max 8-Hour Conc. (ppm)	0.117	0.121	0.103	0.103	0.122	0.116	0.114	0.108	0.107	0.112
No. Days Exceeded	**Carbon Monoxide:** [b]										
	California Standard:										
	1-Hour - 20 ppm	0	0	0	0	0	0	0	0	0	0
	8-Hour - 9.0 ppm	0	0	0	0	0	0	0	0	0	0
	Federal Primary Standards:										
	1-Hour - 35 ppm	0	0	0	0	0	0	0	0	0	0
	8-Hour - 9.0 ppm	0	0	0	0	0	0	0	0	0	0
	Max 1-Hour Conc. (ppm)	8.0	5	4	3	3	4	3	2	3	--
	Max 8-Hour Conc. (ppm)	3.0	3.7	3.0	2.5	2.1	2.9	2.0	1.9	1.8	1.4
No. Days Exceeded	**Nitrogen Dioxide:** [b]										
	California Standard:										
	1-Hour - 0.18 ppm, (Federal -100 ppb)	0	0	0	0	0	0	0	0	0	0
	Federal Standard:										
	Annual Arithmetic Mean (AAM) (ppm) [c]	0.024	0.022	0.017	0.022	0.020	0.021	0.019	0.017	0.017	0.017
	Max. 1-Hour Conc. (ppm)	0.10	0.09	0.09	0.08	0.08	0.07	0.09	0.08	0.06	0.06
No. Days Exceeded	**Sulfur Dioxide:** [b]										
	California Standards:										
	1-Hour – 0.25 ppm	0	0	0	0	0	0	0	0	0	0
	24-Hour – 0.04 ppm	0	0	0	0	0	0	0	0	0	0
	Federal Primary Standards:										
	24-Hour – 0.14 ppm[d]	0	0	0	0	0	0	0	0	0	0
	Annual Standard – 0.03 ppm [e]	No	No	No	No	No	No	No	No	No	--
	Max. 1-Hour Conc. (ppm)	0.02	0.02	0.02	0.02	0.01	0.02	0.01	0.01	0.02	0.05
	Max. 24-Hour Conc. (ppm)	0.002	0.012	0.015	0.011	0.004	0.002	0.003	0.003	0.005	--
No. Days Exceeded	**Suspended Particulates (PM10):**										
	California Standards:										
	24-Hour - 50 μg/m^3	24	19	15	19	19	32	12	9	1	3
	Federal Primary Standards:										
	24-Hour – 150 μg/m^3	0	0	0	0	0	0	0	0	0	0
	Annual Arithmetic Mean (μg/m^3) [f]	45.2	43.9	41.4	39.2	45.0	54.8	38.3	34.8	28.0	29.2
	Max. 24-Hour Conc. (μg/m^3)	100	142	83	80	125	120	85	80	51	65
No. Days Exceeded	**Suspended Particulates (PM2.5):** [b]										
	California and Federal Primary Standards:										
	24-Hour – 65 μg/m^3 (35μg/m^3) [g]	8	8	5	4	1(32)	3(33)	0(14)	0(12)	(4)	(4)
	Annual Arithmetic Mean (μg/m^3) [h]	27.5	24.9	22.1	21.0	19.0	19.1	16.4	15.3	13.2	13.6
	Max. 24-Hour Conc. (μg/m^3)	77.6	104.3	91.7	98.7	68.5	75.7	57.7	47.2	46.5	60.8

Note -- No data available.

a. 2004 is first year of SCAQMD records for state 8-hour Ozone standard. Federal ozone standard is 0.075 ppm, effective May 27, 2008.

b. Metro Riverside County 1 air monitoring station (SRA 23) data summaries used because this pollutant not monitored for SRA 24.

c. Federal NO_2 standard is AAM > 0.053; State NO_2 standard of AAM > 0.030 effective March 20, 2008.

d. Federal SO_2 standard revoked 24-hour and AAM standards and established new 1-hour standard of 0.075 ppm, effective August 2, 2010.

e. Yes or No indicating whether or not the standard has been exceeded for that year.

f. Federal PM-10 standard is AAM> 50μg/m^3 was revoked December 17, 2006. State standard is AAM> 20μg/m^3, effective July 5, 2003.

g. Federal 24-hour PM-2.5 standard changed to 35μg/m^3 in 2006. Data for 2009 did not reflect old 24-hour standard.

h. Federal PM-2.5 standard is annual average (AAM) > 15μg/m^3. State standard is AAM > 12μg/m^3.

Regulatory Setting

The federal and California ambient air quality standards (AAQS) establish the context for the local air quality management plans and for determination of the significance of a project's contribution to local or regional pollutant concentrations. The California and federal AAQS are presented in **Table 1**. The AAQS represent the level of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other diseases or illness, and persons engaged in strenuous work or exercise, all referred to as “sensitive receptors.” SCAQMD defines a "sensitive receptor" as a land use or facility such as residences, schools, child care centers, athletic facilities, playgrounds, retirement homes, and convalescent homes.

Both federal and state Clean Air Acts require that each non-attainment area prepare a plan to reduce air pollution to healthful levels. The 1988 California Clean Air Act and the 1990 amendments to the federal Clean Air Act (CAA) established new planning requirements and deadlines for attainment of the air quality standards within specified time frames which are contained in the State Implementation Plan (SIP). Amendments to the SIP have been proposed, revised, and approved over the past decade. The currently adopted clean air plan for the basin is the 1999 SIP Amendment, approved by the U.S. Environmental Protection Agency (EPA) in 2000.

The Air Quality Management Plan (AQMP) for the Basin establishes a program of rules and regulations directed at attainment of the state and national air quality standards. The AQMP control measures and related emission reduction estimates are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Accordingly, conformance with the AQMP for development projects is determined by demonstrating compliance with local land use plans and/or population projections. The SCAQMD adopted an updated AQMP in June 2007, which outlines the air pollution measures needed to meet federal health-based standards for particulates (PM-2.5) in 2014 and for ozone in 2023 (SCAQMD 2007). The AQMP was forwarded to the CARB for review and approved on September 27, 2007. It was sent to the EPA for its final approval and to be included as a revision to California’s SIP on November 16, 2007. On November 22, 2010, EPA published its notice of proposed partial approval and partial disapproval of the 2007 AQMP PM-2.5 Plan primarily because the attainment demonstration relies too heavily (i.e., greater than 10 percent) on emissions reductions from several state rules that have not been finalized or submitted to EPA for approval. However, according to the SCAQMD Board Meeting Agenda on March 4, 2011, the proposed revision to the PM-2.5 and Ozone SIP for the South Coast Air Basin and Coachella Valley will not adversely impact the 2007 SIP attainment demonstration or the overall SIP reduction commitment.

The CARB maintains records as to the attainment status of air basins throughout the state, under both state and federal criteria. The portion of the Basin within which the proposed Project is located is designated as a non-attainment area for NO_2 under state standards, and for ozone, PM-10, and PM-2.5 under both state and federal standards.

Section 3 – Emissions Estimates

Regional Significance Threshold Analysis

The thresholds contained in the SCAQMD CEQA Air Quality Handbook are considered regional thresholds and are shown in **Table 2 – SCAQMD CEQA Regional Significance Thresholds**. These regional thresholds were developed based on the SCAQMD's treatment of a major stationary source.

Table 2 – SCAQMD CEQA Regional Significance Thresholds

Emission Threshold	Units	VOC	NO_X	CO	SO_X	PM-10	PM-2.5
Construction	lbs/day	75	100	550	150	150	55
Operations	lbs/day	55	55	550	150	150	55

Short-Term Analysis

Short-term emissions consist of fugitive dust and other particulate matter, as well as exhaust emissions generated by construction-related vehicles. Short-term impacts will also include emissions generated during construction as a result of operation of personal vehicles by construction workers, asphalt degassing, and architectural coating (painting) operations.

The Project will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rule 403 establishes these procedures. Compliance with this rule is achieved through application of standard best management practices in construction and operation activities, such as application of water or chemical stabilizers to disturbed soils, managing haul road dust by application of water, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 miles per hour and establishing a permanent, and stabilizing ground cover on finished sites. In addition, projects that disturb 50 acres or more of soil or move 5,000 cubic yards of materials per day are required to submit a Fugitive Dust Control Plan or a Large Operation Notification Form to SCAQMD. Based on the size of the Project (analyzed facilities are less than 50 acres) a Fugitive Dust Control Plan or Large Operation Notification would not be required.

Short-term emissions were evaluated using the CalEEMod version 2011.1.1 computer program. The model evaluated emissions resulting from a reasonably foreseeable representative project (described below).. Construction timing and overall phasing sequence of the Moreno MDP Facilities are currently unknown; however, it is anticipated that construction would occur over many years. Due to funding availability, construction could potentially occur intermittently over the next 10 to 50 years. Actual air quality impacts would depend upon the types and lengths of MDP Facilities constructed and on the timing of multiple projects located in the same vicinity. Project components have yet to be designed; thus, construction specifics are currently unknown, and therefore this analysis is somewhat speculative. This analysis uses conservative assumptions in an attempt to provide a worst-case scenario and to not understate any potential impacts.

For modeling purposes, it was assumed that construction of the representative project could start no sooner than September 2014. Although MDP Facility construction may not start in September 2014, assuming construction would occur in 2014 represents a conservative estimate of emissions because vehicle and equipment emissions generally improve over time. The default parameters within CalEEMod were used and these default values reflect a worst-case scenario, which means that any other MDP

Facility emissions are expected to be equal to or less than the estimated construction emissions modeled.

To provide a worst-case analysis of the Moreno MDP, a representative project was identified for construction of MDP Facilities. This representative project entails a typical (i.e., usual) construction scenario, including anticipated phasing, construction equipment, area disturbed during grading activities, and export of excavated material. The representative project consists of site preparation, grading, and installation during construction of a storm drain, a trapezoidal channel (partially concrete-lined), and a detention basin. Construction scenario assumptions were based on anticipated construction of and along Line F and Line F-2, which include the Cactus Basin (see **Figure 2**). These MDP Facilities were chosen as the representative project in order to determine the maximum reasonable foreseeable air quality impacts or worst-case scenario associated with construction of the MDP Facilities. Therefore, while actual construction could differ from the scenario analyzed herein, the modeled analysis and estimated maximum daily emissions included herein represent a conservative assessment of air quality impacts associated with anticipated construction of MDP Facilities.

Modeled construction for the representative project consists of the following activities, which are assumed to be constructed sequentially for the purposes of this analysis:

Basin Excavation:

- Construction of a 28.5-acre basin is anticipated to require approximately two months, of which site preparation is assumed for one week and grading/excavation of the basin is assumed for 1.5 months beginning no earlier than September 2014.
- Approximately 429,000 cubic yards of soil will be exported from the basin. A maximum disturbance area of four acres is assumed to occur per day.

Trapezoidal Channel (partially lined):

- Construction of approximately 3,800-linear feet of open, trapezoidal channel will begin no earlier than September 2014 and is expected to last eight months.
- Site preparation is expected to last two weeks and will occur before grading operations.
- Grading/excavation are anticipated to require two months. The footprint for the grading/excavation of the channel is anticipated to disturb 200 feet per day. Excavation to a depth of six feet is anticipated, resulting in approximately 74,400 cubic yards of soil export.
- Construction of the channel is anticipated to take approximately six months after grading/excavation.

Storm Drain Installation:

- Construction of an approximately 1,800-linear-foot underground storm drain is expected to begin no earlier than September 2014 and last approximately one month.
- A trench depth of 10 feet is assumed, resulting in approximately 8,000 cubic yards of potential soil export.
- Approximately 25,200 square feet (0.58 acres) of surface area will be covered in asphalt once the pipeline is in place.

The construction equipment estimated to be used for each analyzed activity is shown in Appendix A and is based on the District's input and typical construction practices. The equipment mix is meant to

represent a reasonably conservative estimate of construction activity. For the analysis, it was generally assumed that heavy construction equipment would be operating at the site for approximately 8 hours per day, 5 days per week. To evaluate Project compliance with SCAQMD Rule 403 for fugitive dust control, the modeling utilized the mitigation option of watering the representative project site three times daily which achieves a control efficiency of 61 percent for PM-10 and PM-2.5 emissions. **Table 3** summarizes the estimated construction emissions for the representative project.

Table 3 –Unmitigated Estimated Daily Construction Emissions

Activity	Peak Daily Emissions (lb/day)					
	VOC	NO_X	CO	SO_2	PM-10	PM-2.5
SCAQMD Daily Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Basin Excavation						
Site Preparation	3.35	27.55	14.69	0.03	1.24	1.17
Grading	69.69	787.87	380.70	1.23	1,028.41	37.52
Trapezoidal Channel Construction						
Site Preparation	0.92	6.67	5.50	0.01	0.40	0.36
Grading	15.55	153.12	81.39	0.22	184.29	9.66
Construction	0.09	0.69	0.66	0.00	0.12	0.04
Storm Drain Installation						
Grading	6.76	64.33	34.96	0.08	27.75	4.59
Paving	2.15	11.79	8.19	0.01	1.09	0.97
Maximum	**69.69**	**787.87**	**380.70**	**1.23**	**1,028.41**	**37.52**
Exceeds Threshold?	**No**	**YES**	**No**	**No**	**YES**	**No**

Notes: See Appendix A for model output report. Numbers may not match due to rounding within the model. Results shown were modeled using the representative project, which is the maximum reasonably foreseeable air quality impacts, or worst-case scenario associated with implementation of the Moreno MDP.

As shown in **Table 3**, above, criteria pollutant emissions from construction of the representative project will exceed the SCAQMD regional daily thresholds for NO_X and PM-10, but will not exceed the thresholds for VOC, CO, SO_2, or PM-2.5. The main source of NO_X emissions are from on-road vehicle exhaust from soil hauling and construction equipment while the main source of PM-10 emissions is from hauling during basin and channel excavation activities.

Representative project modeling assumed that construction of MDP Facilities (**Table 3**) would occur sequentially (i.e. one after another). In the event two construction activities would overlap, the combined emissions from both activities would not exceed additional SCAQMD thresholds for criteria pollutants, with the exception of VOC emissions. If the two activities that would generate the greatest amount of emissions (i.e., basin excavation (grading) and trapezoidal channel grading) would occur simultaneously, then VOC emissions could be as high as 85 pounds per day. Accordingly, based on the SCAQMD's quantitative significance thresholds and the maximum emissions presented in **Table 3**, in addition to impacts from NO_X and PM-10, significant VOC emissions would result if two construction phases occurred concurrently.

Long-Term Analysis

Long-term air quality analysis addresses the post-construction impacts related to the Moreno MDP Facilities. Once an MDP Facility is constructed, it would require maintenance in order to retain flood control capacity. It is expected that the District will operate and maintain the MDP Facilities. Maintenance of storm drains and open channels typically consists of keeping those facilities and their side drains clear of debris and sediment, as well as repairing access roads and fences. On rare occasions, major repairs may be required following damaging storm events. Thus, major grading is not expected to routinely occur while maintaining the underground storm drains and open channels. In addition to maintenance activities required for the proposed storm drains and open channels, the routine maintenance of the partially-lined channels and basins likely require the removal of deposition, repair of eroded slopes, and reduction of fire hazard by annual mowing and application of herbicides. Vegetation may be removed or mowed annually, or as necessary, to provide the designed hydraulic capacity. Anticipated maintenance activities may require the temporary and short-term use of an excavator, small tractor, or loader, and operation of light-duty trucks utilized by maintenance workers. Most maintenance projects would be completed in one day. MDP Facility operation and maintenance would be similar to the District's existing maintenance and operations and the Project does not propose new long-term uses. Therefore, no new long-term air quality impacts will result.

Conclusion

Based on the regional significance threshold analysis for the representative project, the short-term construction emissions will exceed the daily regional thresholds set by SCAQMD for NO_X, and PM-10. If two construction activities occur concurrently, additional VOC impacts may result. No long-term Moreno MDP operational emissions were evaluated because the proposed MDP will not result in a change from the operation of the existing MDPs for the Project area. As the Moreno MDP does not propose new long-term uses, no new long-term air quality impacts will result.

Localized Significance Threshold Analysis

Background

As part of the SCAQMD's environmental justice program, attention has been focused on localized effects of air quality. Staff at SCAQMD has developed localized significance threshold (LST) methodology (SCAQMD 2008) that can be used by public agencies to determine whether or not a project may generate significant adverse localized air quality impacts (both short-term and long-term). LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area (SRA). The Moreno MDP is located within SRA 24.

Methodology

The emissions analyzed under the LST methodology are NO_2, CO, PM-10, and PM-2.5. For attainment pollutants, NO_2 and CO, the LSTs are derived using an air quality dispersion model to back-calculate the emissions per day that would cause or contribute to a violation of any ambient air quality standard for a particular source receptor area. LSTs for NO_2 and CO are derived by adding the incremental emission impacts from the project activity to the peak background NO_2 and CO concentrations and comparing the total concentration to the state ambient air quality standards. The state standard for NO_2 is the 1-hour state standard of 18 parts per hundred million and for CO it is the 1-hour and 8-hour state standards of 9

parts per million (ppm) and 20 ppm, respectively. For PM-10 and PM-2.5, for which the Basin is non-attainment, the LSTs are derived using an air quality dispersion model to back-calculate the emissions necessary to make an existing violation in the specific source receptor area worse, using the allowable change in concentration thresholds approved by the SCAQMD. For PM-10 and PM-2.5, the approved 24-hour concentration thresholds for construction and operation are 10.4 $\mu g/m^3$ and 2.5 $\mu g/m^3$, respectively.

Short-Term Analysis

According to the LST methodology, only on-site emissions need to be analyzed. Emissions associated with hauling, vendor trips, and worker trips are mobile source emissions that occur off-site and need not be considered. SCAQMD has provided LST lookup tables and sample construction scenarios[2] to allow users to readily determine if the daily emissions for proposed construction or operational activities could result in significant localized air quality impacts for projects five acres or smaller. Although some facilities are larger than five acres, it is anticipated that an area no larger than four acres would be disturbed per day during construction of a typical project, which corresponds to the detention basin.[3] Because the representative project consist of three types of facilities of varying size, the LST analysis for the representative project is analyzed independently and the corresponding LST lookup tables were used for construction emissions. Default information contained in the LST sample construction scenarios for each analyzed facility was modified using Project-specific information such as the construction equipment usage information from the CalEEMod data found in Appendix A.

The LST thresholds are estimated using the maximum daily disturbed area (in acres) and the distance of the project to the nearest sensitive receptors (in meters). The Moreno MDP area includes many types of sensitive receptors consisting of schools, child care centers, athletic facilities, playgrounds, retirement homes and convalescent homes adjacent to and in close proximity with the majority of the MDP Facilities. However, existing residences are the nearest sensitive receptors in the Project vicinity for each facility within the representative project. The Cactus Basin is separated from its nearest sensitive receptors by Cactus Avenue to the south at a distance of approximately 100 feet (30 meters) and Brodiaea Avenue to the north at a distance of approximately 100 feet (30 meters). Line F will traverse through predominantly vacant land and will be separated from the nearest sensitive receptors, by approximately 150 feet (46 meters) as it crosses Brodiaea Avenue. Line F-2 will be constructed within Redlands Boulevard immediately adjacent to existing residences. The closest receptor distance on the LST look-up tables is 25 meters. According to SCAQMD Methodology, projects with boundaries closer than 25 meters to the nearest receptor should use LST's for receptors located at 25 meters. Therefore, a receptor distance of 25 meters was chosen for all the analyzed facilities, to provide a worst-case scenario. SCAQMD linear regression calculations were utilized to obtain the thresholds for three- and four-acre areas of daily disturbance. The results are summarized in **Table 4 – Unmitigated LST Results for Construction Estimates**.

[2] http://www.aqmd.gov/ceqa/handbook/LST/LST.html

[3] http://www.aqmd.gov/ceqa/handbook/LST/CalEEModguidance.pdf

Table 4 – Unmitigated LST Results for Construction Emissions

Activity	Peak Daily Emissions (lb/day)			
	NO_x	CO	PM-10	PM-2.5
Basin Excavation				
25 meter LST Threshold for 4-acre	**237**	**1,346**	**11**	**7**
Site Preparation	33.5	14.9	6.4	2.4
Site Grading	108.6	52.2	10.0	5.6
Exceeds Threshold?	**No**	**No**	**No**	**No**
Trapezoidal Channel				
25 meter LST Threshold for 3-acre	**203**	**1,114**	**9**	**5**
Site Preparation	20.9	10.8	3.3	1.4
Site Grading	64.6	33.7	4.9	3.2
Pipeline Construction	1.8	0.8	0.1	0.1
Exceeds Threshold?	**No**	**No**	**No**	**No**
Storm Drain				
25 meter LST Threshold for 1-acre	**118**	**602**	**4**	**3**
Site Grading	31.9	16.7	1.8	1.5
Asphalt and Paving	12.2	7.9	0.8	0.8
Exceeds Threshold?	**No**	**No**	**No**	**No**

Note: LST Threshold for the 3-acre and 4-acre site has been calculated by using Appendix K of SCAQMD's LST Methodology, dated February 2005, available at SCAQMD. Each activity occurs separately. Results shown were modeled using the representative project, which is the maximum reasonably foreseeable air quality impacts, or worst-case scenario associated with implementation of the Moreno MDP.

As shown in **Table 4**, short-term construction emissions from the representative project facilities will not exceed the SCAQMD-established LST for any criteria pollutant.

Long-Term Analysis

The proposed drainage facilities may include channels, storm drains, levees, basins, dams, or any other conveyance capable of feasibly relieving flooding problems within the plan area. There would be no long-term operation of the proposed MDP Facilities that would generate localized emissions that could expose sensitive receptors to substantial pollutant concentrations. Maintenance activities would be temporary and would not represent a long-term source of potential localized emissions that would impact sensitive receptors within the MDP Boundary.

Conclusion

Based on the LST analysis, the short-term construction of the Moreno MDP will not result in localized air quality impacts to sensitive receptors within the Project vicinity. Due to the lack of any new long-term source of emissions, no new long-term impacts will occur.

Recommended Mitigation Measures

For construction of MDP storm drain facilities, no mitigation over and above adherence to SCAQMD regulations and the District's standard regulatory procedures is required.

In order to reduce VOC, NO_X, and PM-10 emissions from construction of Moreno MDP Facilities, the following mitigation measures shall be implemented for MDP Facilities related to channel construction or basin excavation activities:

MM Air 1: For channel and basin Facilities, during construction, ozone precursor emissions from all vehicles and construction equipment shall be controlled by maintaining equipment engines in good condition, in proper tune per manufacturers' specifications. Equipment maintenance records and equipment design specification data sheets shall be kept on site during construction. Compliance with this measure shall be subject to periodic inspections by the Lead Agency (i.e., Moreno Valley, Riverside County, or District).

MM Air 2: For channel and basin Facilities, to reduce construction vehicle (truck) idling while waiting to enter/exit the site, prior to issuance of grading permits, the contractor shall submit a traffic control plan that will describe in detail, safe detours to prevent traffic congestion to the best of the project's ability, and provide temporary traffic control measures during construction activities that will ensure smooth traffic flows. Pursuant to CCR Title 13 §2449(d)(3), construction equipment and truck idling times shall be prohibited in excess of five minutes on site. To reduce traffic congestion, and therefore NO_X, the plan shall include, as necessary, appropriate, and practicable, the following: dedicated turn lanes for movement of construction trucks and equipment on and off site, scheduling of construction activities that affect traffic flow on the arterial system to off-peak hours, rerouting of construction trucks away from congested streets or sensitive receptors, and/or signal synchronization to improve traffic flow. This measure applies to all projects, unless the Lead Agency determines that a traffic control plan is not warranted or feasible due to no impact on local roadways.

MM Air 3: For channel and basin facilities, to minimize impacts related to particulate matter (PM-10 and PM2.5) generation from construction activities, consistent with SCAQMD Rule 403, it is required that fugitive dust generated by grading and construction activities be kept to a minimum with a goal of retaining dust on the site. The contractor shall be required to comply with the applicable provisions of SCAQMD Rule 403 and implement appropriate fugitive dust control measures that may include watering, stabilized construction access to reduce tracking of mud or dirt onto public roads, covering trucks hauling loose materials off-site[4], and street sweeping.

[4] 91 percent reduction per SCAQMD Mitigation Measures and Control Efficiencies for Fugitive Dust – Table XI-A: Construction & Demolition, available at http://www.aqmd.gov/ceqa/handbook/mitigation/fugitive/MM_fugitive.html.

MM Air 4: For channel and basin Facilities, to reduce construction vehicle emissions, contractor specification packages for Facility construction phases shall require construction equipment to meet EPA standards according to the following, unless a Facility (or Facilities)-specific air quality analysis is conducted at the time are actually designed and proposed for construction that determines impacts would be less than significant by adhering to the most current federal, state and local (e.g., (SCAQMD) regulations, and the District's standard regulatory practices:

- The contracting company's fleet of off-road diesel-powered construction equipment greater than 100 horsepower shall meet Tier 3 off-road emissions standards or better.
- Any emissions control device used by the contractor shall achieve Level 3 emissions reductions of no less than 85 percent for particulate matter, as specified by CARB regulations.
- A copy of the fleet's tier compliance documentation, and CARB or AQMD operating permit shall be available to the Lead Agency (i.e., Moreno Valley, Riverside County, or District) at the time of mobilization of each applicable unit of equipment.

Impacts After Mitigation

Although implementation of mitigation measures **MM Air 1** and **MM Air 2** will reduce MDP Facility-generated emissions of VOC, NO_X, and PM-10, there are no distinct SCAQMD established quantitative reductions associated with them; therefore, to be conservative, it is assumed that there is no change in the estimated emissions of the Project from those mitigation measures. To mitigate fugitive dust (PM-10) emissions from the hauling of large quantities of soil from the construction of a basin or the construction of a channel that requires substantial excavation, , **MM Air 3** will be implemented and reduces fugitive PM-10 emissions from soil hauling during the grading phase by approximately 91 percent. **MM Air 4** will reduce NO_X and VOC emissions from off-road equipment by at least six percent for activities related to basin grading and channel grading. The results are shown in **Table 5**, below.

Table 5 – Mitigated Estimated Maximum Daily Construction Emissions

Activity/Year	Peak Daily Emissions (lb/day)					
	VOC	NO_X	CO	SO_2	PM-10	PM-2.5
SCAQMD Daily Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Basin Grading	65.72	740.37	388.18	1.23	125.71	36.54
Trapezoidal Channel Grading	12.81	123.88	80.55	0.22	27.34	8.93
Maximum	**65.72**	**740.37**	**388.18**	**1.23**	**125.71**	**36.54**
Exceeds Threshold?	**No**	**YES**	**No**	**No**	**No**	**No**

Note: The PM-10 emissions shown above represent a 91% reduction in fugitive dust from soil hauling, not from total PM-10 emissions. Because unmitigated emissions from storm drain construction do not exceed SCAQMD thresholds, mitigated emissions estimates for storm drains are not included in this table. Emissions were modeled using the representative project, which is the maximum reasonably foreseeable air quality impacts, or worst-case scenario associated with implementation of the Moreno MDP.

The evaluation presented in the preceding analysis demonstrates that even with mitigation, projected short-term emissions from construction of the Moreno MDP, as analyzed by the representative project, are above applicable SCAQMD regional thresholds for NO_X. The emissions generated by storm drain installation remain below applicable thresholds without implementation of mitigation measures. As shown in **Table 5**, emissions of PM-10 will be mitigated below the SCAQMD thresholds. Emissions of

VOC are below the threshold when activities occur sequentially. If the two activities that generate the most emissions (basin grading and channel grading) occur at the same time, the VOC emissions could be as high as 79 pounds per day (**Table 5**), which would also exceed the SCAQMD threshold and result in significant VOC impacts.

Conclusion

Even with implementation of the proposed mitigation measures, emissions from short-term construction of the representative project will exceed SCAQMD regional thresholds for NO_X. Emissions of VOC are below the threshold when activities occur sequentially. If the two activities that generate the most emissions (basin grading and channel grading) occur at the same time, the VOC emissions could be as high as 79 pounds per day, which would also exceed the SCAQMD threshold. Short-term localized significance thresholds will not be exceeded at sensitive receptor locations within the Moreno MDP vicinity.

No long-term air quality impacts will occur because the Moreno MDP does not create a new long-term source of operational emissions.

Section 4 – Greenhouse Gas Analysis

Background

Some gases in the atmosphere affect the Earth's heat balance by absorbing infrared radiation. This layer of gases in the atmosphere functions much the same as glass in a greenhouse (i.e., both prevent the escape of heat). This is why global warming is also known as the "greenhouse effect." Increased emissions of these gases due to combustion of fossil fuels and other activities increase the greenhouse effect, leading to global warming and other climate changes. Gases responsible for global climate change in the Basin and their relative contribution to the overall warming effect are carbon dioxide (55 percent), chlorofluorocarbons (24 percent), methane (15 percent), and nitrous oxide (6 percent) (SCAQMD 2005, p. 1-8). It is widely accepted that continued increases in greenhouse gases (GHG) will contribute to global climate change although there is uncertainty concerning the magnitude and timing of future emissions and the resultant warming trend (SCAQMD 2005, p.1-8). Human activities associated with industrial/manufacturing, utilities, transportation, residential, and agricultural sectors contribute to these GHG (CEC 2006, p.7). According to a recent report published by the California Energy Commission (CEC), transportation was responsible for 41 percent of the state's GHG emissions, followed by electricity generation for the most recent reporting year, 2004 (CEC 2006, p. 8). In November 2007, the California Air Resources Board (CARB) reported that transportation was 38 percent of the state's GHG emissions, followed by electricity generation for 2004 (CARB 2007, p.7). Emissions of carbon dioxide (CO_2) and nitrous oxide (N_2O) are byproducts of fossil fuel combustion (CARB 2007, p. 15). Methane (CH_4), a highly potent GHG, results from off-gassing associated with agricultural practices, landfills, and wastewater treatment (CARB 2007, p. 19–22; IPCC 2007, p. 593).

"Stratospheric ozone depletion" refers to the slow destruction of naturally occurring ozone, which lies in the upper atmosphere (called the stratosphere) and which protects Earth from the damaging effects of solar ultraviolet radiation. Certain compounds, including chlorofluorocarbons (CFCs,) halons, carbon tetrachloride, methyl chloroform, and other halogenated compounds, accumulate in the lower atmosphere and then gradually migrate into the stratosphere. In the stratosphere, these compounds participate in complex chemical reactions to destroy the upper ozone layer. Destruction of the ozone layer increases the penetration of ultraviolet radiation to the Earth's surface, a known risk factor that can increase the incidence of skin cancers and cataracts, contribute to crop and fish damage, and further degrade air quality (SCAQMD 2005, p. 1-8).

GHG and ozone-depleting gases include, but are not limited to, the following:

- **Carbon dioxide –** Carbon dioxide (CO_2) results from fossil fuel combustion in stationary and mobile sources. It contributes to the greenhouse effect, but not to stratospheric ozone depletion. In 2004, CO_2 accounted for approximately 84 percent of total GHG emissions in the state (CEC 2006, p. 5). In the Basin, approximately 48 percent of CO_2 emissions come from transportation, residential and utility sources which contribute approximately 13 percent each; 20 percent come from industry; and the remainder comes from a variety of other sources (SCAQMD 2005, p. 1-8).
- **Methane –** Atmospheric methane (CH_4) is emitted from both non-biogenic and biogenic sources. Non-biogenic sources include fossil fuel mining and burning, biomass burning, waste treatment, geologic sources, and leaks in natural gas pipelines. Biogenic sources include wetlands, rice agriculture, livestock, landfills, forest, oceans, and termites. Methane sources can also be divided into anthropogenic and natural. Anthropogenic sources include rice agriculture, livestock, landfills, and waste treatment, some biomass burning, and fossil fuel combustion. Natural sources are

wetlands, oceans, forests, fire, termites, and geological sources. Anthropogenic sources currently account for more than 60 percent of the total global emissions. (IPCC 2007, p. 593.) It is a greenhouse gas and traps heat 40–70 times more effectively than carbon dioxide. In the Basin, more than 50 percent of human-induced methane emissions come from natural gas pipelines, while landfills contribute 24 percent. Methane emissions from landfills are reduced by SCAQMD Rule 1150.1 – Control of Gaseous Emissions from Active Landfills. Methane emissions from petroleum sources are reduced by a number of rules in SCAQMD Regulation XI that control fugitive emissions from petroleum production, refining, and distribution. (SCAQMD 2005, p. 1-9.)

- **Other regulated greenhouse gases include Nitrous Oxide, Sulfur Hexafluoride, Hydrofluorocarbons, and Perfluorocarbons -** These gases all possess heat-trapping potentials hundreds to thousands of times more effective than carbon dioxide. Emission sources of nitrous oxide gases include, but are not limited to, waste combustion, waste-water treatment, fossil fuel combustion, and fertilizer production. Because the volume of emissions is small, the net effect of nitrous oxide emissions relative to carbon dioxide or methane is relatively small. Sulfur hexafluoride, hydrofluorocarbon, and perfluorocarbon emissions occur at even lower rates.

- **Chlorofluorocarbons** – Chlorofluorocarbons (CFCs) are emitted from blowing agents used in producing foam insulation. They are also used in air conditioners and refrigerators and as solvents to clean electronic microcircuits. CFCs are primary contributors to stratospheric ozone depletion and to global climate change. Sixty-three percent of CFC emissions in the Basin come from the industrial sector. Federal regulations require service practices that maximize recycling of ozone-depleting compounds (both CFCs, hydro-chlorofluorocarbons and their blends) during the servicing and disposal of air-conditioning and refrigeration equipment. SCAQMD Rule 1415 – Reduction of Refrigerant Emissions from Stationary Refrigeration and Air Conditioning Systems requires CFC refrigerants to be reclaimed or recycled from stationary refrigeration and air conditioning systems. SCAQMD Rule 1405 – Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization or Fumigant Processes requires recovery of reclamation of CFCs at certain commercial facilities and eliminates the use of some CFCs in the sterilization processes. Some CFCs are classified as toxic air contaminants (TACs) and regulated by SCAQMD Rule 1401 – New Source Review of Toxic Air Contaminants and SCAQMD Rule 1402 Control of Toxic Air Contaminants from Existing Sources (SCAQMD 2005, p. 1-8 through 1-9).

- **Halons –** These compounds are used in fire extinguishers and behave as both ozone-depleting and greenhouse gases. Halon production ended in the United States in 1993. SCAQMD Rule 1418 – Halon Emissions from Fire Extinguishing Equipment requires the recovery and recycling of halons used in fire extinguishing systems and prohibits the sale of halon in small fire extinguishers (SCAQMD 2005, p. 1-9).

- **Hydro-chlorofluorocarbons –** HCFCs are solvents, similar in use and chemical composition to CFCs. The hydrogen component makes HCFCs more chemically reactive than CFCs, allowing them to break down more quickly in the atmosphere. These compounds deplete the stratospheric ozone layer, but to a much lesser extent than CFCs. HCFCs are regulated under the same SCAQMD rules as CFCs (SCAQMD 2005, p. 1-9).

- **1,1,1,-trichloroethane (TCA**) – TCA (methyl chloroform) is a solvent and cleaning agent commonly used by manufacturers. It is less destructive on the environment than CFCs or HCFCs, but its continued use will contribute to global climate change and ozone depletion. TCA is a synthetic chemical that does not occur naturally in the environment. No TCA is supposed to be manufactured for domestic use in the United States after January 1, 2002 because it affects the ozone layer. TCA

had many industrial and household uses, including use as a solvent to dissolve other substances, such as glues and paints; to remove oil or grease from manufactured metal parts; and as an ingredient of household products such as spot cleaners, glues, and aerosol sprays. SCAQMD regulates this compound as a toxic air contaminant under Rules 1401 and 1402 (SCAQMD 2005, p. 1-9).

Individual GHGs have varying global warming potential and atmospheric lifetimes. The Intergovernmental Panel on Climate Change (IPCC) developed the Global Warming Potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of individual GHGs is determined through a comparison with the GWP of CO_2. CO_2 has a GWP of one. CH_4 has a GWP of 21, meaning that on a molecule by molecule basis, CH_4 has 21 times the global warming potential of CO_2. CO_2-equivalents (CO_2E) are the emissions of a GHG multiplied by the GWP. The CalEEMod program calculates the CO_2E based on the GWPs reported in the IPCC Second Assessment Report (IPCC 1995, p. 22). **Table 6 – Global Warming Potentials and Atmospheric Lifetimes** shows the GWP and atmospheric lifetimes of various GHGs with relatively long atmospheric lifetimes from the IPCC 1995 report.

Table 6 – Global Warming Potentials and Atmospheric Lifetimes

Gas	Atmospheric Lifetime	Global Warming Potential (100-Year Time Horizon)
Carbon Dioxide (CO_2)	50-200	1
Methane (CH_4)	12±3	21
Nitrous Oxide (N_2O)	120	310
Hydrofluorocarbons (HFCs)		
HFC-23	264	11,700
HFC-32	5.6	650
HFC-125	32.6	2,800
HFC-134a	14.6	1,300
HFC-143a	48.3	3,800
Perfluoromethane (CF_4)	50,000	6,500
Perfluoroethane (C_2F_6)	10,000	9,200
Sulfur Hexafluoride (SF_6)	3,200	23,900

Source: IPCC 1995, Table 4

Unlike criteria air pollutants and TACs, which are pollutants of regional and local concern, global climate change is a global problem and GHGs are global pollutants. Impacts of GHG emissions are a function of their total atmospheric concentration and most GHGs are globally well mixed atmospheric constituents. This means that the location of a particular GHG emission, in contrast to the situation for criteria pollutants, does not change its environmental impact.

Globally, for the years 2000 through 2005, the annual average emissions of fossil fuel-related CO_2 was 26.4 gigatons (one gigaton equals one billion metric tonnes (MT)) per year (IPCC 2007, Summary for Policy Makers, p.2). It should also be noted that the annual total U.S. emissions of GHG dropped 1.5 percent in 2006 from 7,181 million MT to 7,075 million MT due to warmer weather and decreased energy demand, according to the Energy Information Administration (EIA) (EIA, p. 1). During the same timeframe, the U.S. economic output increased 2.9 percent (EIA, p. 2). This decline results in a GHG intensity reduction of 4.2 percent as a measure of gross domestic product (EIA, p. 2).

Worldwide, California is the 12th to 16th largest emitter of CO_2, and is responsible for approximately two percent of the world's CO_2 emissions (CEC 2006, p. i). In 2004, the most recent year for which statewide data is available, the CEC reported that California produced 492 million gross MT (one MT equals 2,205 pounds) of carbon dioxide-equivalent (CEC 2006, p. 5).

In January 2007, Assembly Bill 1803 transferred responsibility for developing and maintaining the state's GHG inventory from the California Energy Commission (CEC) to CARB. Using the CEC GHG inventory as a starting point, CARB staff determined the state's 1990 GHG emissions level by conducting a comprehensive review of all GHG emitting sectors. The seven sectors are: Transportation, Electricity Generation, Industrial, Residential, Agriculture, Commercial, and Forestry.

In November 2007, the CARB released its staff report establishing a statewide 1990 GHG emission level and a 2020 emission limit (CARB 2007). As part of this staff report, CARB staff recommended an amount of 427 million metric tonnes of carbon dioxide equivalent ($MMTCO_2E$) as the total statewide GHG 1990 emissions level and 2020 emissions limit (CARB 2007, p. 2). The Board approved the 2020 limit on December 6, 2007. This limit is an aggregated statewide limit, rather than sector- or facility-specific. The staff report also included the statewide GHG emissions for 2004, which was 480 $MMTCO_2E$ (CARB 2007, p. 7).

While the inventory data numbers from the CEC and CARB are similar for 2004, these estimates have important differences. Emissions from individual sectors differ between CEC and CARB estimates by up to 30 percent due to updated data, methodologies, and differences in included and excluded emissions. Staff at CARB treated carbon stored in landfills differently than CEC by separately tracking stored carbon instead of considering it an emission sink within a landfill. In addition, the CARB estimate only includes intrastate aviation, whereas the CEC estimates include both interstate and intrastate flights. Staff also included emissions from international shipping and related port activities in California waters, whereas the CEC excluded all emissions from international ships (CARB 2007, p. 9).

Regulatory Setting

Federal

Previously the U.S. EPA (USEPA) had not regulated GHGs under the CAA because it asserted that the Act did not authorize it to issue mandatory regulations to address global climate change and that such regulation would be unwise without an unequivocally established causal link between GHGs and the increase in global surface air temperatures. In Massachusetts v. Environmental Protection Agency et al. (127 S. Ct. 1438 (2007)), however, the U.S. Supreme Court held that GHGs are pollutants under the CAA and directed the USEPA to decide whether the gases endangered public health or welfare. On December 7, 2009, the USEPA issued an Endangerment Finding under Section 202(a) of the CAA, opening the door to federal regulation of GHGs. The Endangerment Finding notes that GHGs threaten public health and welfare and are subject to regulation under the CAA. To date, the USEPA has not promulgated major regulations on GHG emissions, but it has begun to develop them.

The USEPA had also not moved aggressively to regulate GHGs because it expected Congress to make progress on GHG legislation, primarily from the standpoint of a cap-and-trade system. However, proposals circulated in both the House of Representative and Senate have been controversial and it may be some time before Congress adopts major climate change legislation. The USEPA's Endangerment Finding paves the way for federal regulation of GHGs with or without Congress. To date, Congress, under

the Consolidated Appropriations Act of 2008 (HR 2764), has established mandatory GHG reporting requirements for some emitters of GHGs. On September 22, 2009, the USEPA issued the Final Mandatory Reporting of Greenhouse Gases Rule. The rule requires annual reporting to the USEPA of GHG emissions from large sources and suppliers of GHGs, including facilities that emit 25,000 MT or more a year of GHGs.

State

For decades, California's Building Codes have mandated energy efficiency. Since the production of energy uses large quantities of fossil fuels, efficient use of energy reduces GHGs. California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The amendments made in October 2005 require new homes to use half the energy they used only a decade ago. In September 2008, the new 2008 standards were adopted to update the Building Energy Efficiency Standards contained in the California Code of Regulations (CCR), Title 24, Part 6 (also known as the California Energy Code) and associated administrative regulations in Part 1. The amended 2008 standards went into effect in January 2010. Energy efficient buildings require less electricity, and electricity production by fossil fuels results in greenhouse gas emissions. Therefore, increased energy efficiency results in decreased greenhouse gas emissions.

The California Building Standards Commission adopted the nation's first green building standards on July 17, 2008. The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code in the CCR. Part 11 establishes voluntary standards, that become mandatory in the 2010 edition of the Code (January 2011), on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.

In addition to building code requirements, California is leading the U.S. in regulating the emissions of GHGs directly. In July 2002, Governor Gray Davis signed California Assembly Bill (AB) 1493 (Pavley), which requires CARB to develop and adopt regulations that reduce GHG emitted by passenger vehicles and light duty trucks. Regulations adopted by CARB will apply to 2009 and later model year vehicles. CARB estimates that the regulation, if implemented, will reduce GHG emissions from the light duty passenger vehicle fleet by an estimated 18 percent in 2020 and by 27 percent in 2030. The USEPA initially denied the CAA waiver required to implement AB 1493 on December 19, 2007. However, in January 2009, President Barack Obama issued a directive to the USEPA to reconsider California's request for the waiver. The USEPA granted California's request for a CAA waiver on June 30, 2009.

In June 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. This Order calls for the following GHG emission reduction targets to be established: reduce GHG emissions to 2000 levels by 2010; reduce GHG emissions to 1990 levels by 2020; and reduce GHG emissions to 80 percent below 1990 levels by 2050. S-3-05 also requires that the Secretary of the California Environmental Protection Agency (CalEPA) shall coordinate oversight of the efforts made to meet the targets with: the Secretary of the Business, Transportation and Housing Agency, Secretary of the Department of Food and Agriculture, Secretary of the Resources Agency, Chairperson of the Air Resources Board, Chairperson of the Energy Commission, and the President of the Public Utilities Commission. The Secretary of CalEPA leads a "Climate Action Team" made up of representatives from the agencies listed above to implement

GHG emission reduction programs and report on the progress made toward meeting the statewide GHG targets that were established in the executive order. Per the Executive Order, the first Climate Action Team report to the Governor and the Legislature was released in March 2006.

In September 2006, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 directs the CARB to implement regulations for a cap on sources or categories of sources of GHG emissions. The bill requires that CARB develop regulations to reduce emissions with an enforcement mechanism to ensure that the reductions are achieved, and to disclose how it arrives at the cap. It also includes conditions to ensure businesses and consumers are not unfairly affected by reductions.

AB 32 requirements and milestones are as follows:

- June 30, 2007 – Identification of discrete early action greenhouse gas emissions reduction measures. Three early action measures were approved by CARB on June 21, 2007. Six other discrete early action measures were subsequently approved.
- January 1, 2008 – Establish a 1990 baseline GHG emissions level and approval of a statewide limit equivalent to that level. Adoption of mandatory reporting and verification requirements concerning GHG emissions. On December 6, 2007, CARB approved a statewide limit on GHG emissions levels for the year 2020 consistent with the determined 1990 baseline.
- January 1, 2009 – Adoption of a scoping plan for achieving GHG emission reductions. On December 11, 2008, the CARB Board adopted the *Climate Change Scoping Plan* (Scoping Plan), at its meeting.
- January 1, 2010 – Adoption and enforcement of regulations to implement the "discrete" actions. The CARB identified nine discrete early action measures including regulations affecting landfills, motor vehicle fuels, refrigerants in cars, tire pressure, port operations and other sources in 2007 that included ship electrification at ports and reduction of high global warming potential (GWP) gases in consumer products. Regulatory development for the remaining measures is ongoing.
- January 1, 2011 – Adoption of GHG emissions limits and reduction measures by regulation.
- January 1, 2012 – GHG emissions limits and reduction measures adopted in 2011 become enforceable.

AB 32 codifies S-3-05's year 2020 goal by requiring that statewide GHG emissions be reduced to 1990 levels by the year 2020.

Under AB 32, CARB published its, *Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California* in October 2007. There are 44 early action measures, both regulatory and non-regulatory, and are currently underway or to be initiated by the CARB in the 2007 to 2012 timeframe. The early action measures apply to the fuels, transportation, forestry, agriculture, education, energy efficiency, commercial, waste, fuels, cement, oil and gas, electricity, and fire suppression sectors. As noted in the milestones above, nine of the early action measures are discrete early action measures that are regulatory and enforceable by January 1, 2010. CARB estimates that the 44 recommendations have the potential to result in GHG reductions of at least 42 $MMTCO_2E$ by 2020, representing approximately 25 percent of the 2020 target.

As discussed in the Scoping Plan, the projected total business-as-usual emissions for year 2020 (596 $MMTCO_2E$) must be reduced approximately 30 percent to achieve CARB's approved 2020 emission target of 427 $MMTCO_2E$. This is an approximately 15 percent reduction in today's levels. The Scoping

Plan identifies recommended measures for several GHG emission sectors and the associated emission reductions to meet the 2020 emissions target. Each sector has a different emission reduction target. The majority of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements for reducing California's GHG to 1990 levels by 2020 include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the state's long-term commitment to AB 32 implementation.

A regulation establishing the 33 percent renewable electricity standard was adopted unanimously on September 23, 2010 by CARB. The standard will promote green jobs to construct and run renewable facilities in California, reduce hundreds of tons of harmful air pollution, insulate California's economy from the shock of volatile natural gas prices and help establish the state as a global leader in the research, development and manufacturing of clean, renewable energy sources.

The Renewable Electricity Standard (RES) means cleaner energy for California's households and businesses, and is the product of coordination and cooperation by CARB, California Public Utilities Commission, California Energy Commission and California Independent System Operator. Work on the standard began immediately following the Governor's Renewable Electricity Standard Executive Order, signed on September 15, 2009. The goal of 33 percent renewable electricity was also a major measure in the Scoping Plan, adopted by the Board in December 2008, toward fulfilling AB 32, the requirements of California's climate change legislation. The regulation ramps up the amount of electricity from wind, solar, geothermal and other renewable sources of energy while preserving the existing authorities of the energy agencies and the grid operator. CARB oversight will ensure that the renewable standard delivers substantial reductions in greenhouse gas emissions and achieves clean air goals by reducing smog-forming pollution. RES is one of many measures designed to reach the goals set out by AB 32, California's law requiring the reduction of greenhouse gas emissions to 1990 levels by 2020. In 2020 the new regulation will eliminate the equivalent of 12 million metric tons of carbon dioxide, making it one of AB 32's largest emission-reduction strategies.

Also in September 2006, Governor Arnold Schwarzenegger signed Senate Bill (SB) 1368 which calls for the adoption of a GHG performance standard for in-state and imported electricity generators to mitigate climate change. On January 25, 2007, the California Public Utilities Commission adopted an interim GHG emissions performance standard. This standard is a facility-based emissions standard requiring all new long-term commitments for baseload generation to serve California consumers be with power plants that have emissions no greater than a combined cycle gas turbine plant. The established level is 1,100 pounds of CO_2 per megawatt-hour.

Executive Order S-01-07 was approved by the Governor on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. It also required that a Low Carbon Fuel Standard for transportation fuels be established for California which was approved by CARB on April 23, 2009. The regulation is designed to increase the use of alternative fuels, replacing 20 percent of the fuel used by cars in California with clean alternative fuels by 2020, including electricity, biofuels, hydrogen, and other options.

The Western Climate Action Initiative (WCI) was signed on February 26, 2007 by five states: Washington, Oregon, Arizona, New Mexico, and California. Utah, as well as Manitoba and British Columbia, Canada joined in April 2007. Montana joined in January 2008, Quebec moved from Observer to Partner status in April 2008 and Ontario moved from Observer to Partner status in July 2008. Other United States and Mexican states and Canadian provinces have joined as observers. The WCI Partner jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15 percent below 2005 levels by 2020 and spur investment in and development of clean-energy technologies, create green jobs, and protect public health.

In August 2007, Governor Arnold Schwarzenegger signed Senate Bill (SB) 97, CEQA: Greenhouse Gas Emissions. The bill required the Office of Planning and Research (OPR), by July 1, 2009, to prepare guidelines for the feasible mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions, as required by CEQA, including, but not limited to, effects associated with transportation or energy consumption. The Natural Resources Agency was required to certify and adopt those guidelines by January 1, 2010. On June 19, 2008, OPR released an interim technical advisory for addressing climate change in CEQA documents (OPR 2008). The recommended approach is to identify and quantify project-related GHG emissions; determine its significance; and if the impact is found to be potentially significant, implement mitigation measures or alternatives that will reduce the impact below significance (OPR 2008, p. 5). Further, the guidance states that the lead agency is not responsible for completely eliminating all project-related GHG emissions (OPR 2008, p. 7).

Pursuant to SB 97, OPR released and the Natural Resources Agency adopted CEQA Guideline Amendments addressing GHG emissions on December 30, 2009 (OPR 2009). The amended State *CEQA Guidelines* went into effect in March 2010. As a result, CEQA now requires a discussion of potential climate change impacts for projects that require environmental analysis. Lead agencies are now required to consider the adverse effects of a project's cumulative contribution to GHG emissions on the environment and determine if a project's climate change impact may be significant. The amended State *CEQA Guidelines* provide that significance thresholds may be quantitative, qualitative, or in the form of performance-based standards. Various agencies, including the CARB and SCAQMD, have been developing and drafting standards and guidelines for determining the cumulative significance of a project's GHG emissions on global climate change. However, there is currently no single accepted industry practice or methodology for analyzing GHG impacts under CEQA. The Project's GHG emissions will be evaluated according to the draft thresholds proposed by SCAQMD, discussed in more detail below.

On September 30, 2008, Governor Arnold Schwarzenegger signed Senate Bill (SB) 375 (Steinberg). SB 375 focuses on housing and transportation planning decisions to reduce fossil fuel consumption and conserve farmlands and habitat. This legislation is important to achieving AB 32 goals because greenhouse gas emissions associated with land use, which includes transportation, are the single largest source of emissions in California. SB 375 provides a path for better planning by providing incentives to

locate housing developments closer to where people work and go to school, allowing them to reduce vehicle miles traveled (VMT) every year.

To achieve these goals, SB 375 will:

- require the regional transportation plan for each of the state's major metropolitan areas to adopt a "sustainable community strategy" that will meet the region's target for reducing GHG emissions from cars and light trucks. These strategies would get people out of their cars by promoting smart growth principles such as: development near public transit; projects that include a mix of residential and commercial use; and projects that include affordable housing to help reduce new housing developments in outlying areas with cheaper land and reduce vehicle miles traveled (VMT).
- create incentives for implementing the sustainable community strategies by allocating federal transportation funds only to projects that are consistent with the emissions reductions.
- provide various forms of CEQA relief by allowing projects that are shown to conform to the preferred sustainable community strategy through the local general plans (and therefore contribute to GHG reduction) to have a more streamlined environmental review process. Specifically, if a development is consistent with the sustainable community's strategy and incorporates any mitigation measures required by a prior EIR, then the environmental review does not have to consider: a) growth-inducing impacts, or b) project-specific or cumulative impacts from cars on global climate change or the regional transportation network. In addition, a narrowly-defined group of "transit priority projects" will be exempt from CEQA review.

On September 23, 2010, CARB adopted regional targets for reducing GHG emissions in 2020 and 2035 associated with passenger vehicles in the state's 18 Metropolitan Planning Organizations (MPOs). The Southern California Association of Governments (SCAG) is the local MPO for the region. The SCAG targets are an eight percent reduction in per capita emissions by 2020 and a 13 percent reduction in per capita GHG emissions by 2035 (the 2035 target is conditioned on discussion with the MPO). With the targets adopted, SCAG will develop and finalize a Sustainable Community Strategy (SCS) as part of the 2012 Regional Transportation Plan.

Pursuant to OPR's request to recommend significance thresholds, CARB released the *Preliminary Draft Staff Proposal: Recommended Approaches for Setting Interim Significant Thresholds for Greenhouse Gases under CEQA* on October 24, 2008 (CARB 2008). The current recommendations are a sector-specific approach to develop thresholds for projects that result in a substantial portion of the state's GHG emissions. The preliminary interim thresholds are for two sectors: 1) industrial projects, and 2) residential and commercial projects. For industrial projects that do not qualify under existing CEQA statutory or categorical exemptions, CARB recommends that GHG-related impacts may be found to be insignificant if they: (1) meet interim performance standards for construction and transportation-related emissions and (2) emit no more than 7,000 $MTCO_2E$ from non-transportation operational sources. CARB recommends that residential and commercial projects that do not qualify under existing CEQA statutory or categorical exemptions are presumed to have a less than significant impact related to climate change if: (1) construction activities meet an interim CARB performance standard for construction-related emissions; (2) operational activities: i) meet the California Energy Commission's Tier II Energy Efficiency goal; ii) meet an interim CARB performance standard for water use; iii) meet an interim CARB performance standard for waste; and iv) meet an interim CARB performance standard for transportation; and (3) the project will emit no more than a "to be determined" limit for $MTCO_2E$ per year. Although the CARB 2008 Draft Guidance indicated CARB's intent to provide final guidance to OPR before OPR issued its draft *CEQA Guidelines*, CARB did not release final guidance before the CEQA Guideline Amendments were adopted in December 2009. Because no further guidance has been issued

as of April 2012, these recommendations are not utilized in the Project's analysis; they are briefly addressed here for the purpose of full disclosure.

Regional

In addition to current rules and regulations which also address GHG, SCAQMD plans to provide guidance to local lead agencies on determining significance for GHG in their CEQA documents by convening a GHG CEQA Significance Threshold Working Group to work with SCAQMD staff on developing GHG CEQA significance thresholds. The SCAQMD began hosting monthly working group meetings in April 2008. The result of the October 2008 working group meeting was a *Draft AQMD Staff CEQA Greenhouse Gas Significance Threshold* (SCAQMD 2008a) and the *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold* (SCAQMD 2008b). The Draft Threshold is intended to be interim guidance until statewide significance thresholds or guidance are established. The proposed significance threshold is a tiered approach which allows for flexibility by establishing multiple thresholds to cover a broad range of projects.

SCAQMD proposes three tiers of compliance that may lead to a determination that impacts are less than significant, including: (1) projects with greenhouse gas emissions within budgets set out in approved regional plans, to be developed under the SB 375 process; (2) projects with GHG emissions that are below designated quantitative thresholds: (i) industrial projects with an incremental GHG emissions increase that falls below (or is mitigated to be less than) 10,000 $MTCO_2E$/yr; or (ii) commercial and residential projects with an incremental GHG emissions increase that falls below (or is mitigated to be less than) 3,000 $MTCO_2E$/yr, provided that such projects also meet energy efficiency and water conservation performance targets that have yet to be developed; (3) projects that purchase GHG offsets which, either alone or in combination with one of the three tiers mentioned above, achieve the target significance screening level.

On December 5, 2008, the SCAQMD Governing Board adopted its staff proposal for an interim CEQA GHG significance threshold for projects where the SCAQMD is the lead agency. Currently, the Board has only adopted thresholds relevant to industrial (stationary source) projects.

Since December 2008, the SCAQMD continued hosting the working group meetings and revised the draft threshold proposal several times although it did not officially provide these proposals in a subsequent document. The most recent working group meeting on September 28, 2010[5] proposed two options lead agencies can select from for screening thresholds of significance for GHG emissions in residential and commercial projects proposes to expand the industrial threshold to other lead agency industrial projects. Option 1 proposes a threshold of 3,000 $MTCO_2E$/year for all residential and commercial projects; Option 2 proposes a threshold value by land use type where the numeric threshold is 3,500 $MTCO_2E$/year for residential projects; 1,400 $MTCO_2E$/year for commercial projects; and 3,000 $MTCO_2E$/year for mixed use projects. Although both Options are recommended, a lead agency is advised to use only one Option and to use it consistently. The Project's GHG emissions will be compared according to Option 1 of SCAQMD recommendations.

[5] http://www.aqmd.gov/ceqa/handbook/GHG/2010/sept28mtg/sept29.html

Emissions Estimates

It should be noted that the release of GHG in general and CO_2 specifically into the atmosphere is not of itself an adverse environmental affect. It is the affect that increased concentrations of GHG including CO_2 in the atmosphere has upon the Earth's climate (i.e., climate change) and the associated consequences of climate change that results in adverse environmental affects (e.g., sea level rise, loss of snowpack, severe weather events). Although air quality modeling can estimate a project's incremental contribution of CO_2 into the atmosphere, it is not feasible to determine whether or how an individual project's relatively small incremental contribution (on a global scale) might translate into physical effects on the environment. Since the Earth's climate is determined by the complex interaction of different components of the Earth and its atmosphere, it is not possible to discern whether the presence or absence of GHG emitted by the Project would result in any measurable impact that would cause climate change. Nonetheless, GHG emissions resulting from the Project were quantified and evaluated pursuant to CEQA.

The following Project activities were analyzed below for their contribution to global GHG emissions:

Short-Term Analysis

Construction-Related Activities

The CalEEMod model calculates GHG emissions from fuel usage by construction equipment and construction-related activities, like construction worker trips, for a given project. The CalEEMod estimate does not analyze emissions from construction-related electricity or natural gas. Construction-related electricity and natural gas emissions vary based on the amount of electric power used during construction and other unknown factors which make them too speculative to quantify. Life-cycle emissions associated with the manufacture of building materials are also not quantified in this analysis although they undoubtedly exist. Quantification was not attempted because of the large spatio-temporal variation in sources for building products used to construct the MDP Facilities and the consequent large uncertainty associated with the resulting emissions. For this reason, to attempt to quantify life-cycle emissions of materials would be speculative. This conclusion is consistent with guidance on quantification of emissions for commercial projects presented by the California Air Pollution Control Officer's Association guidance. (CAPCOA, p. 65).

The following table summarizes the CalEEMod output results and presents the GHG emissions estimates for the Moreno MDP's representative project in metric tonnes per year (MT/yr) for CO_2, CH_4, N_2O, and CO_2E.[6]

[6] CO_2E is the sum of CO_2 emissions estimated plus the sum of CH_4 and N_2O emissions estimated multiplied by their respective GWP.

Table 7 – Construction Equipment GHG Emissions

Phase	Metric Tons per year (MT/yr)			
	CO_2	CH_4	N_20	Total CO_2E
2014				
Basin	1,760.81	0.06	0.00	1,761.94
Trapezoidal Channel	411.94	0.02	0.00	412.35
Storm Drain	52.66	0.00	0.00	52.74
2015				
Trapezoidal Channel	4.33	0.00	0.00	4.33
Total	**2,229.74**	**0.08**	**0.00**	**2,231.36**
			Amortized Total	**74.38**

Evaluation of the table above indicates that an estimated 2,231.36 $MTCO_2E$ will occur from the representative project's construction equipment over the course of the estimated construction period. The Moreno MDP and its Facilities does not fit into the typical categories provided (industrial, commercial, and residential) in either the draft thresholds from CARB and SCAQMD. However, the total GHG emissions from construction of the MDP's representative project is below the SCAQMD recommended screening level of 3,000 $MTCO_2E$/yr for commercial projects. Further, the draft SCAQMD GHG threshold Guidance document released in October 2008 (SCAQMD 2008b, p. 3-8) recommends that construction emissions be amortized for a project lifetime of 30 years to ensure that GHG reduction measures address construction GHG emissions as part of the operational reduction strategies. Therefore, GHG emissions from the Project do not exceed available draft screening thresholds.

Long-Term Analysis

As discussed in the criteria pollutant analysis above, the majority of operational emissions would be from the infrequent visits by vehicles driven by maintenance personnel. This and any other maintenance-related activity will not result in additional sources of emissions when compared to the existing maintenance routine of the current MDPs for the area. Therefore, no long-term impacts related to the Moreno MDP Facility operation were evaluated.

Conclusion

As stated above, the Moreno MDP's GHG emissions are below the SCAQMD draft screening threshold for commercial projects.

Section 5 – References

References Cited

The following documents were referred to as general information sources during preparation of this document. They are available for public review at the locations abbreviated after each listing and spelled out at the end of this section. Some of these documents are also available at public libraries and at other public agency offices.

AB 32	Legislative Counsel of California, *Bill Information: AB 32 – California Global Warming Solutions Act of 2006*, September 2006. (Available at http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf, accessed November 7, 2011.)
CalEEMod	ENVIRON International Corporation, **Cal**ifornia **E**missions **E**stimator **Mod**el version 2011.1.1, February 2011. (Available at http://www.caleemod.com/, accessed March 2012 and April 2014.)
CalEEMod User's Guide	ENVIRON International Corporation, **Cal**ifornia **E**missions **E**stimator **Mod**el User's Guide Version 2011.1, March 16, 2011. (Available at http://www.caleemod.com/, accessed March and April 2012.)
CAPCOA	California Air Pollution Control Officer's Association, *CEQA and Climate Change*, January 2008. (Available at http://www.capcoa.org, accessed November 7, 2011.)
CARB AB 32	California Air Resources Board, *Assembly Bill 32 Global Warming Solutions Act* webpage. (Available at http://www.arb.ca.gov/cc/ab32/ab32.htm, accessed November 7, 2011.)
CARB 2007	California Air Resources Board, *Staff Report – California 1990 Greenhouse Gas Emissions Level and 2020 Emission Limit*, November 16, 2007. (Available at http://www.arb.ca.gov/cc/ccei.htm, accessed November 7, 2011.)
CARB 2008	California Air Resources Board, *Preliminary Draft Staff Proposal, Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act*, October 24, 2008. (Available at http://www.arb.ca.gov/cc/localgov/ceqa/ceqa.htm, accessed November 7, 2011.)
CARB Scoping Plan	California Air Resources Board, *Climate Change Proposed Scoping Plan,* October, 2008. (Available at http://www.arb.ca.gov/cc/scopingplan/document/psp.pdf, accessed November 7, 2011.)

CEC 2005 California Energy Commission, *California's Water – Energy Relationship*, Publication CEC-700-2005-011-SF, Published November 2005. (Available at www.energy.ca.gov/publications/index.php, accessed November 7, 2011.)

CEC 2006 California Energy Commission, *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004*, Publication CEC-600-2006-013-SF, December 2006. (Available at http://www.energy.ca.gov/2006publications/CEC-600-2006-013/CEC-600-2006-013-SF.PDF, accessed November 7, 2011.)

CPUC California Public Utilities Commission, *News Release: PUC Sets GHG Emissions Performance Standard to Help Mitigate Climate Change*, January 25, 2007. (Available at http://docs.cpuc.ca.gov/published/News_release/63997.htm, accessed November 7, 2011.)

EIA Energy Information Administration, *Emissions of Greenhouse Gases in the United States 2006*, U.S. Department of Energy, November 2007. (Available at ftp://ftp.eia.doe.gov/pub/oiaf/1605/cdrom/pdf/ggrpt/057306.pdf, accessed November 7, 2011.)

EO S-3-05 California Executive Department, *Executive Order S-3-05 by the Governor of the State of California,* June 2005. (Available at http://www.dot.ca.gov/hq/energy/ExecOrderS-3-05.htm, accessed November 7, 2011.)

IPCC 1995 Intergovernmental Panel on Climate Change, Second Assessment Report, *Climate Change 1995 – The Science of Climate Change*, 1996. (Available at http://www.ipcc.ch/ipccreports/sar/wg_I/ipcc_sar_wg_I_full_report.pdf, accessed November 7, 2011.)

IPCC 2007 Intergovernmental Panel on Climate Change, Fourth Assessment Report, *Climate Change 2007 – The Physical Science Basi*s, 2007. (Available at http://www.ipcc.ch/publications_and_data/ar4/wg1/en/contents.html, accessed November 7, 2011.)

OPR 2008 State of California, Governor's Office of Planning and Research, *Technical Advisory, CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review*, June 19, 2008. (Available at http://opr.ca.gov/index.php?a=ceqa/index.html, accessed November 7, 2011.)

OPR 2009 State of California, Governor's Office of Planning and Research, *CEQA Guideline Amendments*, December 30, 2009. (Available at http://ceres.ca.gov/ceqa/guidelines/, accessed November 7, 2011.)

SB 97	Legislative Counsel of California, *Senate Bill No. 97, Chapter 185, CEQA, Greenhouse Gas Emissions*, approved August 24, 2007. (Available at http://www.climatechange.ca.gov/publications/legislation/SB_97_bill_20070824_chaptered.pdf, accessed November 7, 2011.)
SB 375	California State Senate, *Senate Bill No. 375, Chapter 728*, approved September 30, 2008. (Available at http://www.leginfo.ca.gov/pub/07-08/bill/sen/sb_0351-0400/sb_375_bill_20080930_chaptered.pdf, accessed November 7, 2011.)
SB 1368	California State Senate, *Bill Information: SB 1368*, September 29, 2006. (Available at http://www.leginfo.ca.gov/pub/05-06/bill/sen/sb_1351-1400/sb_1368_bill_20060929_chaptered.pdf, accessed November 7, 2011.)
SCAQMD	South Coast Air Quality Management District, *Air Quality Data 2000–2009*. (Available at http://www.aqmd.gov/smog/historicaldata.htm, accessed November 2011.)
SCAQMD 1993	South Coast Air Quality Management District, *CEQA Air Quality Handbook*, November 1993. (Available at SCAQMD.)
SCAQMD 2005	South Coast Air Quality Management District, *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, May 6, 2005. (Available at http://www.aqmd.gov/prdas/aqguide/doc/aq_guidance.pdf, accessed November 7, 2011.)
SCAQMD 2007	South Coast Air Quality Management District, *2007 Air Quality Management Plan,* June 2007. (Available at http://www.aqmd.gov/aqmp/AQMPintro.htm, accessed November 7, 2011.)
SCAQMD 2008	South Coast Air Quality Management District, *Final Localized Significance Threshold Methodology*, Revised July 2008. (Available at http://www.aqmd.gov/ceqa/handbook/LST/LST.html, accessed November 7, 2011.)
SCAQMD 2008a	South Coast Air Quality Management District, *Draft AQMD Staff CEQA Greenhouse Gas Significance Threshold*, October 22, 2008. (Available at http://www.aqmd.gov/ceqa/hdbk.html, accessed March 5, 2012.)
SCAQMD 2008b	South Coast Air Quality Management District, *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*, October 2008. (Available at http://www.aqmd.gov/ceqa/hdbk.html, accessed November 7, 2011.)

Location	Address
SCAQMD	South Coast Air Quality Management District 21865 East Copley Drive Diamond Bar, CA 91765-4182

Document Preparation Staff

ALBERT A. WEBB ASSOCIATES
3788 McCray Street
Riverside, CA 92506
951.686.1070

Eliza Laws, Senior Environmental Analyst
Laura Hudson, Assistant Environmental Technician

APPENDIX A

CalEEMod OUTPUT FILES

Construction Schedule

PhaseNumber	PhaseName	PhaseType	PhaseStartDate	PhaseEndDate	NumDaysWeek	NumDays
1	Cactus Basin Site Prep	Site Preparation	2014/09/01	2014/09/05	5	5
2	Line F Site Prep	Site Preparation	2014/09/06	2014/09/19	5	10
3	Line F Grading	Grading	2014/09/20	2014/11/14	5	40
4	Line F-2 Grading	Grading	2014/11/15	2014/12/02	5	12
5	Cactus Basin Grading	Grading	2014/12/03	2015/01/13	5	30
6	Line F-2 Paving	Paving	2015/01/14	2015/01/21	5	6
7	Line F Construction	Trenching	2015/01/22	2015/07/08	5	120

Construction Equipment List

PhaseName	OffRoadEquipmentType	OffRoad Equipment Unit Amount	Usage Hours	Horse Power	Load Factor
Cactus Basin Site Prep	Excavators	1	8	157	0.57
Cactus Basin Site Prep	Scrapers	1	8	356	0.72
Line F Site Prep	Excavators	1	8	157	0.57
Line F Grading	Graders	2	8	162	0.61
Line F Grading	Rubber Tired Dozers	2	8	358	0.59
Line F Grading	Tractors/Loaders/Backhoes	2	8	75	0.55
Line F-2 Grading	Graders	1	8	162	0.61
Line F-2 Grading	Rubber Tired Dozers	1	8	358	0.59
Line F-2 Grading	Tractors/Loaders/Backhoes	1	8	75	0.55
Cactus Basin Grading	Cement and Mortar Mixers	1	8	9	0.56
Cactus Basin Grading	Graders	2	8	162	0.61
Cactus Basin Grading	Rubber Tired Dozers	2	8	358	0.59
Cactus Basin Grading	Scrapers	2	8	356	0.72
Cactus Basin Grading	Tractors/Loaders/Backhoes	2	8	75	0.55
Line F-2 Paving	Cement and Mortar Mixers	1	8	9	0.56
Line F-2 Paving	Pavers	1	8	89	0.62
Line F-2 Paving	Rollers	1	8	84	0.56
Line F Construction	Cement and Mortar Mixers	1	8	9	0.56

Moreno MDP

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Other Asphalt Surfaces	0.58	Acre
Other Non-Asphalt Surfaces	26.3	Acre

1.2 Other Project Characteristics

Urbanization Urban

Climate Zone 10

Wind Speed (m/s) 2.4

Precipitation Freq (Days) 28

Utility Company Southern California Edison

1.3 User Entered Comments

Project Characteristics -

Land Use - Pipeline Construction disturbance area: Line F = 3.66 ac, Cactus Basin = 25.8 ac
Paved area: Line F-2 = .58 ac

Construction Phase - Cactus Basin Site Prep - 1 Week, Basin Grading - 1.5 Months
Line F Site Prep - 2 weeks during grading, Line F Grading - 2 Months total
Off-road Equipment - Grader -2, Dozers -2, Scrapers -2, Cement & mortar mixer -1, tractor/loader/backhoes -2

Off-road Equipment - Excavator -1, Scraper -1

Off-road Equipment - Grading Drainage Ditch

Off-road Equipment - Dozer -1, Grader -1, Tractor/loader/backhoe -1

Off-road Equipment - Paver -1, Roller -1, Cement & mortar mixer -1

Off-road Equipment - Cement & mortar mixer - 1

Off-road Equipment - Graders -2, Dozers -2, Tractor/loader/backhoe -2

Off-road Equipment - Excavators -2

Trips and VMT - F-2 Grading assumes 2 vendor trips/day
F-2 Repaving assumes 2 trips/day

Grading - Line F=1860CYx40 days=74,400
Line F-2 = 600yd(1800lf)x4yd(12lf)x3.33yd(10ft)=8,000CY

Construction Off-road Equipment Mitigation -

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2014	68.29	758.34	353.05	1.23	1,007.22	30.64	1,037.86	10.60	30.64	41.24	0.00	129,117.90	0.00	3.85	0.00	########
2015	61.96	679.50	325.13	1.23	1,007.23	27.08	1,034.31	10.61	27.08	37.68	0.00	129,294.07	0.00	3.51	0.00	########
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2014	64.32	710.84	357.70	1.23	997.45	29.66	1,027.11	6.56	29.66	36.22	0.00	129,117.90	0.00	3.85	0.00	########
2015	58.60	639.43	332.21	1.23	997.46	26.42	1,023.88	6.57	26.42	32.99	0.00	129,294.07	0.00	3.51	0.00	########
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**		**0.00**	**0.00**	**0.00**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**		**0.00**	**0.00**	**0.00**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 Cactus Basin Site Prep - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	3.33	27.52	14.38	0.03		1.17	1.17		1.17	1.17		3,462.90		0.30		3,469.14
Total	**3.33**	**27.52**	**14.38**	**0.03**	**0.00**	**1.17**	**1.17**	**0.00**	**1.17**	**1.17**		**3,462.90**		**0.30**		**3,469.14**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.02	0.03	0.31	0.00	0.07	0.00	0.07	0.00	0.00	0.00		51.54		0.00		51.60
Total	**0.02**	**0.03**	**0.31**	**0.00**	**0.07**	**0.00**	**0.07**	**0.00**	**0.00**	**0.00**		**51.54**		**0.00**		**51.60**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	2.44	15.84	17.58	0.03		1.02	1.02		1.02	1.02	0.00	3,462.90		0.30		3,469.14
Total	**2.44**	**15.84**	**17.58**	**0.03**	**0.00**	**1.02**	**1.02**	**0.00**	**1.02**	**1.02**	**0.00**	**3,462.90**		**0.30**		**3,469.14**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.02	0.03	0.31	0.00	0.07	0.00	0.07	0.00	0.00	0.00		51.54		0.00		51.60
Total	**0.02**	**0.03**	**0.31**	**0.00**	**0.07**	**0.00**	**0.07**	**0.00**	**0.00**	**0.00**		**51.54**		**0.00**		**51.60**

3.3 Line F Site Prep - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	0.91	6.65	5.32	0.01		0.36	0.36		0.36	0.36		896.14		0.08		897.83
Total	**0.91**	**6.65**	**5.32**	**0.01**	**0.00**	**0.36**	**0.36**	**0.00**	**0.36**	**0.36**		**896.14**		**0.08**		**897.83**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.01	0.02	0.18	0.00	0.04	0.00	0.04	0.00	0.00	0.00		30.92		0.00		30.96
Total	**0.01**	**0.02**	**0.18**	**0.00**	**0.04**	**0.00**	**0.04**	**0.00**	**0.00**	**0.00**		**30.92**		**0.00**		**30.96**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00						0.00
Off-Road	0.63	4.10	5.83	0.01		0.35	0.35		0.35	0.35	0.00	896.14		0.08		897.83
Total	**0.63**	**4.10**	**5.83**	**0.01**	**0.00**	**0.35**	**0.35**	**0.00**	**0.35**	**0.35**	**0.00**	**896.14**		**0.08**		**897.83**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.01	0.02	0.18	0.00	0.04	0.00	0.04	0.00	0.00	0.00		30.92		0.00		30.96
Total	**0.01**	**0.02**	**0.18**	**0.00**	**0.04**	**0.00**	**0.04**	**0.00**	**0.00**	**0.00**		**30.92**		**0.00**		**30.96**