VOLUME 2

DRAFT ENVIRONMENTAL IMPACT REPORT

WESTGATE SPECIFIC PLAN

CITY OF FONTANA, CALIFORNIA

APPENDIX A1 THROUGH H

PCR

JANUARY 2015

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DRAFT ENVIRONMENTAL IMPACT REPORT

WESTGATE SPECIFIC PLAN

CITY OF FONTANA, CALIFORNIA

APPENDIX A1 THROUGH H

Prepared For:

City of Fontana
Development Services Organization – Planning Division
8353 Sierra Avenue
Fontana, California 92335

Prepared By:

PCR Services Corporation
2121 Alton Parkway, Suite 100
Irvine, California 92606

JANUARY 2015

Appendix A1 - Initial Study

INITIAL STUDY

WESTGATE SPECIFIC PLAN

CITY OF FONTANA, CALIFORNIA

JULY 2013

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Prepared By:

PCR Services Corporation
One Venture, Suite 150
Irvine, California 92618

JULY 2013

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ENVIRONMENTAL CHECKLIST FORM

1. **Project title:** Westgate Specific Plan

2. **Lead agency name and address:** City of Fontana
   Community Development Department
   8353 Sierra Avenue
   Fontana, CA 92335

3. **Contact person and phone number:** Charles Fahie, Senior Planner (909) 350-6724

4. **Project location:** Regionally, this project site is approximately five miles north and west of downtown Fontana, ten miles west of Downtown San Bernardino, 22 miles north of the City of Riverside, and 50 miles east of the City of Los Angeles. The project site is situated adjacent to and east of Interstate 15 (I-15) and north and south of State Route 210 (SR-210).

5. **Project sponsor's name and address:** City of Fontana Community Development Department

6. **General plan designation:** Regional Mixed Use (RMU), Residential Planned Community (R-PC), Medium Density Residential (R-M), General Commercial (C-G), Public Utility Corridors (P-UC), and Recreational Facilities (P-R).

7. **Zoning:** Specific Plan #17 – Westgate

8. **Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)**

   The Westgate Specific Plan is comprised of four villages, all of the land uses within which are incorporated into 83 development areas, designated as "Planning Areas" (PAs). Altogether, these PAs include a total of 5,410 residential units, 50.9 acres of Commercial Retail, 179.9 acres of business park and professional office uses, 71.6 acres of warehouse/distribution uses, 47.8 acres of Open Space/Public Parks, 9.15 acres of Open Space/Private Parks, 1.4 acres of Open Space/Landscape, 96.1 acres of Open Space/Utility Corridor, 24 acres for an Elementary School, 60 acres for a High School, and 89.35 acres of major street rights-of-way.

   An Initial Study/Notice of Preparation for the Westgate Specific Plan was previously distributed for public review on February 15, 2012; the only material change to the currently proposed Specific Plan from the previous version is the designation of 71.6 acres for warehouse/distribution uses that were previously designated as Business Park.

9. **Surrounding land uses and setting: Briefly describe the project's surroundings:**

   North: Interstate 15 Freeway – the 103-acre Ventana at Duncan Canyon Specific Plan is approximately ½-mile to the north. Several unimproved vacant properties are located between the Ventana project and Westgate.

   East: Various developed residential single family neighborhoods.

   West: Interstate 15 Freeway.

   South: The Village of Heritage planned community is located directly to the south of the Westgate Specific Plan.

10. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)**

    - Santa Ana Regional Water Quality Control Board;

- San Bernardino County Flood Control District;
- California Department of Transportation;
- California Public Utilities Commission.

PURPOSE OF THE INITIAL STUDY

The Project is analyzed in this Initial Study, in accordance with the California Environmental Quality Act (CEQA), to determine if approval of the Project would have a significant impact on the environment. This Initial Study has been prepared pursuant to the requirements of CEQA, under Public Resources Code 21000-21177, of the State CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387) and under the guidance of the City of Fontana. The City of Fontana is the Lead Agency under CEQA and is responsible for preparing the Initial Study for the proposed Project.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☒ Aesthetics	☒ Agriculture Resources	☒ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Geology/Soils
☒ Greenhouse Gas Emissions	☒ Hazards/Hazardous Materials	☒ Hydrology/Water Quality
☒ Land Use/Planning	☐ Mineral Resources	☒ Noise
☒ Population/Housing	☒ Public Services	☒ Recreation
☒ Transportation/Traffic	☒ Utilities and Service Systems	☒ Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature — July 11, 2013 (Date)

Charles D. Fahie, AICP (Printed Name) — Senior Planner (Title)

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

2) A list of "Supporting Information Sources" should be attached, and other sources used or individuals contacted should be cited in the discussion.

3) Impact Columns Heading Definitions:

   - "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
   - "Potentially Significant Unless Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The mitigation measures must be described, along with a brief explanation of how they reduce the effect to a less than significant level.
   - "Less Than Significant Impact" applies where the project creates no significant impacts, only Less Than Significant impacts.
   - "No Impact" applies where a project does not create an impact in that category. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one proposed (e.g., the project falls outside of a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

4) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   - Earlier Analysis Used. Identify and state where they are available for review.
   - Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   - Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

5) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

6) The explanation of each issue should identify:

   a) The significance criteria or threshold, if any, used to evaluate each question; and

   b) The mitigation measure identified, if any, to reduce the impact to less than significance.

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS – Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☒	☐	☐	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☒	☐	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☒	☐	☐	☐
II. AGRICULTURE AND FORESTRY RESOURCES – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire protection regarding the state's inventory of forest land, including the Forest and Range Assessment of and the Forest Legacy Assessment Project; and forest carbon measurements methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project::				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☒	☐	☐	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 1220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☒	☐	☐	☐

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☒	☐	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☒	☐	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☒	☐	☐	☐
IV. BIOLOGICAL RESOURCES – Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☒	☐	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☒	☐	☐	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☒	☐	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native nursery sites?	☒	☐	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒
V. CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☒	☐	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☒	☐	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☒	☐	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☒	☐	☐	☐
VI. GEOLOGY AND SOILS – Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☒	☐	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☒	☐	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GREENHOUSE GAS EMISSIONS – Would the Project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance?	☒	☐	☐	☐
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐
VIII. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☒	☐	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☒	☐	☐	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☒	☐	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☒	☐	☐	☐
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐
IX. HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☒	☐	☐	☐

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☒	☐	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☒	☐	☐	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alternation of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☒	☐	☐	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☒	☐	☐	☐
f) Otherwise substantially degrade water quality?	☒	☐	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☒	☐	☐	☐
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☒	☐	☐	☐
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☒	☐	☐	☐
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒
X. LAND USE AND PLANNING – Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☒	☐	☐	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES – Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒
XII. NOISE – Would the project result in:				
a) Exposure of persons to or generation of noise level in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☒	☐	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☒	☐	☐	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
XIII. POPULATION AND HOUSING – Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☒	☐	☐	☐
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☒	☐	☐	☐
Police protection?	☒	☐	☐	☐
Schools?	☒	☐	☐	☐
Parks?	☒	☐	☐	☐
Other public facilities?	☒	☐	☐	☐
XV. RECREATION				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☒	☐	☐	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☒	☐	☐	☐
XVI. TRANSPORTATION/TRAFFIC – Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☒	☐	☐	☐
b) Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☒	☐	☐	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☒	☐	☐	☐
e) Result in inadequate emergency access?	☒	☐	☐	☐

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities??	☒	☐	☐	☐
XVII. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☒	☐	☐	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☒	☐	☐	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☒	☐	☐	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☒	☐	☐	☐
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☒	☐	☐	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☒	☐	☐	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

ATTACHMENT A – PROJECT DESCRIPTION

1. INTRODUCTION

Unitex Management Corporation, the project applicant, proposes to replace the existing Westgate Specific Plan, which was adopted by the City of Fontana in 1996. The new Westgate Specific Plan (the proposed project) is intended to update the existing Specific Plan to reflect current conditions and respond to changing market conditions relative to future development in the project area.

2. PROJECT LOCATION

The Westgate Specific Plan encompasses 964 acres in the northwestern part of the City of Fontana within a gently sloping alluvial plain of the nearby San Gabriel Mountains in western San Bernardino County. Regionally, this project site is approximately five miles north and west of downtown Fontana, ten miles west of Downtown San Bernardino, 22 miles north of the City of Riverside, and 50 miles east of the City of Los Angeles. **Figure A-1**, *Regional Map*, identifies the Westgate Specific Plan location within the context of the southern California region. The project site is situated adjacent to Interstate 15 (I-15) and State Route 210 (SR-210). Full freeway interchanges that provide access to the site are located at I-15/Baseline, I-15/Summit Avenue with direct access at the SR-210/Cherry Avenue interchange. A utility corridor including Southern California Edison, Southern California Gas and Metropolitan Water District traverses the property, paralleling the I-15 freeway. **Figure A-2**, *Project Vicinity Map*, shows the project area within the local city context.

3. EXISTING ON-SITE AND SURROUNDING LAND USES

The Westgate Specific Plan project area is located in a rapidly growing area of North Fontana. The General Plan identifies this part of the City as "Growth Areas" which also includes all of Northern Fontana. There are over a dozen Master Planned Developments in the nearby areas. The North Fontana area contains significant recreational uses, including Fontana Park and the Jessie Turner Health & Fitness Community Center, which includes a new community building and swim complex. A second new community center and swim complex is also located nearby at the Heritage Neighborhood Center directly south of the Westgate Specific Plan. Lighted soccer fields, baseball fields, tennis courts and other amenities area are also located directly south in the McDermott Sports Complex, adjacent to Heritage Intermediate School. **Figure A-3**, *Existing Specific Plans and Community Plans*, identifies the existing Specific Plans and Community Plans in the Westgate Specific Plan area. Adjacent and surrounding land uses around the project area are summarized as follows:

NORTH: Interstate 15 Freeway – the 103-acre Ventana at Duncan Canyon Specific Plan is approximately ½-mile to the north. Several unimproved vacant properties are located between the Ventana project and the Westgate Specific Plan area.

EAST: Various developed residential single-family neighborhoods.

WEST: Interstate 15 Freeway.

SOUTH: The Village of Heritage planned community is located directly to the south of the Westgate Specific Plan.

4. PROJECT SITE GENERAL PLAN AND ZONING DESIGNATIONS

The project site represents a relatively large area and therefore contains several General Plan land use designations; however, the entire site is zoned Specific Plan (Specific Plan #17 – Westgate), as the existing Westgate Specific Plan provides site-specific zoning for the various land uses within the Plan area. Land use designations within the project site include the following: Regional Mixed Use (RMU), Residential Planned Community (R-PC), Medium Density Residential (R-M), General Commercial (C-G), Public Utility Corridors (P-UC), and Recreational Facilities (P-R). Land use designations are illustrated below in **Figure A-4**, *Existing Land Use Designations*.

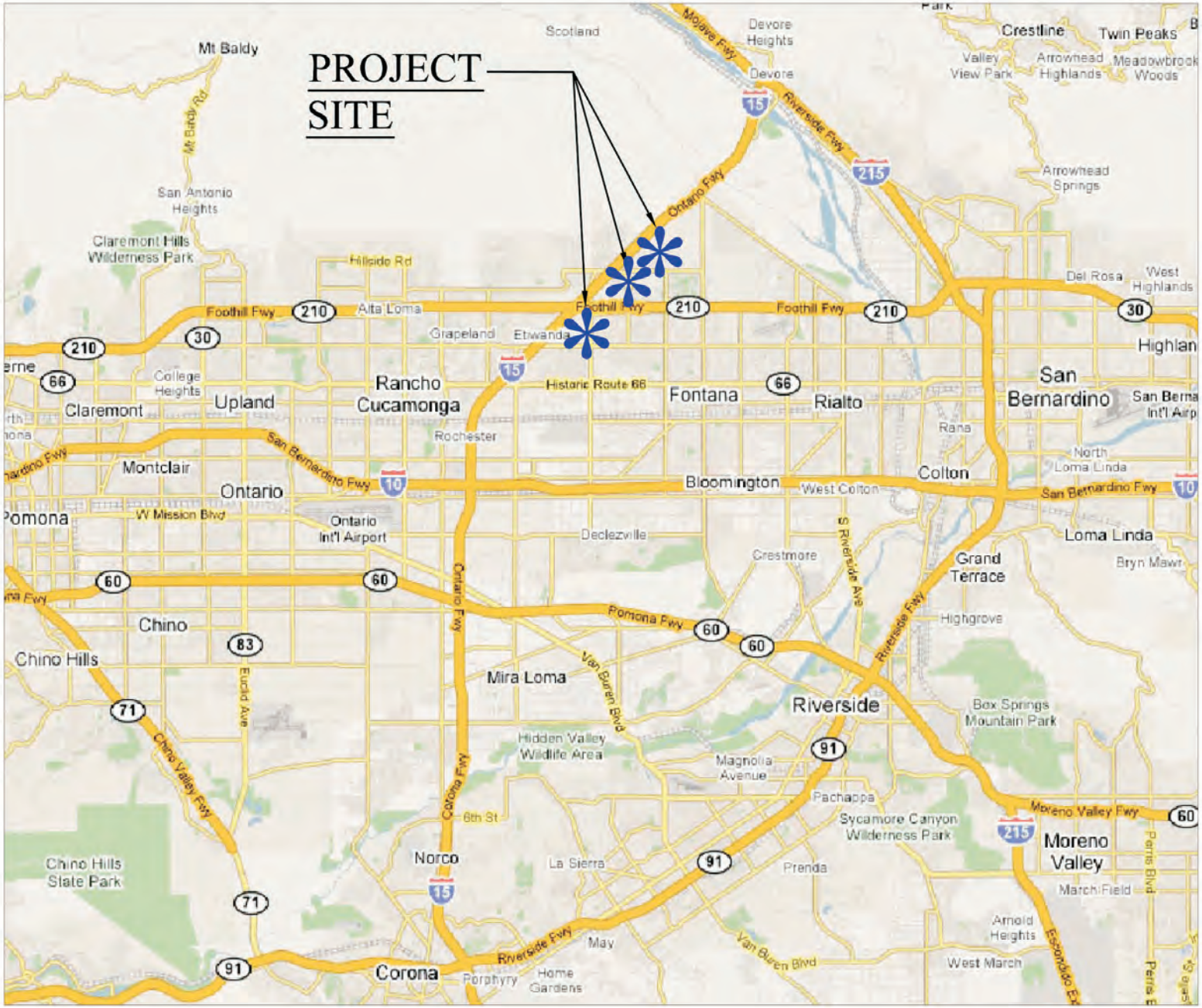
5. EXISTING SITE CONDITIONS

The Westgate Specific Plan project area is located on a gently sloping alluvial plain with slopes ranging from 1.5 to 2.5 percent grade. The property contains no significant topographical features, and portions of the site were previously utilized for agricultural purposes. The Falcon Ridge Town Center, with approximately 415,000 square feet of commercial retail uses, has been completed within the Specific Plan boundaries directly north of Summit Avenue. One multi-tenant office building also exists on the project site and is located along Cherry Avenue just north of SR-210. Between Baseline Avenue and the SR-210, the California Department of Transportation (Caltrans) has recently occupied a new 124,000-square-foot Transportation Management Facility and Southern Regional Lab. A Southern California Edison (SCE) Company utility corridor diagonally traverses the site in a southwesterly direction. Additionally, a Metropolitan Water District (MWD) main trunk line and right-of-way is located parallel to and along the north side of the SCE corridor, while a Southern California Gas Company (SCG) main line and right-of-way, as well as a San Gabriel Valley Municipal Water District pipeline, occur on the south side and parallel to the SCE corridor. Further, a San Bernardino Association of Governments (SANBAG) right-of-way occurs contiguous to the southwest boundary of the site. Formerly the location of a railroad line, this corridor is now part of a regional trail system with the capability for a future commuter train line. Along the southerly portion of the site just east of the I-15 freeway, a County of San Bernardino Flood Control District dual box concrete channel collects seasonal storm flows from the Etiwanda and San Sevaine Creeks to the north. An open earthen channel remains just east of the dual concrete channel that formerly collected the storm flows prior to the completion of the dual concrete channels and the Highland channel. Refer to **Figure A-5**, *Existing Site Conditions*, below, for the location of the above site conditions and other site elements.

6. DESCRIPTION OF THE PROPOSED PROJECT

a. Project Background

The Westgate Specific Plan was adopted in 1996 by the City of Fontana. Since that time, the Inland Empire region has experienced substantial growth and the dynamics of the area have changed considerably. The SR-210/I-15 freeway overpass has been completed, with the SR-210 freeway extending easterly to the Interstate 215 (I-215) freeway. Two major development projects have also been completed within the Specific Plan boundary, including the Falcon Ridge Town Center, with 415,000 square feet of retail uses that include shops, services, and restaurants, and the Caltrans 124,000-square-foot Transportation Management Facility and Southern Regional Lab.



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Not to scale

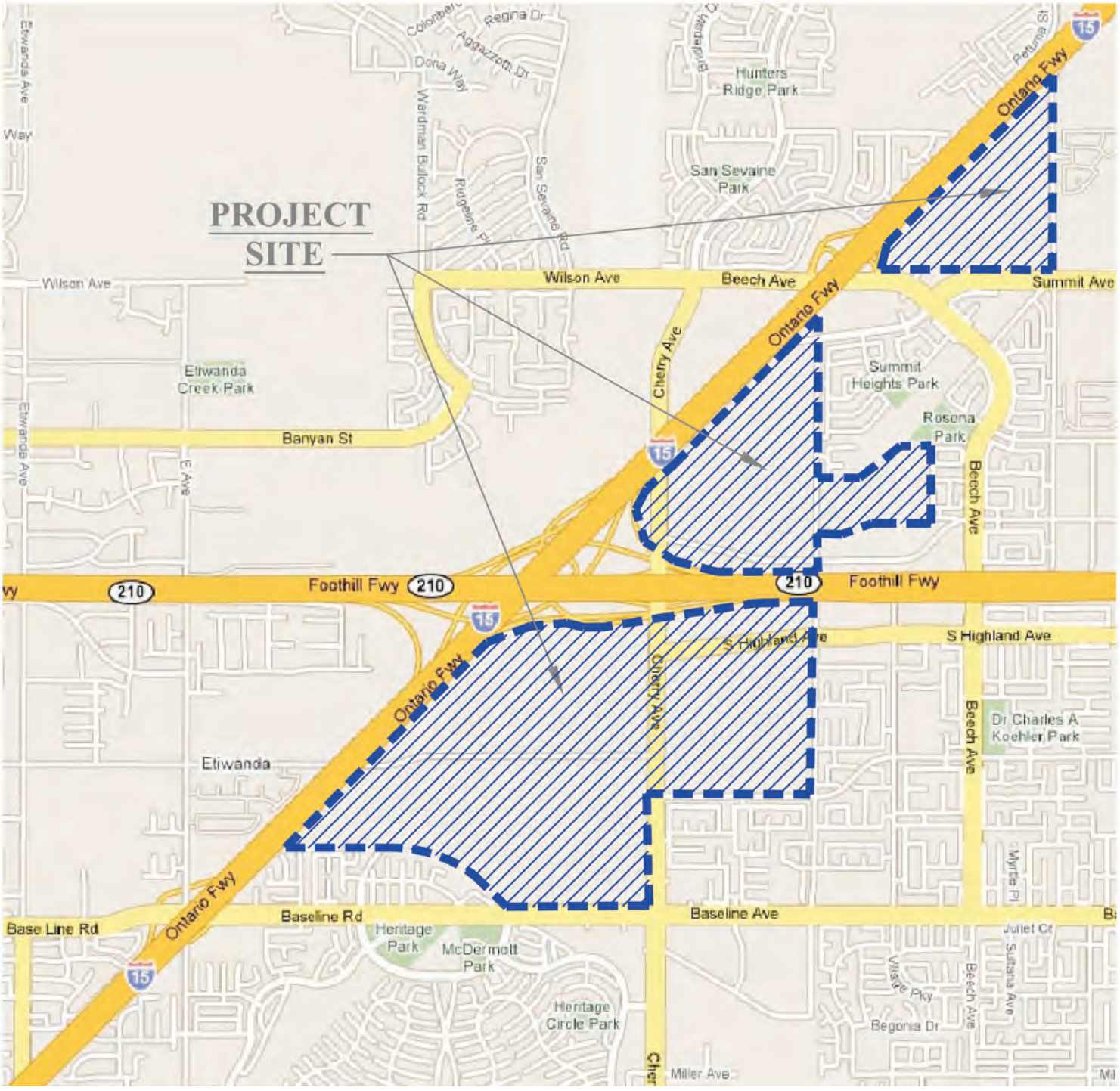
Regional Map

Westgate Specific Plan

Source: JHA Consulting, Inc., 2011.

FIGURE

A-1



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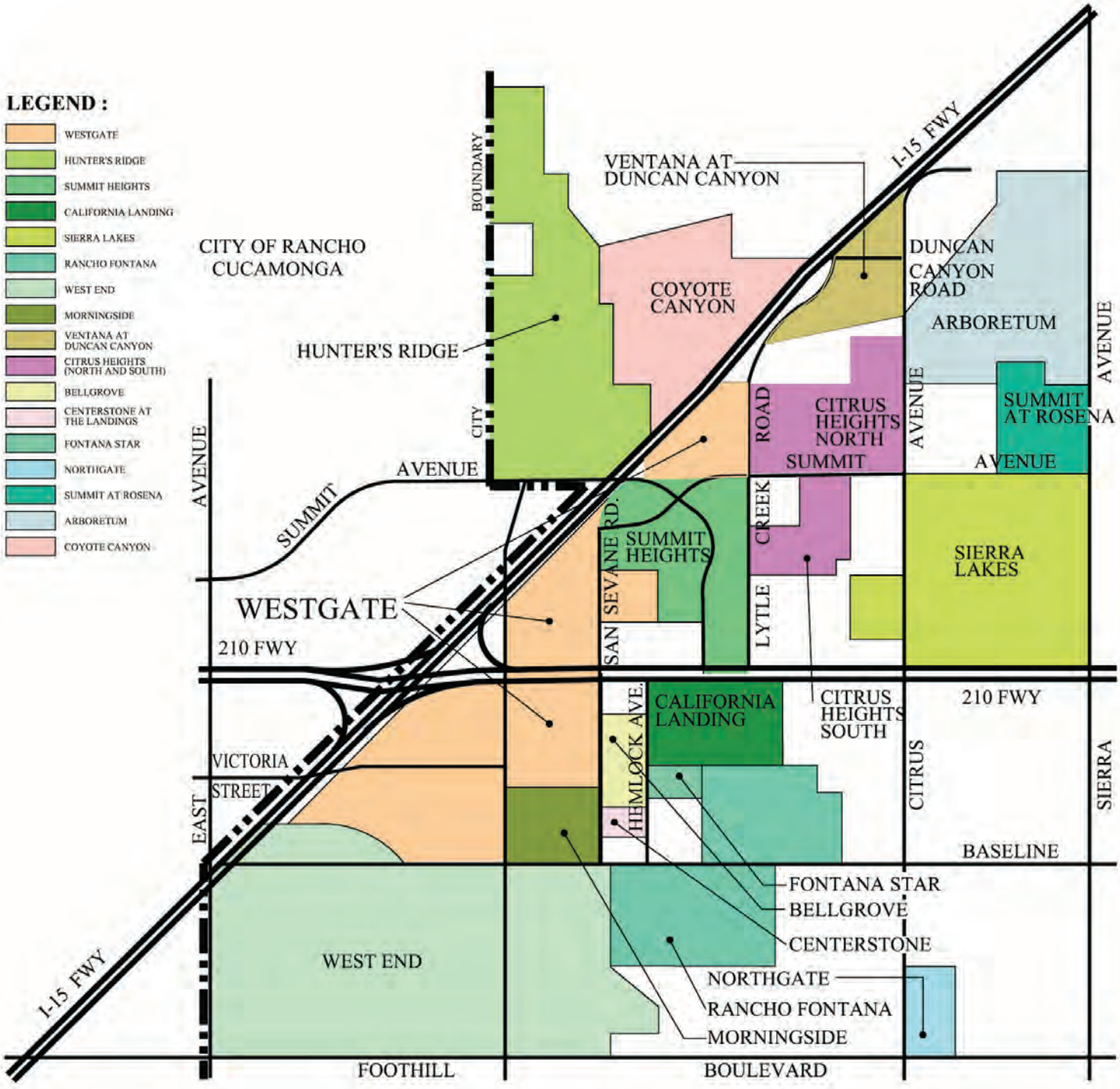
Project Vicinity Map

Westgate Specific Plan

Source: JHA Consulting, Inc., 2011.

FIGURE

A-2



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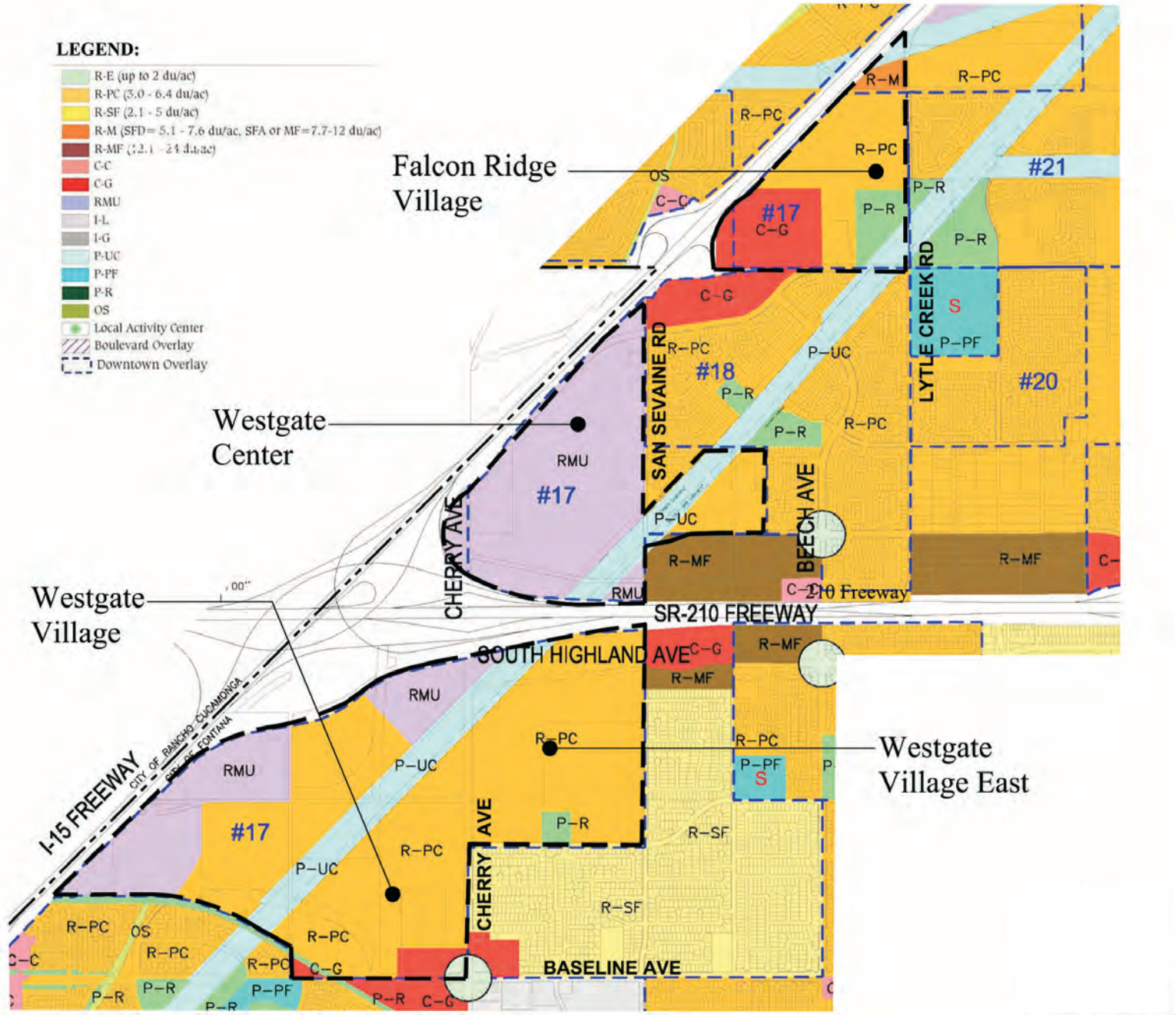
Existing Specific Plans and Community Plans

Westgate Specific Plan

Source: JHA Consulting, Inc., 2011.

FIGURE

A-3



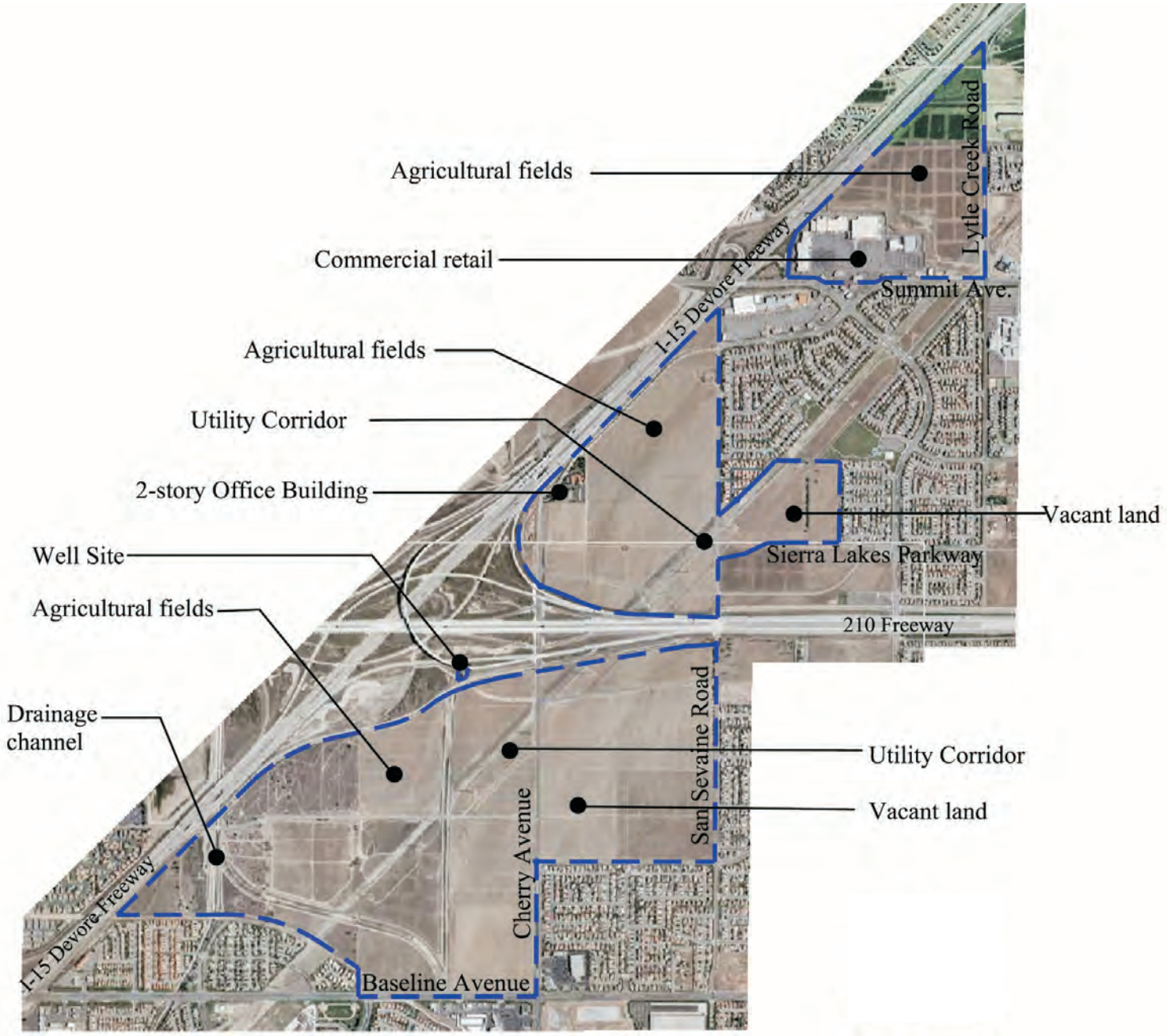
Existing General Plan Designations

Westgate Specific Plan

Source: JHA Consulting, Inc., 2011.

FIGURE
A-4

P C R



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0 2000 Feet

Existing Site Conditions

Westgate Specific Plan

Source: JHA Consulting, Inc., 2011.

FIGURE

A-5

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The overall quality of new development has improved in the region, as consumers and municipalities such as Fontana have become more discerning. Greater emphasis has also emerged on a state-wide and national basis for developing sustainable communities, which are those that encourage conservation of resources, increase energy efficiency, promote reduction of water consumption, and promote healthy buildings and communities. Based on these changes, a new vision has been developed for the Westgate Specific Plan. The new vision represents an opportunity to create a project for the City of Fontana that implements the goals and policies of the Fontana General Plan, enhances the City's tax base, contributes to the jobs/housing balance, promotes the City's corporate corridor, and creates a sustainable community where people can live, work, shop and play.

b. Project Components

The following describes all the components of the proposed Specific Plan, including land uses, parks and recreation areas, circulation, public facilities and community services elements that will provide for the orderly development of the Westgate Specific Plan. The Westgate Specific Plan sets forth a range of land uses that focuses on creating a village-oriented mixed-use development that implements the vision, goals, policies and objectives described in the proposed new Specific Plan. The Plan provides a broad range of uses including residential, school, commercial retail, office, business and open space uses.

The commercial retail, business and office park areas will serve to enhance the City's employment base, establish a corporate corridor, augment the city's tax revenue, and provide opportunities for people to work and shop in the same locale. The residential uses provide a range of single family detached, attached, stacked flats and multi-family homes to appeal to a broad cross-section of the market in a pedestrian-friendly village environment. The various Specific Plan components are discussed in detail below.

(1) Land Use Plan & Summary

Figure A-6, *Proposed Land Use Plan*, illustrates the overall land use plan for The Westgate Specific Plan with a summary of those uses provided below. The community is comprised of four villages. These villages, including their community structure and design, are discussed following the summary presented for each village. All of the land uses within each village are incorporated into 68 development areas, designated as "Planning Areas" (PAs). **Table A-1**, *Planning Area Land Use Summary*, below, provides the total acres for each land use including total dwelling units planned.

(a) Commercial Land Uses

The Westgate Specific Plan includes 50.9 acres of land zoned for commercial retail uses, 179.9 acres of business park and professional office uses (Mixed Use – 1 [MU-1] and Mixed Use – 3 [MU-3]), and 71.6 acres of land zoned for warehouse/distribution uses (Mixed Use – 2 [MU-2]). These uses are located principally adjacent to the Route 210 and I-15 Freeway corridors and comprise 31 percent of the 964-acre Specific Plan area. All truck traffic associated with the warehouse/distribution land use would be restricted to access off of Cherry Avenue and Baseline Avenues from only Route 210 Freeway east or westbound and the I-15 Freeway north or southbound. When comparing to the total combined commercial and residential planned development areas, commercial uses total 48 percent of the Specific Plan.

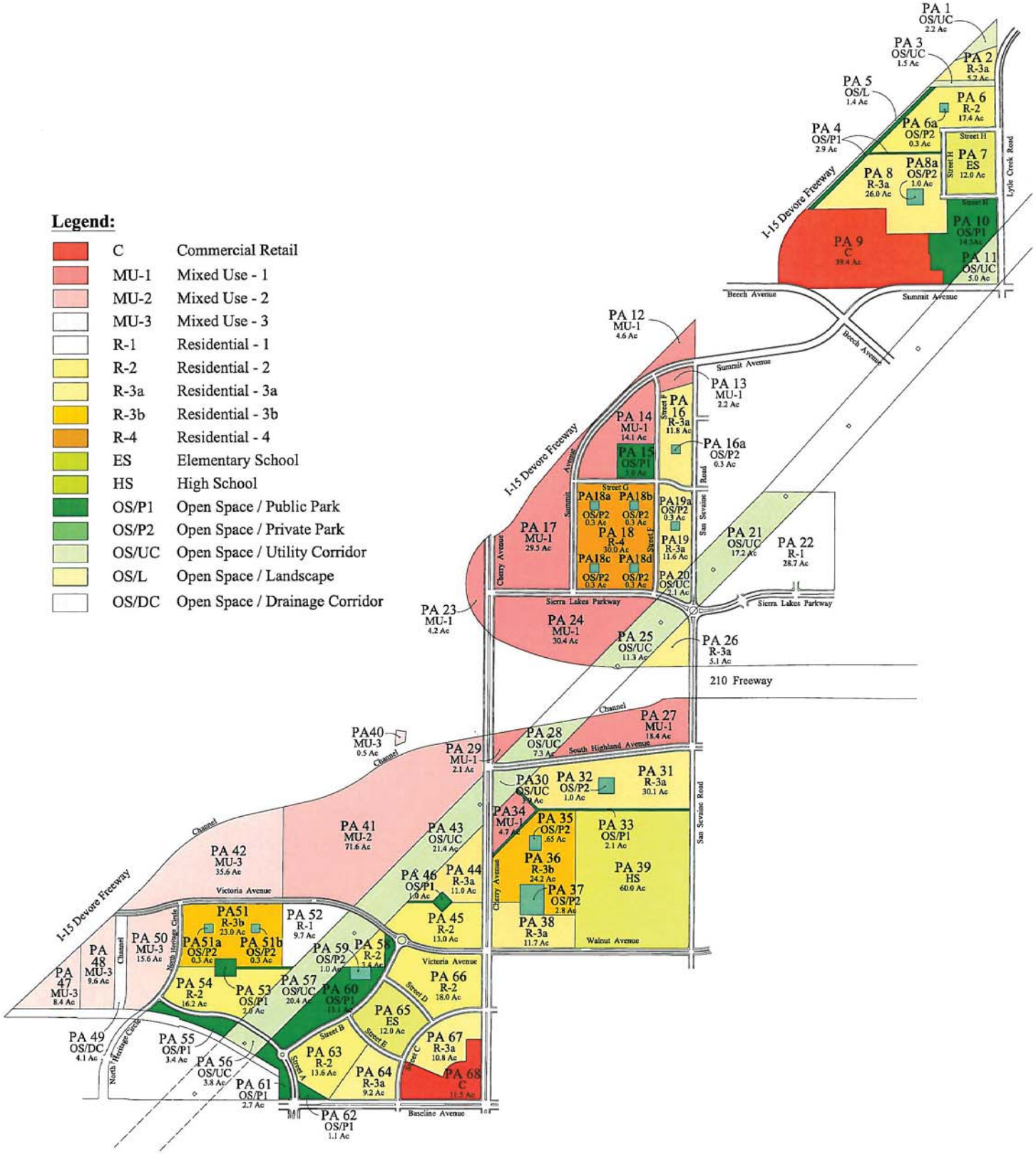
Table A-1

Planning Area Land Use Summary

Land Use Description	Acres	Target Dwelling Units [a]
Mixed Use – 1 (MU-1)	110.2	
Mixed Use – 2 (MU-2)	71.6	
Mixed Use – 3 (MU-3)	69.7	
Commercial Retail (C)	50.9	
Residential-1 (R1)	38.4	148
Residential-2 (R2)	81.6	732
Residential-3a (R3a)	132.5	2,029
Residential-3b (R3b)	47.2	1,001
Residential-4 (R4)	30.0	1,500
Open Space / Public Parks (OS/P1)	47.8	
Open Space / Private Parks (OS/P2)	9.15	
Open Space / Landscape (OS/L)	1.4	
Open Space / Utility Corridors (OC/UC)	96.1	
Open Space / Drainage Corridor (OS/DC)	4.1	
School Sites (ES/HS)	84.0	
Other (road right-of-way)	89.35	
TOTAL ACRES	**964.0**	
MAXIMUM DWELLING UNITS		**5,410**

[a] *Refer to Section 6.0, paragraph 6.5 in the proposed Specific Plan for discussion of Target Dwelling Units and Transfer of Dwelling Units.*

Source: Westgate Specific Plan, 2013



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0 1600 Feet

Proposed Land Use Plan

Westgate Specific Plan

Source: JHA Consulting, Inc., 2013.

FIGURE

A-6

(b) Residential Land Uses

Residential land uses are located throughout the community and are designed to establish a village character. The residential uses are interconnected to the entire Westgate Community and surrounding uses through pedestrian walks and both off and on-street bicycle lanes. Approximately 330 acres of residential uses are planned with 5,410 total maximum dwelling units.

(c) Open Space, Parks, Recreation and Trails

The Westgate Specific Plan provides a variety of open space, parks, recreation and trail uses. Public and private parks total approximately 57 acres, plus 1.4 acres of open space/landscape, 96.1 acres of additional open space within utility corridors, and 4.1 acres within the drainage corridor. The continuation of the City wide regional trail is planned within the utility corridor and SANBAG right-of-way that will also interconnect many village areas within The Westgate Specific Plan. Parks and recreation areas would include active uses such as ball fields, tennis courts, basketball courts, tot lots, exercise courses and passive uses for picnic stations, barbeque and other amenities. All public parks, the three school sites, and the regional trail are interconnected by on- and off-street bike lanes.

(d) Public Schools

Two elementary school sites and one high school site are included in the Plan, totaling 84.0 acres. The high school site, located within the Chaffey Joint Union High School District, is 60 acres in size, while the elementary school sites of 12 acres each are located within the Etiwanda School District. The high school site and one elementary school site within Planning Area 6 have already been acquired in fee by the respective school districts.

(e) Dedicated Public Rights-of-Way

Dedicated major public road rights-of-way shown on the land use and circulation plan will occupy 89.35 acres of land.

(2) Community Structure and Village Design

Following is a summary of the overall community structure, description of the village design and discussion of the integration of business park, retail, residential uses and amenities in the form of parks, recreation, trails and open space. Sections 4.0 and 5.0 of the proposed Specific Plan include development regulations and design guidelines, respectively. These sections provide standards to implement the community structure and to assure that a high quality of development results in all aspects of community.

Four villages have been designed as part of the Westgate Specific Plan. The villages were defined based on a logical clustering of development in relationship to the overall Specific Plan site and context, and to meet the community vision and objectives. While each village will have its own unique identity and character, they have been integrated into a cohesive and unified land use plan.

In addition to defining the individual land uses and planning areas within each village, these figures include general planning information and design criteria. They also illustrate the relationship between planning areas to each other and to the adjacent city context.

(a) Falcon Ridge Village

Falcon Ridge Village is intended to complement the existing Falcon Ridge Towne Center that is part of this village, and includes retail, park, recreation, school and residential uses. A centrally located elementary school is designed to provide a community hub for both Falcon Ridge Village and other nearby residential neighborhoods. The school site, 39.4-acre Falcon Ridge shopping center, and park areas are all within a five- to ten-minute walk of the planned homes. For reference purposes throughout this Specific Plan, a walking speed of three miles per hour is used to estimate walking times.

Residential uses include single-family detached cottage, paseo and court cluster-type homes, as well as attached and multi-family homes. Detached single-family cluster type homes are planned adjacent to Lytle Creek Road to provide a transition to existing single-family homes to the east. Refer to Section 4.0 of the proposed Specific Plan for various home types planned for these planning areas, and refer to the Community Design section (Section 5.0) of the proposed Specific Plan for site planning, architecture and landscape guidelines.

(b) Westgate Center

Westgate Center is designed as an integrated mixed use business and residential setting with high amenity urban life style options. With extensive business park, professional office, and warehouse/distribution uses planned within the Mixed-Use 1 district, it will provide a major regional employment hub located along both the I-15 and Route 210 freeways. Residential communities with multiple park sites are also planned.

The business park uses have excellent visibility from the I-15 freeway with direct vehicular access to the property provided at the Route 210/Cherry Avenue interchange. The location of all business park uses along the two freeway corridors will provide a major catalyst in establishing the City's corporate corridor. In addition to professional offices, other approved uses include hospitality, medical centers, medical offices, and support retail.

Located adjacent to the Business Park are high density (R-4) residential uses. The location will encourage people to walk and/or bike to the business park, retail and park uses, reinforcing the goal of creating a pedestrian friendly, sustainable community. "Mansion style" multi-family homes (R-3a) are located adjacent to the R-4 land uses along San Sevaine Road. Planned to be reminiscent of early California estates, they will be designed to complement the existing single family homes along San Sevaine Road. Residential uses to the east, within Planning Area 22, are planned for minimum 7,200-square-foot lots.

Opportunities for live-work homes, intended for work-at-home professionals such as realtors, architects, accountants, and hair stylists, are included within the high density R-4 designation.

Residential uses within Westgate Center are oriented to multiple recreation and park areas, including a centrally located five-acre park planned for a community building, pool, tennis courts, basketball courts, volleyball, benches, outdoor fireplace, and picnic areas. Facilities within the community building will include a multipurpose room, game room, and other amenities. The community building will provide a strong architectural feature and focal point for Westgate Center.

With the high density residential and business park uses in close proximity to one another, an opportunity may arise for locating a commercial sports/health club facility within Westgate Center as a complementary park use. Therefore, this type of use is also considered an optional use within or adjacent to the park site.

In addition to the above community building, either an additional freestanding clubhouse facility or a facility designed as an integral part of the multi-family buildings will be provided in the R-4 planning area to include such facilities as a game room, media room, kitchen and other complementary uses.

(c) Westgate Village

This village also includes a diversity of uses including 69.7 acres of business park and professional office uses (MU-3), 71.6 acres of warehouse/distribution uses (MU-2), a neighborhood retail center, elementary school site, and residential uses in a highly amenitized setting. Residential uses range from 7,200 minimum square feet lots to compact single family detached cottage, paseo and court cluster homes, townhomes and multi-family homes. Westgate Village includes live-work homes within PA's 64 and 67. The live-work homes are located adjacent to the neighborhood shopping center, which are intended to complement one another. Mixed-Use (MU-2 and MU-3) districts are predominantly located along the freeway corridors.

Within residential areas, the intent is to create pedestrian friendly setting, with attractive streetscapes and multiple amenities. Amenities for the village include six parks, trails, a lake, and a pedestrian bridge. Amenities are summarized as follows:

- Six public and three private parks totaling 23.3 and 1.6 acres, respectively, are included. Combined, these parks will provide a variety of active and passive uses, including tennis courts, basketball courts, multiple swim complexes, gardens, trails with a par course, benches and picnic stations that connect to Citywide regional trails. An elementary school site is centrally located within the community.
- A public lake is planned as a focal point with an adjacent private clubhouse and pool complex that will be available to all Westgate Village residents. The clubhouse will provide a location for community social functions and will include such facilities as a media room, game room and exercise room. It will be oriented to take advantage of the views of the lake and of the San Gabriel and San Bernardino Mountains to the north.
- A park with a trail for walking/jogging/bike riding, exercise course, and picnic stations will complement the adjacent SANBAG right-of-way and planned regional trail. It also serves as a landscape buffer and amenity for the existing homes in the Village of Heritage to the south. The park will also connect to the regional trail within the utility corridor that provides connectivity to Fontana Park and beyond.
- Class I and Class II bike paths are planned to interconnect the residential uses to parks, recreation uses, neighborhood retail center, including the school sites in the Westgate Specific Plan and Westgate Village East. All streets in the Westgate Specific Plan will include parkways between the sidewalks and curb to provide a safe and attractive walkable community. Whether a bicycling or walking, residents will all be within 10 to 15 minutes of all amenities including the neighborhood shopping center.

- A pedestrian bridge is planned at Baseline Avenue to provide a grade-separated crossing. The bridge will provide multiple community-wide benefits summarized below.
    - Connects the City regional trail located within the SANBAG right-of-way across Baseline Avenue, a six-lane divided road.
    - Connects the City regional trail that provides access to Fontana Park, Jesse Turner Park, and other amenities to the north.
    - Facilitate safe access for pedestrians and those on bicycles between the Westgate Specific Plan and the Village of Heritage. In particular, it will provide safe access for students living in the Village of Heritage to reach the high school in the Westgate Specific Plan. It will also provide safe access for students in the Westgate Specific Plan to reach the intermediate school in the Village of Heritage, including McDermott Sports Complex and Village of Heritage community center.

(d) Westgate Village East

Westgate Village East includes 25.2 acres of business park uses (MU-1), residential uses, three private parks and one public park, and a high school site; it should be noted that the Chaffey Joint Union High School District purchased the high school site in 2007 and also plans to construct a fully lighted stadium.

Mixed-Use (MU-1) districts are located principally along the 210 freeway as part of the corporate corridor; Planning Area 34, however, is located approximately 800 feet south of the freeway corridor adjacent to Cherry Avenue. Residential uses will include a variety of housing types and style including duplexes, townhomes, and multi-family uses. Paired homes are planned adjacent to Walnut Avenue and will be designed to appear as one large home in order to complement existing single family homes to the south. All residential uses are located within walking distance of the high school site and park sites.

Three private parks are planned to serve Westgate Village East. A clubhouse building, swim and recreational complex are planned on 2.8 acres to serve Planning Areas 36 and 38. Two additional private parks will include a range of amenities such as a sports court, barbeque areas and free play areas. One public park within Planning Area 33 would be a 2.1-acre linear feature that provides non-vehicular public access between San Sevaine Road, Cherry Avenue, and the utility corridor.

Class I and II bike lanes will provide connectivity to other community amenities in the Westgate Specific Plan including the lake and swim complex in Westgate Village, Fontana Park and the Heritage Community Center.

(3) Park, Recreation and Trail Amenities

(a) Parks & Recreation

The four villages in the Westgate Specific Plan – Westgate Village, Westgate Village East, Westgate Center, and Falcon Ridge Village include a variety of parks, recreation areas, trails and school sites interwoven throughout the community, all designed to create an attractive and inviting environment.

Public parks total 47.8 acres and include both active and passive uses such as ball fields, tennis courts, basketball courts, tot lots, exercise courses, picnic stations, and barbeque areas. All are located within a five-

to seven-minute walk of the residential areas which they serve. All public parks, including the three school sites within the Specific Plan area, are interconnected by a Class I and Class II bike lanes.

Private parks/recreation areas total 9.15 acres and are generally within three to five minutes of the residential areas they serve and typically include pools, spas, and plays areas. They will be complemented in higher density residential areas with tot lots or barbeque areas to be located within 800 feet of any dwelling unit. This equates to approximately a three-minute walk. Maintenance of the private parks will be provided by a homeowners association or similar entity.

The final design of each park master plan provided in this Section are subject to change based upon market differentiation, engineering, and input from the City Police and Public Works Departments. The park uses and amenities shown may shift locations or be substituted with like kind amenities as approved by the Community Development Department and in substantial conformance with this Specific Plan.

A summary of the facilities to be included in the various parks and recreation areas within the four villages is provided below.

i) Falcon Ridge Village

Falcon Ridge Village includes a large sports park, a park with an exercise course, and two private recreation areas as follows:

- A 14.5-acre sports park will provide a large park amenity for Falcon Ridge Village as well as other Westgate villages and nearby Fontana neighborhoods. It is also designed to complement the adjacent Fontana Park and Jesse Turner Community Center.
- Two private park and pool facilities, totaling 1.3 acres, are located near the planned homes and are linked together with a paseo.
- A 2.9-acre park with a walking/jogging path, benches, barbeques, picnic tables and an exercise course is located along the western edge of the village adjacent to the I-15 freeway. This public park will also provide a landscape buffer that creates a forested effect along the freeway edge. Additional landscaping would be provided in Planning Area 5, which would designate 1.4 acres of land situated adjacent to the freeway for a permanent buffer between the freeway and proposed on-site uses. A walking/jogging path/bike path will connect to the 14.5-acre park site and two private parks.

ii) Westgate Center

Westgate Center will include multiple park and recreation areas. In addition to six private parks of 0.3 acres, each with pools, a centrally located five-acre public park is planned with a public community building, pool complex, sports courts and multi-use play area.

iii) Westgate Village

Within Westgate Village, a public lake will serve as the focal point of a 13.1-acre park and recreation area complemented with walking paths along the lake, a gazebo overlooking the lake, picnic tables, benches, basketball courts, and a children's play lot.

A clubhouse building and pool complex is planned adjacent to the lake. This will be a private facility maintained by a homeowners association and will be available to all Westgate Village residents. The clubhouse building will include such uses as a meeting room, game room, media room and fitness room. The clubhouse will also create an architectural icon and theme for the Westgate Village community.

Along the south portion of Westgate Village, adjacent to the SANBAG right-of-way and future regional trail, a park is planned with an exercise course, picnic tables and barbeques. The pedestrian bridge planned for The Westgate Specific Plan will provide a grade-separated access into the park and regional trail across Baseline Avenue.

iv) Westgate Village East

Three private parks and one linear public park will serve Westgate Village East: A 2.8-acre and 0.65-acre park are planned to serve planning areas 36 and 38 with a 1.0-acre recreation area centrally located within planning area 31. A clubhouse building, swim and recreational complex are planned in the 2.8-acre park. Additionally, as noted above, a 2.1-acre linear public park will serve as a non-vehicular trail connection between San Sevaine Road, Cherry Avenue, and the open space/utility corridor.

(b) Trails

The Westgate Specific Plan has a multi-faceted trail, bike and walkway plan that links the entire community together as well as connecting to City wide regional trails.

- With five public parks and three school sites, there will be a significant number of children and adults that will be walking or bicycling within the community. In addition to the bike path in the utility corridor, a Class I (off-street) bike lane will provide residents of the four villages both pedestrian and bicycle access along landscape parkways to park and school sites.
- For those residents interested in activities beyond the four villages, Class I bike lanes provide access to City wide amenities, such as Fontana Park and Jesse Turner Center to the north. To the south, access to the Village of Heritage Community Center, McDermott Sports Park, the Heritage Intermediate School and the City Regional trail in the SANBAG right-of-way is provided. With the high school site planned in Westgate Village East, this Class 1 bike lane will also facilitate access for many students from Heritage and neighboring communities.
- Class II bike lanes will also link the community and shall be provided on all major streets which do not include off-street bike lanes.
- A pedestrian bridge, discussed below, will enhance access across Baseline Avenue between the Village of Heritage and the Westgate Specific Plan villages.
- Sidewalks with landscaped parkways and street trees will also be provided to link the community together.

(c) Pedestrian Bridge

A pedestrian bridge is planned at Baseline Avenue at the primary entry to Westgate Village. The bridge will serve many Westgate Specific Plan and City-wide purposes, as summarized below:

- Provides a grade-separated extension of the City of Fontana regional trail within the SANBAG right-of-way across Baseline Avenue, which links Fontana to adjacent cities to the east and west. The bridge also will provide access to the City regional trail that links to Fontana Park, Jesse Turner Center and other community amenities to the north.
- Provides access for the Westgate Specific Plan residents to the Heritage Community Center, McDermott Sports Complex, Heritage Intermediate School, Heritage shopping center and nearby business in Fontana Commerce Center.
- Provides access for Village of Heritage residents to the future High School in Westgate Village East - a Class I bike lane will provide continuous off-street access to the High School from the bridge location. It will also provide access for Heritage residents to many of the Westgate Specific Plan's site amenities, such as the new lake in Westgate Village Park.

c. Site Access and Circulation

The proposed project's circulation plan identifies the major transportation corridors and street alignments required within the Specific Plan project area.

The Westgate Specific Plan project area is located adjacent to the I-15 Freeway and SR-210. The I-15 freeway major interstate transportation corridor connects San Diego with Las Vegas. It includes a High Occupancy Vehicle lane and four travel lanes in each direction. It provides excellent regional access to other nearby interstate freeways, including the SR-210, I-215, I-10 and SR-60 freeways. Access to the Westgate Specific Plan from the I-15 occurs at Baseline Avenue and Summit Avenue. The SR-210 Freeway connects from Los Angeles to the west and Redlands to the east. It has a High Occupancy Vehicle lane and four travel lanes in each direction. It also provides excellent regional access to other nearby interstate freeways, including the I-15, I-215, I-10 and I-60 Freeways. The Cherry Avenue/SR-210 interchange provides direct access into the Westgate Specific Plan.

Local streets are not shown on the Circulation Plan but will be provided on a parcel-by-parcel basis when applications for development occur. The Local Street classification with a 36 feet curb-to-curb section may be restricted to cul-de-sac and short local streets (public or private) as required by the Fire Department.

The Local Street classification of 40 feet wide curb-to-curb shall be used for local collector streets or backbone streets which exceed the above standards. In both cases, both sides of the street feature a five-foot-wide street-adjacent landscape area and a five-foot-wide sidewalk. When there is a residential rear or side yard condition and/or a community theme wall an additional ten-foot landscape easement, as measured to back of sidewalk, shall be provided. When a residential unit fronts onto a collector street no landscape easement is required.

d. Landscaping

The proposed Westgate Specific Plan provides extensive landscaping along proposed roadways throughout the Specific Plan area. Additionally, development of the various proposed land uses within each Planning Area would be subject to the landscaping requirements provided in Section 5.0, *Community Design Guidelines*, of the proposed Specific Plan. The design guidelines prescribe the type, amount, and location of

landscaping for structures, roadways, access points, and parking lots for all future development occurring within the Specific Plan area.

7. PROJECT DESIGN FEATURES

a. Sustainability Features

The proposed Westgate Specific Plan includes a number of sustainability features that are intended to minimize the development's impacts on the environment. Such features that the applicant has committed to implementing include the following:

PDF-1: By providing jobs near housing, with retail, parks and schools within walking distance of compact residential villages, the Westgate Specific Plan residents will have less reliance on the automobile. This in turn will result in reduced vehicular emissions and an overall healthier community.

PDF-2: The Westgate Specific Plan will also become one of the first large scale planned communities in the Inland Empire to meet one of the nation's first mandatory green building standards code (CalGreen). These comprehensive regulations were adopted by the State of California and went into effect as of January 1, 2011. By adhering to these regulations, the Westgate Specific Plan will achieve significant reductions in greenhouse gas emissions, energy consumption and water use. CalGreen, for example, requires that every new building constructed in California reduce water consumption by 20 percent, divert 50 percent of construction waste from landfills and install low pollutant-emitting materials. It also requires separate water meters for nonresidential buildings' indoor and outdoor water use, with a requirement for moisture-sensing irrigation systems for large scale landscape projects and mandatory inspections of energy systems (e.g., heat furnace, air conditioner and mechanical equipment) for nonresidential buildings over 10,000 square feet designed to ensure that all are working at their maximum capacity and according to their design efficiencies.

PDF-3: In order to further conserve resources, in addition to the above, the Westgate Specific Plan is designed to use recycled water for landscape in public parks and rights of ways. The Inland Empire Utilities Agency (IEUA) is in the process of building a regional recycled water system to serve the Westgate Specific Plan and others areas in Fontana.

PDF-4: The Westgate Specific Plan infrastructure plans include a reclaimed water "purple pipe" system that will be installed as part of the major streets for all medians, parkways and public parks. It will be connected to the IEUA master plan upon its completion.

8. PROJECT OBJECTIVES

The following describes the objectives of the proposed project, which are provided in the proposed Specific Plan as "Specific Plan Goals," and are intended to implement the Plan's Community Planning Vision. The Specific Plan Goals are as follows:

Goal 1: In order to create a vibrant community, incorporate a rich diversity of uses including retail, office, business park, residential, schools, parks, trails, and open space uses.

Goal 2: Create organizing elements that provide a community identity and opportunity for social interaction.

Goal 3: Develop a plan that generates employment opportunities and improves the city's tax base.

Goal 4: Develop a plan that establishes a corporate corridor.

Goal 5: Create pedestrian friendly connectivity to main activity nodes, including employment, shopping, schools and recreation.

Goal 6: Create a diversity of housing types within a high amenity setting.

Goal 7: Create a village structure.

Goal 8: Provide quality master planning, architectural and landscape architectural standards.

Goal 9: Develop a compact community to promote a healthy village character, enhance sustainability and conserve resources.

Goal 10: Create a community with a high quality of life.

9. CONSTRUCTION SCHEDULE AND PHASING

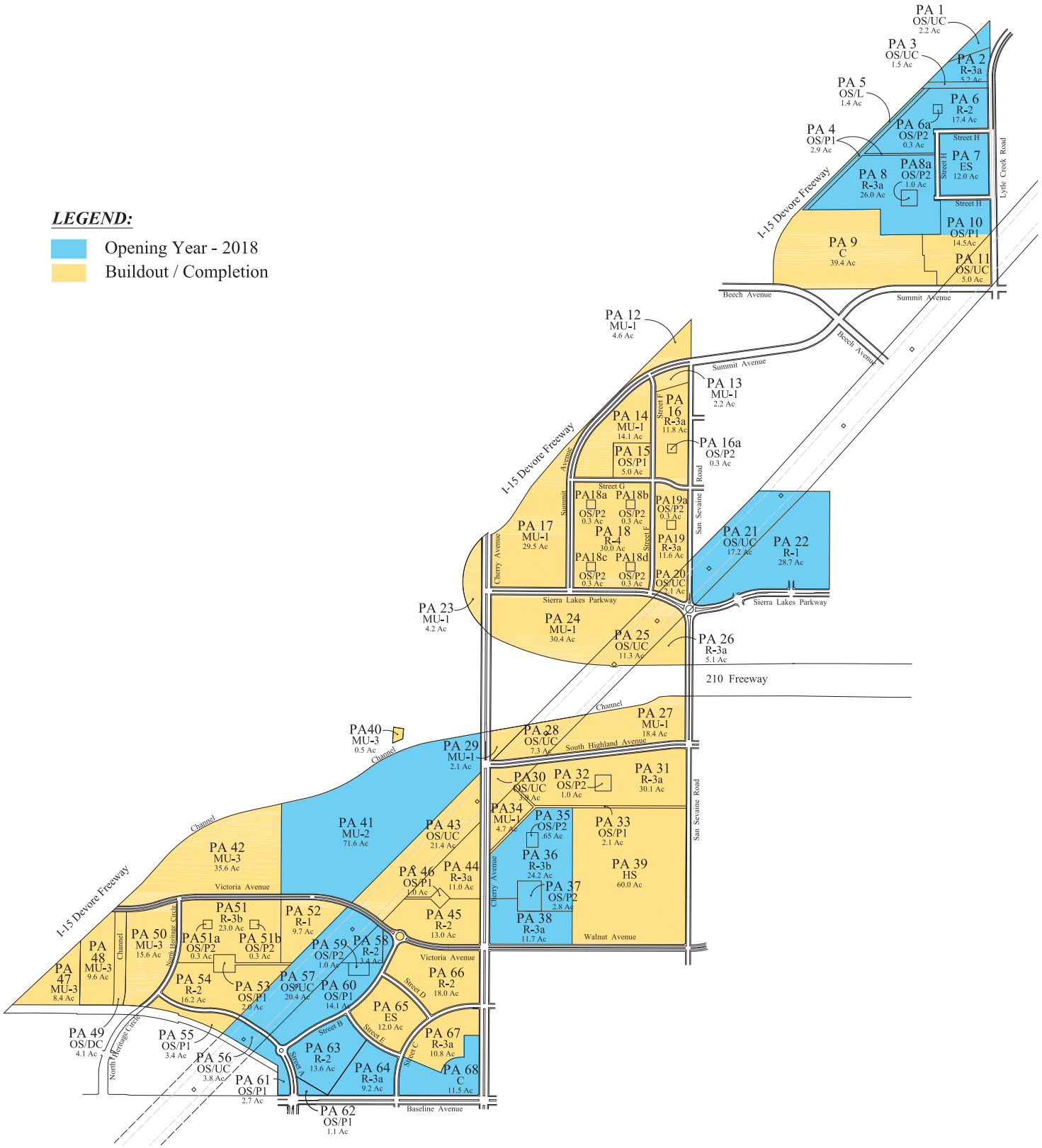
Construction of the project will be phased in an orderly manner, with full buildout of the Specific Plan anticipated to occur by 2035. Each of the four villages may be developed concurrently or in any sequence provided that all infrastructure required to serve each area is provided to the satisfaction of the City engineering department. The timing of each area will be subject to local, regional, and national market conditions. However, the project Applicant has identified the project components to be implemented as part of the first phase of development, which is anticipated to be constructed and operational by 2018. Phase 1 development would include uses proposed within each of the four villages, which are intended to complement existing on- and off-site development and minimize the need for expanded infrastructure facilities in the short-term. A summary of uses to be developed as part of Phase 1 is provided below in **Table A-2**, *Phase 1 Development Summary*, and illustrated in **Figure A-7**, *Opening Year and Buildout Phasing Plan*.

Table A-2

Phase 1 Development Summary

Planning Area	Land Use	Acres	Density Range	Target Density	Target DU
COMMERCIAL RETAIL					
68	Commercial Retail	11.5			
MIXED-USE					
41	Mixed Use 2	71.6			
RESIDENTIAL					
2	R-3a	5.2	12.1-18.0	14.0	73
6	R-2	17.4	5.1-12.0	9.0	157
8	R-3a	26.0	12.1-18.0	14.0	364
22	R-1	28.7	0-5.0	3.8	110
36	R-3b	24.2	18.1-24.0	21.4	518
38	R-3a	11.7	12.1-18.0	14.0	164
58	R-2	3.4	5.1-12.0	9.0	31
63	R-2	13.6	5.1-12.0	9.0	122
64	R-3a	9.2	12.1-18.0	14.0	129
Subtotal		***139.4***			***1,668***
PARKS/OPEN SPACE					
1	OS/Utility Corridor	2.2			
3	OS/Utility Corridor	1.5			
4	OS/P1	2.9			
5	OS/Landscape	1.4			
6a	OS/P2	0.3			
8a	OS/P2	1.0			
10	OS/P1	14.5			
21	OS/Utility Corridor	17.2			
35	OS/P2	0.7			
37	OS/P2	2.8			
56	OS/Utility Corridor	3.8			
57	OS/Utility Corridor	20.4			
59	OS/P2	1.0			
60	OS/P1	14.1			
61	OS/P1	2.7			
62	OS/P1	1.1			
Subtotal		***87.6***			
OTHER					
7	Elementary School – ES	12.0			
TOTAL*		**322.1**			**1,668**

Source: Westgate Specific Plan, 2013



PCR

Opening Year and Buildout Phasing Plan

Westgate Specific Plan

Source: JHA Consulting, Inc., 2013.

FIGURE

A-7

10. NECESSARY APPROVALS

a. General Plan Amendment

The project applicant proposes a General Plan Amendment to modify the City's General Plan Land Use Map to match the equivalent land use designations in the proposed Specific Plan, change the Land Use Element to add a residential land use designation to allow a density of 50 dwelling units per acre and an industrial designation that would allow warehouse distribution/trucking, as well as modify the Air Quality Element and Noise Element to reduce the setback for residential development from a freeway from 200 feet minimum to approximately 88 feet.

b. Zoning Ordinance Amendment

A zone change application is also required to modify the Zoning District Map to outline the new proposed Specific Plan boundary.

c. Development Agreement

In addition, the project includes a Development Agreement (DA) that will establish the phasing and financing for the Specific Plan. The DA proposes the pedestrian bridge across Baseline Avenue (discussed above) as a public benefit to enhance/improve the walkability that exist along the trails established by the City's trail system. The DA does not propose any off-site improvements as a public benefit to offset the increase in density proposed in the Specific Plan. The developer will in the future incur substantial costs in excess of the generally applicable requirements in order to assure vesting of legal rights to develop the property in accordance with the DA. The approval of the proposed DA will establish a fifteen (15) year term period with a provision to extend the life of the DA and Specific Plan for an additional 5 years at the end of the fifteen (15) year term. In addition, the DA will ensure the current development impact fees will not increase for a period of ten (10) years from approval by the City.

d. Other Approvals

Other approvals required for development of the Westgate Specific Plan project would include, but may not be limited to, the following:

- Adoption of the new Westgate Specific Plan;
- Certification of an Environmental Impact Report; and
- Other permits or approvals, as necessary.

ATTACHMENT B - EXPLANATION OF CHECKLIST DETERMINATIONS

I. AESTHETICS

Would the project:

a. Have a substantial adverse effect on a scenic vista?

Potentially Significant Impact. A scenic vista is typically defined as a view of highly valued visual resources, particularly from public vantage points. There are scenic views in the area of the San Gabriel Mountains, which are located immediately north of the site. These mountains are visible on clear days from the project site and all north/south roadways near the project area. Currently, urban development, elevated freeway corridors, and other visual obstructions exist within and around the project site. The proposed project would introduce structures that could impair views of the mountains from areas to the south of the site. As such, impacts would be potentially significant and further analysis of effects on scenic vistas in an Environmental Impact Report (EIR) is required.

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, or other locally recognized desirable aesthetic natural feature within a state scenic highway?

Less Than Significant Impact. None of the roadways adjacent to and in the vicinity of the project site are designated as a scenic highway. As indicated in the General Plan, there are no designated Official State Scenic Highways in the vicinity of the project site. The nearest State Scenic Highway, Route 18, is located near Big Bear Lake approximately 40 miles from the site, such that current views experienced from the roadway would not be affected by any development that would occur on the project site.[1] In addition, no valued natural features (i.e., rock outcroppings), or other notable features exist within the site, as the site has been altered through its historical agricultural use, leaving little or no native vegetation. Therefore, implementation of the proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. Further analysis of this issue in an EIR is not necessary and no mitigation measures are required.

c. Substantially degrade the existing visual character or quality of the site and its surroundings?

Potentially Significant Impact. The existing visual character of the project site is defined primarily by vacant land, various public facility-related buildings, and freeway rights-of-way. The Westgate Specific Plan proposes a development plan that would include a community of traditional neighborhoods providing a variety of housing types, commercial retail uses, business parks, an elementary school site, a high school site, parks, and trails. Therefore, implementation of the Specific Plan would permanently alter the existing visual character of the project site by replacing the agriculture-related uses with a master-planned residential community.

[1] *California Department of Transportation (Caltrans), California Scenic Highway Program, (http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm) Accessed October 18, 2011.*

The Specific Plan includes design guidelines and development standards that would guide the physical character of future residential development and community and neighborhood features, including the overall landscape treatment within the Specific Plan area. These guidelines and standards would assist in establishing a unified aesthetic treatment for the overall project site. Nevertheless, the replacement of the existing vacant land on the site with a planned, urban development may not be considered to be a positive aesthetic impact. Therefore, potential impacts on the visual character and quality of the site and its surroundings will be further analyzed in an EIR, including an evaluation of the consistency of the project with regulations, plans, and policies related to visual quality.

d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Potentially Significant Impact. The project will introduce new sources of light and glare since the project site is currently characterized by vacant land. The proposed development of over 5,000 residences, commercial retail and office uses, an elementary school, a high school, and various parks would provide nighttime illumination due to the addition of architectural or design elements, streetlights, security lighting, and lighting within the residences, as well as transient vehicular lighting from cars traveling within the proposed community and on adjacent roadways. Additionally, windows associated with proposed structures and vehicle windshields would increase the potential for glare effects compared to the existing vacant project site. Therefore, potential impacts due to increased light and glare effects will be further analyzed in an EIR.

II. AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire protection regarding the state's inventory of forest land, including the Forest and Range Assessment of and the Forest Legacy Assessment Project; and forest carbon measurements methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Potentially Significant Impact. Although there is no land designated as Prime Farmland within the project boundaries, a substantial portion of the project site is designated as Unique Farmland by the California Department of Conservation.[2] Portions of the project site contain grape vines associated with historic vineyard operations, but the vineyards are no longer irrigated or cultivated, and no agricultural operations occur within the project boundaries that could be impacted by implementation of the project. While implementation of the proposed project would permanently convert on-site farmland to urban uses, this impact, along with the overall cumulative loss of agricultural land within the City, was evaluated in the 2003

[2] *California Department of Conservation, Division of Land Resource Protection. San Bernardino County Important Farmland 2010. December 2011.*

General Plan Update EIR and concluded to be significant and unavoidable. Therefore, potential impacts related to Converting Prime Farmland, Unique Farmland, or Farmland of Statewide Importance will be further analyzed in an EIR.

b. Conflict with the existing zoning for agricultural use, or a Williamson Act Contract?

No Impact. The project would not conflict with the existing zoning for an agricultural use, as the site is currently zoned for urban uses as part of the adopted 1996 Westgate Specific Plan. Additionally, no portion of the project site is enrolled in a Williamson Act Contract. Thus, no impact would occur and further analysis of this issue is not necessary in the EIR.

c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 1220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No Impact. Project implementation would not result in changes to or cause rezoning of forest land, timber land or timberland zoned for Timberland Production. In addition, the project area does not include areas zoned or utilized for timberland production. Thus, no impact would occur in this regard. Further analysis of this issue is not necessary in the EIR.

d. Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. No forest land exists in the project area. As such, the project would not result in the loss of forest land or conversion of forest land to non-forest use and no impact would occur in this regard. Further analysis of this issue is not necessary in the EIR.

e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

Potentially Significant Impact. As discussed above, the project would result in the permanent conversion of farmland designated as Unique Farmland by the California Department of Conservation to a non-agricultural or non-forest use. As such, impacts are considered potentially significant and further analysis of this issue in the EIR is required.

III. AIR QUALITY

Where available, the significance criteria established by the South Coast Air Quality Management District (SCAQMD) or air quality management plan may be relied upon to make the following determinations.

Would the project:

a. Conflict with or obstruct implementation of the applicable air quality plan?

b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?

d. Expose sensitive receptors to substantial pollutant concentrations?

e. Create objectionable odors affecting a substantial number of people?

Potentially Significant Impact (a-e). The construction and operation of proposed land uses under the Specific Plan would generate air pollutant emissions that could exceed established thresholds, thereby potentially conflicting with the applicable air quality plan, violating air quality standards, contributing to an existing air quality violation, exposing sensitive receptors to substantial pollutant concentrations, and/or creating objectionable odors affecting a substantial number of people. As such, these air quality impacts would be potentially significant and further analysis of these issues in an EIR is required.

IV. BIOLOGICAL RESOURCES

Would the project:

a. Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in the City or regional plans, policies, regulations by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Potentially Significant Impact. (a-d). A variety of biological resources are known to exist in portions of the project area. Implementation of the project's physical improvements would occur on existing undeveloped land which may have the potential to impact sensitive species and habitats including wetlands and riparian lands, and could interfere with wildlife corridors and wildlife nursery sites. Given the potential presence of sensitive biological resources on-site and the proposed urbanization of the entirety of the Specific Plan area, potential impacts to biological resources will be evaluated in an EIR.

e. Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance (e.g., oak trees or California walnut woodlands)?

Less Than Significant Impact. The project site is undeveloped and was historically used for agricultural production and therefore no substantial stands of trees exist within the Specific Plan area; however, several trees, including oak trees, exist in a number of areas within the Specific Plan area. Several of these trees may be subject to the requirements of Chapter 28 of the Fontana Municipal Code (FMC), which established

provisions for the removal, replacement, or relocation of heritage, significant, and specimen trees. Based on the criteria presented in Chapter 28 of the FMC, any tree removals required as part of the implementation of the Specific Plan would require that the applicant obtain a permit from the City and comply with any associated permit conditions in order to ensure that significant adverse impacts to protected trees do not occur. No other location policies or ordinances protecting biological resources are applicable to the site. As such, impacts would be less than significant in this regard and further analysis of this issue in an EIR is not required.

f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. No natural community or habitat conservation plans apply to the project site or surrounding area. As such, implementation of the proposed project would have no potential to affect such plans. No impact would occur in this regard and further analysis of this issue in an EIR is not required.

V. CULTURAL RESOURCES

Would the project:

a. Cause a substantial adverse change in significance of a historical resource as defined in State CEQA §15064.5?

b. Cause a substantial adverse change in significance of an archaeological resource pursuant to State CEQA §15064.5?

c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

d. Disturb any human remains, including those interred outside of formal cemeteries?

Potentially Significant Impact (a-d). While the project site is generally undeveloped, several infrastructure improvements, including a drainage channel and railroad right-of-way, as well as remnants of structures, may have the potential to be considered historic resources. The project site was historically utilized for agricultural production and therefore on-site soils have been previously disturbed; however, this does not preclude the potential presence of undiscovered buried resources on-site, including human remains. Similarly, paleontological resources may be present in subsurface geologic layers that could be disturbed by project implementation. Therefore, cultural resources impacts are considered potentially significant and further analysis of this issue in an EIR is required.

VI. GEOLOGY AND SOILS

Would the project:

a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Less Than Significant Impact. Fault rupture is defined as the displacement that occurs along the surface of a fault during an earthquake. Based on criteria established by the California Geological Survey (CGS), faults can be classified as active, potentially active, or inactive.[3] Active faults are those having historically produced earthquakes or shown evidence of movement within the past 11,000 years (during the Holocene Epoch).[4] Potentially active faults have demonstrated displacement within the last 1.6 million years (during the Pleistocene Epoch), but do not displace Holocene Strata. Inactive faults do not exhibit displacement younger than 1.6 million years before the present. In addition, there are buried thrust faults, which are low angle reverse faults with no surface exposure. Due to their buried nature, the existence of buried thrust faults is usually not known until they produce an earthquake.

The seismically active Southern California region is crossed by numerous active and potentially active faults and is underlain by several blind thrust faults. Alquist-Priolo Earthquake Fault Zones (formerly Special Study Zones) have been established throughout California by CGS. These zones, which extend from 200 to 500 feet on each side of a known active fault, identify areas where potential surface rupture along an active fault could prove hazardous and identify where special studies are required to characterize hazards to habitable structures.

The project site is not located within an established Alquist-Priolo Fault zone. The nearest active fault to the project site is the Sierra Madre Fault Zone (Cucamonga Fault), located approximately ½-mile to the northwest of the project site at its closest point.[5] Active faults with the potential for surface rupture are not known to be located beneath the project site. Therefore, the potential to expose people to impacts from fault rupture resulting from seismic activity during the design life of the buildings is considered less than significant. No further evaluation of this issue in an EIR is required.

ii. Strong seismic ground shaking?

Potentially Significant Impact. The United States is classified into four seismic zones, ranging from 1 (low earthquake danger) to 4 (high earthquake danger). All of California lies within Seismic Zones 3 or 4. The entire Fontana area, including the project site, is located within Seismic Zone 4 according to the Fontana General Plan Safety Element.[6] The future development allowable under the Specific Plan would be required to comply with construction standards contained in the California Uniform Building Code (UBC) and the Fontana Municipal Code. Nonetheless, potential impacts associated with ground shaking will be further analyzed in an EIR.

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[3] *California Department of Conservation, California Geological Survey. "California Geological Survey - Alquist-Priolo Earthquake Fault Zoning Act," http://www.consrv.ca.gov/cgs/rghm/ap/Pages/main.aspx#what_is_fault. Accessed October 4, 2011.*

[4] *Ibid.*

[5] *City of Fontana General Plan Safety Element, 2003.*

[6] *Ibid.*

iii. Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. The City of Fontana General Plan Safety Element indicates that the entire Specific Plan area is located within an area with low susceptibility to liquefaction given the depth the groundwater and relatively coarse nature of the alluvial soils under the site. Based on the low potential for liquefaction on-site, impacts in this regard are considered less than significant and further evaluation of this issue in an EIR is not required.

iv. Landslides?

No Impact. According to the City of Fontana's General Plan Safety Element, landslides of various sizes and types can occur within the foothills of the San Gabriel Mountains.[7] The majority of the landslides are primarily in the steep slopes to the north of the City boundary, which is underlain by granite bedrock. Given the distance of slope areas from the project site and relatively flat topography within the Specific Plan area, no impacts related to landslides are anticipated to occur and therefore further evaluation of this issue in an EIR is not required.

b. Result in substantial soil erosion or the loss of topsoil?

Potentially Significant Impact. Site grading and construction activities could result in soil erosion or loss of topsoil during windy conditions or from site runoff during storm events. As such, impacts are potentially significant and this issue will be further analyzed in an EIR.

c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potential result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less Than Significant Impact. As noted above in Responses VI.a), the project site is not located in an area susceptible to landslides, liquefaction, or other ground failure. As such, impacts in this regard would be less than significant and further analysis of this issue in an EIR is not required.

d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less Than Significant Impact. Expansive soils are typically associated with fine-grained clayey soils that have the potential to shrink and swell with repeated cycles of wetting and drying. As note previously, the project area is characterized by relatively coarse-grained alluvial soils that typically exhibit low clay content. Although not anticipated, expansive soils, if encountered within the project site, would be removed and/or replaced as part of standard construction practices pursuant to the City of Fontana and/or CBC building requirements. Therefore, project implementation would result in less than significant impacts associated with expansive soils and substantial risks to life or property would not occur. Further analysis of this issue in an EIR is not necessary.

[7] *Ibid.*

e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The project site is located in an urbanized area served by existing wastewater infrastructure, and therefore no septic tanks or alternative wastewater disposal systems would be required. As such, the project would not result in impacts related to the ability of soils to support septic tanks or alternative wastewater disposal systems. No impacts would occur, and further evaluation of this issue in an EIR is not required.

VII. GREENHOUSE GAS EMISSIONS

Would the project:

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance?

b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

Potentially Significant Impact (a-b). Construction and operation of the proposed project would generate additional greenhouse gas emissions that could exceed established thresholds, and as such could conflict with applicable plans, policies, and regulations related to greenhouse gases. Therefore, impacts are considered potentially significant and this issue will be further analyzed in an EIR.

VIII. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant Impact. Hazardous materials may be used during the construction phase of the project's development components. Hazardous materials that may be used include, but are not limited to, fuels (gasoline and diesel), paints and paint thinners and possibly herbicides and pesticides. Generally these materials would be used in concentrations that would not pose significant threats during the transport, use and storage of such materials. Furthermore, it is assumed that potentially hazardous materials would be contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable standards and regulations, including California Occupational Safety and Health Administration requirements, and Title 8 and 22 of the Code of California Regulations. Accordingly, risks associated with hazards to the public or environment posed by the transport, use or disposal of hazardous materials during construction are considered less than significant due to compliance with applicable standards and regulations.

Over the long-term, the project would not involve facilities that include substantial storage, use, disposal, or generation of hazardous materials or wastes. However, ongoing landscape and building maintenance activities may involve the occasional use of hazardous materials. Potentially toxic or hazardous compounds associated with maintenance activities typically consist of readily available solvents, cleaning compounds, paint, herbicides, and pesticides. These hazardous materials are regulated by stringent federal and state

laws mandating the proper transport, use, and storage of hazardous materials in accordance with product labeling. The use and storage of these substances is not considered to present a health risk when used in accordance with manufacturer specifications and with compliance to applicable regulations.

Overall, construction and operation of the project would result in a less than significant impact with regard to routine transport, use, or disposal of hazardous materials relative to the safety of the public or the environment. Further analysis of this issue is not necessary in the EIR.

b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Potentially Significant Impact. As discussed in Response No. VIII.a, the project would not involve facilities that include substantial storage, use, disposal, or generation of hazardous materials or wastes. However, there is the potential for unknown hazardous materials to be located on the project site, which could expose people to health risks is encountered during construction or operation of the proposed uses. As such, given the lack of information regarding hazardous materials conditions on-site, impacts are considered potentially significant and this issue will be further analyzed in an EIR.

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Potentially Significant Impact. Several schools are located in the project area, and at least one school (Summit High School) is located within one-quarter mile of the project site.[8] Therefore, although the project would not involve facilities that include substantial storage, use, disposal, or generation of hazardous materials or wastes, construction activities would generate diesel emissions and other potentially hazardous emissions. Based on the proximity of schools to the project site and potential for hazardous materials releases and air pollutant emissions, impacts are considered potentially significant in this regard and this issue will be further analyzed in an EIR.

d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Potentially Significant Impact. The project area has been utilized for agricultural production in the past and a number of properties within or near the project boundaries may have previously been used for industrial activities or other uses that involve hazardous materials. Given the potential presence of listed hazardous materials in the project area, and associated potential for existing contamination to affect the proposed uses, impacts in this regard are considered potentially significant and further analysis of this issue in an EIR is required.

[8] *Google Maps, 2011.*

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The project area is not located within two miles of a public airport or public use airport. The Ontario International Airport is located approximately five miles southwest of the project area. The project area is not located within the boundary of any airport land use plan and would therefore not result in a safety hazard for people using the project area. Thus, no impact would occur in this regard. Further analysis of this issue is not necessary in the EIR.

f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for the people residing or working in the area?

No Impact. There are no private airstrips in the vicinity of the project area. Therefore, the project would not result in airport-related safety hazards for the people residing or working in the area. No impact would occur in this regard. Further analysis of this issue is not necessary in the EIR.

g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Potentially Significant Impact. Implementation of the proposed Specific Plan would result in the conversion of currently vacant land to urban uses, which would increase the local population in the area and modify and extend the existing roadway network. The increased traffic and traffic system modifications could potentially adversely affect the ability of local emergency response vehicles to provide an adequate and timely response to emergency conditions. As such, given the potential for the project to interfere with applicable emergency response or evacuation plans, impacts are considered potentially significant and this issue will be further analyzed in an EIR.

h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Less Than Significant Impact. The project site is not located in an area that has a significant amount of vegetation and is characterized by relatively flat topography. Although sloped areas with extensive vegetation are located to the north of the project site in the San Gabriel and San Bernardino Mountains, these areas are located at a sufficient distance from the project area that they do not pose a substantial risk to people or structures on-site. Furthermore, future development on-site would be subject to all applicable standards and regulations related to fire protection and prevention such that wildland fire hazards would be less than significant. Further analysis of this issue in an EIR is not required.

IX. HYDROLOGY AND WATER QUALITY

Would the project:

a. Violate any water quality standards or waste discharge requirements?

Potentially Significant Impact. Construction and operation of proposed uses has the potential to introduce pollutants into stormwater flows in excess of allowable standards. As such, this issue will be evaluated further in an EIR.

b. Substantially deplete groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned land uses for which permits have been granted)?

Potentially Significant Impact. Fontana Water Company and Cucamonga Valley Water District provide water service to the eastern and western portions of the City, respectively. Development of proposed uses would result in the creation of additional impervious and semi-pervious surfaces in the Plan area. An increase in the amount of impervious surfaces can reduce the amount of water that recharges the local groundwater basin. A reduction in aquifer recharge can subsequently result in a depletion of groundwater supplies. Further, the proposed project would incrementally increase water demand, which could contribute to depletion of groundwater supplies such that there could be a net deficit in aquifer volume or a lowering of the local groundwater table level. As such, this issue will be evaluated further in an EIR.

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Potentially Significant Impact. The proposed project would involve soil disturbance and earthmoving during construction activities and substantial increases in impervious surface area within the project site, which could increase soil erosion and stormwater flow volumes generated on-site. Therefore, the proposed project would alter the existing drainage pattern of the project area, which could result in substantial erosion or sedimentation on- or off-site. As such, impacts are considered potentially significant and this issue will be further analyzed in an EIR.

d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off site?

Potentially Significant Impact. There are no streams or rivers present on the project site; however, a number of unlined drainage channels are located in the southwestern portion of the site. The development of the proposed project would potentially alter drainage patterns through the site due to physical site changes. As discussed above in Response VIII.b, the project is anticipated to result in a substantial change in the amount of impervious surface area, with a corresponding increase in the amount of surface water runoff generated on-site. The potential increase in total runoff is expected to be substantial, and therefore the project would necessarily result in a change in drainage patterns. Therefore, it is recommended that this issue be further evaluated in an EIR.

e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Potentially Significant Impact. As discussed above in Response VIII.d, the proposed project would substantially increase the impervious surface area on-site and therefore would have the potential to exceed the capacity of the stormwater drainage system serving the project area. Therefore, this impact is considered potentially significant and this issue will be further analyzed in an EIR.

f. Otherwise substantially degrade water quality?

Potentially Significant Impact. During construction of the proposed project, excavation and grading activities have the potential to temporarily increase the amount of pollutants in surface water runoff. In addition, urban development under the proposed project compared to existing conditions would substantially increase pollutants generated on-site during project operation. Given the potential for construction and operation of the proposed project to degrade water quality on- and off-site, further analysis in an EIR is recommended to assess the project's potential impacts.

g. Place housing within a 100-year flood plain as mapped on federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Potentially Significant Impact. The Federal Emergency Management Agency (FEMA) maintains and updates the National Flood Insurance Program (NFIP) maps, which identify community flood hazard zone designations. The southwestern portion of the project area has been designated as Zone X (shaded), which indicates an area of moderate flood hazard that is located within the 500-year floodplain but is protected from 100-year floods by levees or other "provisionally accredited" flood protection features. Given the moderate potential for flooding within portions of the site, impacts are considered potentially significant and this issue will be further analyzed in an EIR.

h. Place within a 100-year flood plain structures which would impede or redirect flood flows?

Potentially Significant Impact. As stated in Response No. IX.g, the project area is located within a 500-year floodplain but is protected from 100-year floods from provisionally accredited levees. Thus, impacts would be potentially significant in this regard and further analysis of this issue in the EIR is required.

i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Potentially Significant Impact. Based on the above, less than significant impacts would occur with project implementation. Further analysis of this issue is not necessary in the EIR.

j. Inundation by seiche, tsunami, or mudflow?

No Impact. A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, lake, or storage tank. A tsunami is a great sea wave, commonly referred to as a tidal wave, produced by a significant undersea disturbance such as tectonic displacement of the sea floor associated with large, shallow earthquakes. Mudflows result from the downslope movement of soil and/or rock under the influence of gravity.

The project area is not subject to tsunami hazards given the distance from the Pacific Ocean and elevation of the project area relative to sea level. No open reservoirs or other large water bodies are located within or upstream of the project area. Therefore, the project would not be subject to flooding hazards associated with seiches. Additionally, despite the steep hillsides of the foothills to the north of the project area, the potential for mudflows to affect the proposed uses would be negligible given the distance of the mountains from the project and amount of intervening development. Furthermore, the gently sloping topography of the project area is not conducive to sustaining mudflows.

Based on the above, no adverse impacts associated with inundation by seiche, tsunami, or mudflows would occur with project implementation. Further analysis of this issue is not necessary in the EIR.

X. LAND USE AND PLANNING

Would the project:

a. Physically divide an established community?

No Impact. While there are several developed residential, commercial, and public facility uses within the project vicinity, no established communities are located within the project area that could be physically divided by Specific Plan implementation. Therefore, no impacts related to the physical division of an established community would result from the proposed project. Further analysis of this issue is not necessary in the EIR.

b. Conflict with applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Potentially Significant Impact. The proposed project requires an amendment to the existing Westgate Specific Plan, a General Plan Amendment, Zoning Code Amendment, Development Agreement, and other approvals. Based on the requisite changes to applicable plans, policies, and regulations affecting the project site, the proposed project could potentially result in conflicts. As such, impacts in this regard would be potentially significant and further analysis of this issue in an EIR is required.

c. Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. As stated in Response No. IV.f, the project would have no potential to conflict with any Habitat Conservation Plan or Natural Community Conservation Plans, since no such plans have been prepared for the project area. As such, no impact would occur in this regard and further evaluation of this issue in an EIR is not required.

XI. MINERAL RESOURCES

Would the project:

a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact (a-b). According to the Fontana General Plan Open Space and Conservation Element, there are no known local mineral resources within the project area.[9] No known State-designated mineral resource areas have been identified within the project area. The project does not incorporate heavy industrial uses of any type or propose mineral development activities. Further, implementation of the project would not impede the potential for direct use or future exploration of mineral resources. Therefore, the project would result in no impact regarding mineral resources. Further analysis of this issue is not necessary in the EIR.

XII. NOISE

Would the project result in:

a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Potentially Significant Impact (a-d). Construction of improvements under the Specific Plan would create periodic and short-term noise, including groundborne vibration and groundborne noise, which could exceed established noise standards. The project's facilities and maintenance activities could also increase long-term noise levels near sensitive noise receptors. Accordingly, potential increases in construction and operational noise are considered potentially significant, and a noise analysis will be included in the EIR. The analysis will include discussion of both temporary construction and operational noise increases and the potential for significant impacts on residents and other sensitive receptors near and within the project area.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The project area is not located within an airport land use plan or within two miles of a public airport or public use airport. The nearest airport, Ontario International Airport, is located approximately five miles to the southwest. Therefore, project implementation would not expose people to excessive airport related noise levels. No impact would occur in this regard. Further analysis of this issue is not necessary in the EIR.

[9] *Fontana General Plan Open Space and Conservation Element. October 2003.*

f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The project area is not located within five miles of a private airstrip. Therefore, the project would not expose people residing or working in the project area to excessive noise levels from such uses. No impact would occur in this regard. Further analysis of this issue is not necessary in the EIR.

XIII. POPULATION AND HOUSING

Would the project:

a. Induce substantial population growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Potentially Significant Impact. Project implementation would substantially increase the population, housing stock, and employment opportunities within the project area. Therefore, given the potential growth associated with Specific Plan implementation, impacts are considered potentially significant. Further analysis of this issue in an EIR is required.

b. Displace substantial numbers of existing housing necessitating the construction of replacement housing elsewhere?

c. Displace substantial numbers of people necessitating the construction of replacement housing elsewhere?

No Impact (b-c). Project implementation would not displace existing housing or people. Therefore, no impact would occur to existing housing or local populations such that construction of replacement housing would be necessary. Further analysis of this issue is not necessary in the EIR.

XIV. PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a. Fire protection.

b. Police protection.

c. Schools.

d. Parks.

e. Other public facilities.

Potentially Significant Impact (a-e). The proposed project would include new residential development that would directly increase the City's population, and commercial and educational uses that would indirectly increase population in the area both on- and off-site. Thus, the associated increase in demand

generated by the project for public services, including fire and police protection, schools, parks, and other public facilities, will be addressed in an EIR.

XV. RECREATION

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Potentially Significant Impact. The proposed project would involve the construction of over 5,000 additional residential units, which would increase the permanent residential population within the project area. Thus, although the proposed project would include numerous parks and recreational facilities as well as residential, educational, and commercial uses, it is recommended that the associated increase in demand for parks services generated by the project be addressed in an EIR.

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Potentially Significant Impact. The proposed project would include numerous parks and recreational facilities to serve on-site residents and the community at-large. Such recreational facilities may include parks, ball fields, playgrounds, clubhouses, swimming pools, and other facilities. As on-site facilities are a component of the project, impacts associated with construction of these facilities are addressed in this Initial Study and will be addressed, as appropriate, in the respective analyses within the EIR. While the availability of on-site recreational facilities to residents may reduce project-related demand for area parks and recreational facilities, the proposed project would nonetheless contribute to the demand for parks and other recreational facilities in the area through the introduction of a new residential population. Therefore, it is recommended that this issue be further analyzed in an EIR.

XVI. TRANSPORTATION/TRAFFIC

Would the project:

a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

b. Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Potentially Significant Impact (a-b). Given the extent of new development proposed within the project area under the Specific Plan, traffic conditions within the City could be substantially altered with project implementation. A traffic evaluation is being prepared that will evaluate the project's potential to result in traffic impacts. The results of the traffic evaluation will be presented in the EIR.

c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. The project does not propose any structures that would interfere with air traffic patterns; nor would the project increase use of any airport. Thus, no impact regarding air traffic patterns would occur with project implementation. Further analysis of this issue is not necessary in the EIR.

d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Potentially Significant Impact. The proposed project would involve the construction of new roadways and intersections, including a number of roundabouts. The new circulation system on-site could increase hazards if not properly designed and constructed. As such, impacts are considered potentially significant in this regard and further analysis of this issue in an EIR is required.

e. Result in inadequate emergency access?

Potentially Significant Impact. Immediate access to the project vicinity is provided via a number of major roadways including Cherry Avenue, Summit Avenue, Beech Avenue, Baseline Avenue, Highland Avenue, and San Sevaine Road. Emergency evacuation plans and procedures would be incorporated into the project, and building design plans and emergency access and circulation would be subject to review and approval by the San Bernardino County Fire Department. While it is expected that the majority of construction activities for the project would be confined on-site, short-term construction activities may temporarily affect access on portions of the adjacent street rights-of-way during periods of the day. Additionally, access to many of the proposed Planning Areas is restricted by either the I-15 Freeway, 210 Freeway, the SCE power line corridor, and other major thoroughfares. These restrictions may prevent the development of adequate emergency access points to the proposed Planning Areas during project operation, and therefore access modifications to these Planning Areas may be necessary. Given the potential disruption of traffic patterns during construction and potential access limitations during project operation, it is recommended that emergency access be addressed in an EIR.

f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Potentially Significant Impact. The introduction of proposed uses and associated population, vehicles, and new and expanded roadways could potentially conflict with existing/adopted policies, plans, or programs regarding alternative transportation. Therefore, impacts are considered potentially significant and further analysis of this issue in an EIR is required.

XVII. UTILITIES AND SERVICE SYSTEMS

Would the project:

a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Potentially Significant Impact. Given the increase in development intensity relative to existing conditions at the project site, it is anticipated that the proposed project would generate substantially more wastewater,

and the associated demand for wastewater treatment could potentially exceed existing treatment capacity or the wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board (SARWQCB) for the treatment facility serving the project area. Therefore, further analysis of wastewater treatment in an EIR is necessary.

b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Potentially Significant Impact. The proposed project would result in the development of the project site with new urban uses at a substantially higher intensity than existing on-site development. As such, given the associated increase in demand for water service and wastewater treatment, the potential exists for the project to require the construction or expansion of water and/or wastewater treatment facilities. Therefore, further analysis of this issue in an EIR is necessary.

c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Potentially Significant Impact. The proposed project would substantially increase surface water runoff generated at the project site due to an incremental increase in impervious surface area. Additionally, the project would change the development pattern of the site from vacant land to urban uses, which would alter the rate and direction of runoff. Since the proposed project has the potential to substantially increase surface water runoff and alter the sheet flow pattern through the project site it is recommended that the impacts to stormwater drainage facilities be addressed in an EIR.

d. Have sufficient water supplies available to serve the project from existing entitlements and resource, or are new or expanded entitlements needed?

Potentially Significant Impact. The project would consist of a mix of uses, including over 5,000 residential units. As these uses would generate a water demand greater than that of 500 dwelling units, the project would be subject to Senate Bill (SB) 610 which requires that a water supply assessment be conducted by the water service provider to determine if there is sufficient water supply to serve the project during normal, single dry, and multiple dry water years. Since a water supply assessment is required for the proposed project, it is recommended that water supply be analyzed further in an EIR.

e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Potentially Significant Impact. As noted above, the proposed project would result in the development of the project site with new urban uses at a substantially higher intensity than under existing conditions. As such, given the associated increase in demand for wastewater treatment, the potential exists for the project to exceed the capacity of wastewater treatment facilities serving the project area. Therefore, further analysis of this issue in an EIR is necessary.

f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Potentially Significant Impact. Construction of the proposed project would generate inert solid waste (e.g., export soils, construction and demolition debris) which would require disposal at an unclassified landfill. In addition, during project operation, the project's commercial, educational, and residential uses would generate solid waste which would be disposed of at the landfill(s) serving the City. Although recycling would extend the life of the landfill(s) serving the project area, implementation of the proposed project would increase demand for landfill services and potentially accelerate projected landfill closures. Therefore, the impact of the project with respect to solid waste disposal will be further analyzed in an EIR.

g. Comply with federal, state, and local statutes and regulations related to solid waste?

Less Than Significant Impact. Solid waste collection from the project site would be managed by the Department of Public Works' Solid Waste and Recycling Program and the City's contractor, Burrtec Waste Industries (Burrtec). The City had a 50-percent waste diversion rate in 2006 through recycling and other measures and is in compliance with the California Integrated Waste Management Act of 1989 (AB939).[10] The proposed project would comply with applicable regulations related to solid waste, including those pertaining to waste reduction and recycling. As all solid waste collection from the project site would be managed by Burrtec, which is in compliance with federal, state, and local statutes and regulations, the proposed project would be consistent with respective regulatory measures. Further analysis of this issue in an EIR is not required.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Potentially Significant Impact. As discussed above, the project could potentially result in significant impacts regarding biological resources and cultural resources. Impacts related to either of these issue areas would be considered to degrade the quality of the environment. This impact is considered potentially significant and will be further analyzed in the EIR.

b. Does the project have impacts which are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Potentially Significant Impact. As discussed above, the project could potentially result in significant impacts regarding aesthetics, air quality, biological resources, cultural resources, geology and soils,

[10] *CalRecycle. "Jurisdiction Profile for City of Fontana." http://www.calrecycle.ca.gov/Profiles/Juris/JurProfile1.asp?RG=C&JURID =160&JUR=Fontana. Accessed November 9, 2011.*

greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, public services, traffic/transportation, and utilities and service systems-related impacts. The EIR will assess potential cumulative impacts associated with these issues.

c. Does the project have environmental effects which cause substantial adverse effects on human beings, either directly or indirectly?

Potentially Significant Impact. Due to the potentially significant impacts associated with implementation of the project, the project has the potential to cause substantial adverse effects on human beings, either directly or indirectly. Thus, a potentially significant impact associated with this issue could occur, and as such further analysis will be provided in the relevant sections of the EIR.

REFERENCES

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City of Fontana Zoning and Development Code, updated through January 2010.

Google Maps, 2012.

LIST OF PREPARERS

Lead Agency - City of Fontana

Mr. Charles Fahie, AICP, Senior Planner
City of Fontana
Community Development Department
8353 Sierra Avenue
Fontana, CA 92335
(909) 350-6711

Environmental Document Preparation

PCR Services Corporation
One Venture, Suite 150
Irvine, CA 92618

David Crook, AICP, Principal Planner (Project Manager)

Jay Ziff, Senior Vice President/Director of Environmental Planning and Documentation

Brian Allee, Senior Planner I

Denise Kaneshiro, Graphics Specialist

Terry Keelan, Publications Director

PCR Irvine
One Venture
Suite 150
Irvine, California 92618
TEL 949.753.7001
FAX 949.753.7002
PCRinfo@pcrnet.com

PCR Santa Monica
201 Santa Monica Boulevard
Suite 500
Santa Monica, California 90401
TEL 310.451.4488
FAX 310.451.5279
PCRinfo@pcrnet.com

PCR Pasadena
80 South Lake Avenue
Suite 570
Pasadena, California 91101
TEL 626.204.6170
FAX 626.204.6171
PCRinfo@pcrnet.com

Appendix A2 - Notice of Preparation - Agencies

City of Fontana
Planning Division
8353 Sierra Avenue
Fontana, CA 92335

NOTICE OF PREPARATION
AND
PUBLIC SCOPING MEETING NOTICE

Date:	July 11, 2013
Subject:	Notice of Preparation of a Draft Environmental Impact Report
Project Title:	Westgate Specific Plan
Project Proponent:	Unitex Management Corporation
Lead Agency:	City of Fontana, Development Services Organization – Planning Division
Address:	City Hall, 8353 Sierra Avenue, Fontana, CA 92335
City Contacts:	Charles D. Fahie, AICP, Senior Planner
Phone:	(909) 350-6724

The City of Fontana (City) has determined that an Environmental Impact Report (EIR) is necessary for the analysis of the proposed Westgate Specific Plan (the "Project"). The proposed Specific Plan will replace the original Westgate Specific Plan previously adopted in 1996. The City is the lead agency for the Project and will prepare the EIR under the terms and requirements of the California Environmental Quality Act (CEQA) and the implementing Guidelines of the California Environmental Quality Act ("Guidelines").

The purpose of this notice is: (1) to serve as the Notice of Preparation to the Office of Planning and Research (OPR), potential Responsible Agencies, federal agencies involved in funding or approving the Project, and Trustee Agencies responsible for natural resources affected by the Project, pursuant to Section 15082 of the CEQA Guidelines; and (2) to advise and solicit comments and suggestions regarding the preparation of the EIR, environmental issues to be addressed in the EIR, and any related issues, from interested parties other than those noted above, including interested or affected members of the public. The City requests that any potential Responsible or Trustee Agency responding to this notice respond in a manner consistent with CEQA Guidelines Section 15082(b).

In order for the concerns of your agency to be incorporated into the Draft EIR, we are requesting that you provide us with environmental information pertaining to the scope and content relevant to your agency's statutory responsibilities in connection with the proposed Project. Your response at a minimum should include: a) significant environmental issues and reasonable alternatives and mitigation measures that the responsible or trustee agency will need to have explored in the Draft EIR; and b) whether or not your agency will be a responsible or trustee agency for the Project.

The Project description, location (see attached Figure 1), and a discussion indicating the probable environmental effects of the proposed action are contained in the attached materials. Additional Project information may be obtained at the City Hall address shown above.

In an effort to provide agencies and the public adequate time to provide comments, the City of Fontana is providing a 30-day public review period for this Notice of Preparation and Initial Study. **All comments must be received 30 days from receipt of this public notice.** All parties that have submitted their names and mailing addresses will be notified as part of the current Project's CEQA review process. If you wish to be placed on the mailing list or have any questions or need additional information, please contact the person identified above. The City will accept **written** comments from Agencies and interested parties regarding this notice through the close of business on **August 10, 2013 (submit written comments to the City address shown above)**.

PROJECT SUMMARY

The Westgate Specific Plan is comprised of four villages, all of the land uses within which are incorporated into 83 development areas, designated as "Planning Areas" (PAs). Altogether, these PAs include a total of 5,410 residential units, 50.9 acres of Commercial Retail, 179.9 acres of business park and professional office uses, 71.6 acres of warehouse/distribution uses, 47.8 acres of Open Space/Public Parks, 9.15 acres of Open Space/Private Parks, 1.4 acres of Open Space/Landscape, 96.1 acres of Open Space/Utility Corridor, 24 acres for an Elementary School, 60 acres for a High School, and 89.35 acres of major street rights-of-way.

Anticipated approvals for the Project include a General Plan Amendment, Zone Change, Specific Plan, EIR Certification, and Development Agreement.

An Initial Study/Notice of Preparation for the Westgate Specific Plan was previously distributed for public review on February 15, 2012; the only material change to the currently proposed Specific Plan from the previous version is the designation of 71.6 acres for warehouse/distribution uses that were previously designated as Business Park.

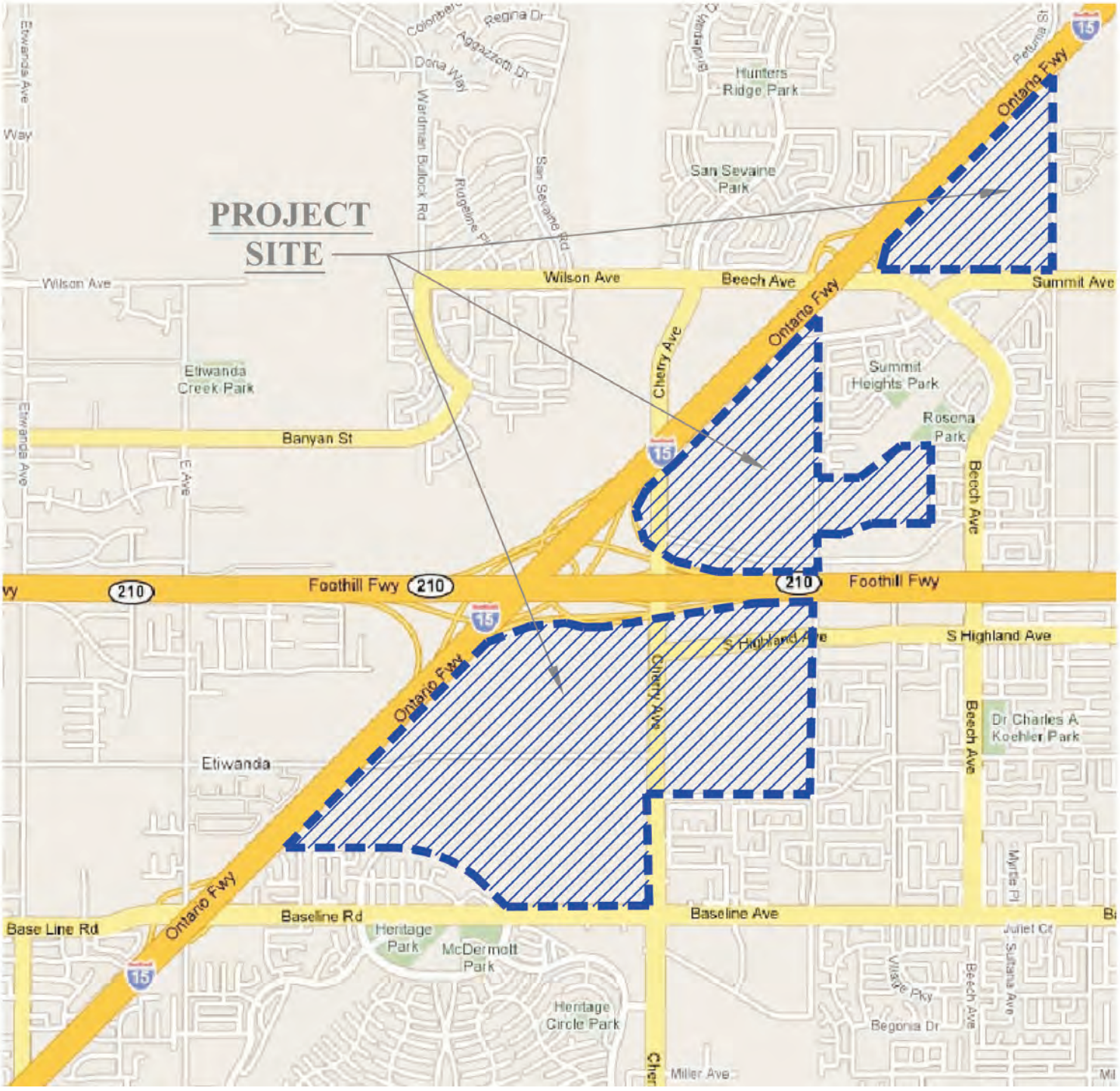
PUBLIC SCOPING MEETING

To accommodate the schedules of both public agencies and residents, the City will be conducting a public scoping meeting, which will include a brief overview of the Project and a discussion of the anticipated environmental issues. Information for the date, time, and location for this meeting is provided below:

Meeting Date	**Meeting Time**	**Meeting Location**
Thursday, July 18, 2013	6:00 pm – 8:00 pm	Fontana City Hall Development Services DAB Conference Room, 1st Floor 8353 Sierra Avenue Fontana, CA 92335

Any interested parties may attend this meeting to gain a better understanding of the Project and to identify environmental issues of concern.

DON WILLIAMS, AICP
Director of Community Development



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Not to scale

Project Vicinity Map

Westgate Specific Plan

Source: JHA Consulting, Inc., 2011.

FIGURE

1

Appendix A3 - Notice of Preparation - Public

City of Fontana
Planning Division
8353 Sierra Avenue
Fontana, CA 92335

NOTICE OF PREPARATION
AND
PUBLIC SCOPING MEETING NOTICE

Date:	July 11, 2013
Subject:	Notice of Preparation of a Draft Environmental Impact Report
Project Title:	Westgate Specific Plan
Project Proponent:	Unitex Management Corporation
Lead Agency:	City of Fontana, Development Services Organization – Planning Division
Address:	City Hall, 8353 Sierra Avenue, Fontana, CA 92335
City Contacts:	Charles D. Fahie, AICP, Senior Planner
Phone:	(909) 350-6724

The City of Fontana (City) has determined that an Environmental Impact Report (EIR) is necessary for the analysis of the proposed Westgate Specific Plan (the "Project"). The proposed Specific Plan will replace the original Westgate Specific Plan previously adopted in 1996. The City is the lead agency for the Project and will prepare the EIR under the terms and requirements of the California Environmental Quality Act (CEQA) and the implementing Guidelines of the California Environmental Quality Act ("Guidelines").

The purpose of this notice is: (1) to serve as the Notice of Preparation to the Office of Planning and Research (OPR), potential Responsible Agencies, federal agencies involved in funding or approving the Project, and Trustee Agencies responsible for natural resources affected by the Project, pursuant to Section 15082 of the CEQA Guidelines; and (2) to advise and solicit comments and suggestions regarding the preparation of the EIR, environmental issues to be addressed in the EIR, and any related issues, from interested parties other than those noted above, including interested or affected members of the public. In order for your relevant concerns regarding the Project to be addressed in the Draft EIR, we are requesting that you provide us with input pertaining to the scope and content of the EIR.

The Project description, location (see attached Figure 1), and a discussion indicating the probable environmental effects of the proposed action are contained in the attached materials. Additional Project information may be obtained at the City Hall address shown above.

In an effort to provide agencies and the public adequate time to provide comments, the City of Fontana is providing a 30-day public review period for this Notice of Preparation and Initial Study. **All comments must be received 30 days from receipt of this public notice.** All parties that have submitted their names and mailing addresses will be notified as part of the current Project's CEQA review process. If you wish to be placed on the mailing list or have any questions or need additional information, please contact the person identified above. The City will accept **written** comments from Agencies and interested parties regarding this notice

through the close of business on **August 10, 2013 (submit written comments to the City address shown above)**.

PROJECT SUMMARY

The Westgate Specific Plan is comprised of four villages, all of the land uses within which are incorporated into 83 development areas, designated as "Planning Areas" (PAs). Altogether, these PAs include a total of 5,410 residential units, 50.9 acres of Commercial Retail, 179.9 acres of business park and professional office uses, 71.6 acres of warehouse/distribution uses, 47.8 acres of Open Space/Public Parks, 9.15 acres of Open Space/Private Parks, 1.4 acres of Open Space/Landscape, 96.1 acres of Open Space/Utility Corridor, 24 acres for an Elementary School, 60 acres for a High School, and 89.35 acres of major street rights-of-way.

Anticipated approvals for the Project include a General Plan Amendment, Zone Change, Specific Plan, EIR Certification, and Development Agreement.

An Initial Study/Notice of Preparation for the Westgate Specific Plan was previously distributed for public review on February 15, 2012; the only material change to the currently proposed Specific Plan from the previous version is the designation of 71.6 acres for warehouse/distribution uses that were previously designated as Business Park.

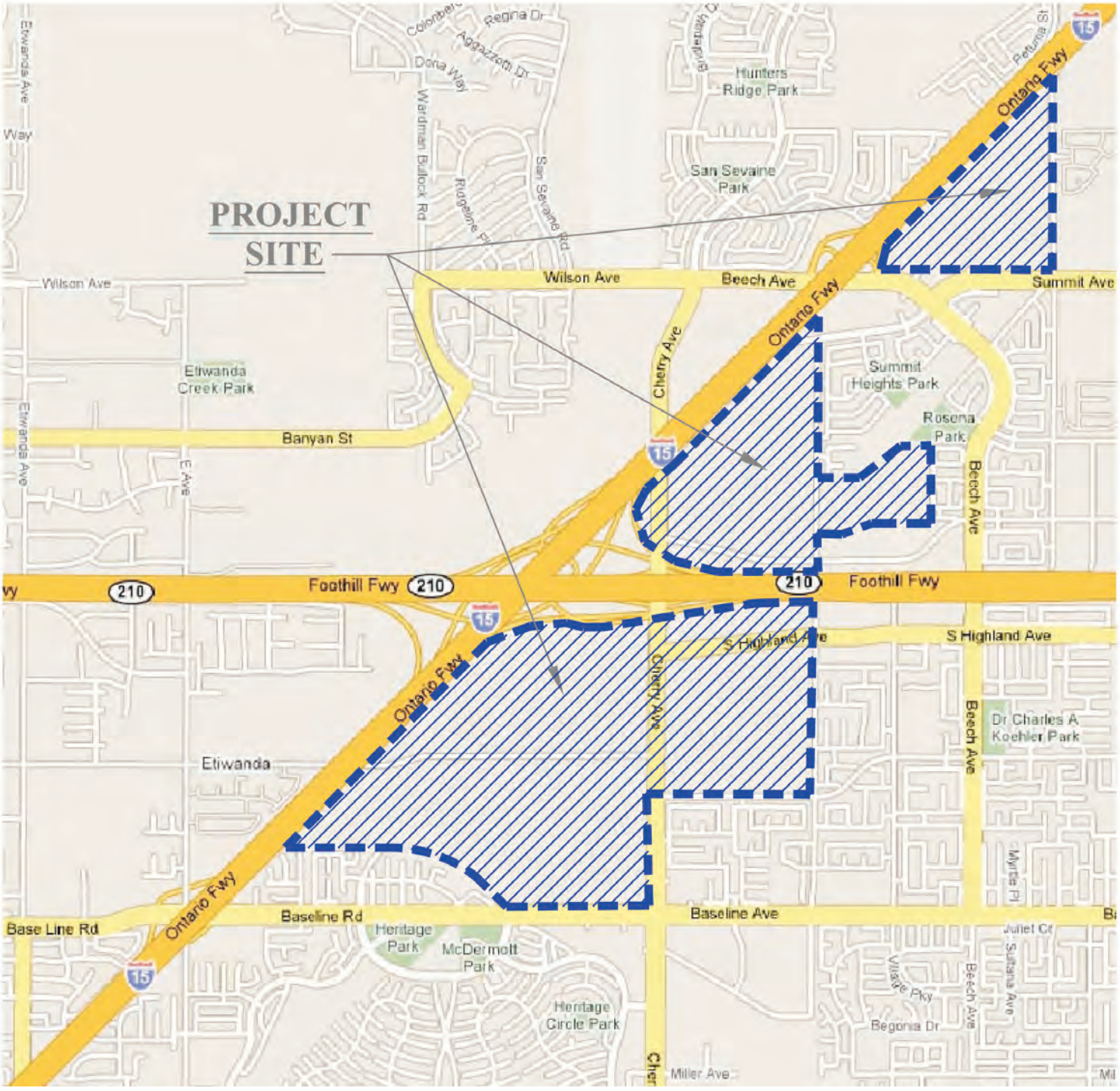
PUBLIC SCOPING MEETING

To accommodate the schedules of both public agencies and residents, the City will be conducting a public scoping meeting, which will include a brief overview of the Project and a discussion of the anticipated environmental issues. Information for the date, time, and location for this meeting is provided below:

Meeting Date	**Meeting Time**	**Meeting Location**
Thursday, July 18, 2013	6:00 pm – 8:00 pm	Fontana City Hall Development Services DAB Conference Room, 1st Floor 8353 Sierra Avenue Fontana, CA 92335

Any interested parties may attend this meeting to gain a better understanding of the Project and to identify environmental issues of concern.

DON WILLIAMS, AICP
Director of Community Development



PCR

N

Not to scale

Project Vicinity Map

Westgate Specific Plan

Source: JHA Consulting, Inc., 2011.

FIGURE

1

Appendix A4 - NOP Comments

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

Notice of Preparation

July 12, 2013

To: Reviewing Agencies

Re: West Gate Specific Plan
SCH# 1995052002

Attached for your review and comment is the Notice of Preparation (NOP) for the West Gate Specific Plan 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:

Charles Fahie
City of Fontana
8353 Sierra Avenue
Fontana, CA 92335

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# 1995052002
Project Title West Gate Specific Plan
Lead Agency Fontana, City of

Type NOP Notice of Preparation

Description Note: Reference SCH# 1991062014

The Westgate Specific Plan is comprised of four villages, all of the land uses within which are incorporated into 83 development areas, designated as "Planning Areas" (PAs). Altogether, these PAs include a total of 5,410 residential units, 50.9 acres of Commercial Retail, 179.9 acres of business park and professional office uses, 71.6 acres of warehouse/distribution uses, 47.8 acres of Open Space/Public Parks, 9.15 acres of Open Space/Private Parks, 1.4 acres of Open Space/Landscape, 96.1 acres of Open Space/Utility Corridor, 24 acres for an Elementary School, 60 acres for a High School, and 89.35 acres of major street rights-of-way.

Lead Agency Contact

Name Charles Fahie
Agency City of Fontana
Phone 909 350 6724 **Fax**
email
Address 8353 Sierra Avenue
City Fontana **State** CA **Zip** 92335

Project Location

County San Bernardino
City Fontana
Region
Cross Streets
Lat / Long
Parcel No. Multiple
Township **Range** **Section** **Base**

Proximity to:

Highways SR 210, I-15
Airports
Railways Metrolink
Waterways Lytle Creek
Schools Multiple
Land Use GP: Regional Mixed Use (RMU), Residential Planned Community (R-PC), Medium Density Residential (R-M), General Commercial (C-G), Public Utility Corridors (P-UC), and Recreational Facilities (P-R)
Z: Specific Plan #17 - Westgate

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife; Growth Inducing; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Wildlife, Region 6 (Inyo & Mono Region); Office of Emergency Management Agency, California; Native American Heritage Commission; Public Utilities Commission; State Lands Commission; California Highway Patrol; Department of Housing and Community Development; Caltrans, District 8; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 8

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

Document Details Report
State Clearinghouse Data Base

Date Received 07/12/2013 *Start of Review* 07/12/2013 *End of Review* 08/12/2013

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

NOP Distribution List

County: SAN BERNARDINO SCH# 1995052002

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
  Dan Foster
- [ ] 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
- [x] Dept. of Water Resources Resources Agency
  Nadell Gayou

Fish and Game

- [ ] Depart. of Fish & Wildlife
  Scott Flint
  Environmental Services Division
- [ ] Fish & Wildlife Region 1
  Donald Koch
- [ ] Fish & Wildlife Region 1E
  Laurie Harnsberger
- [ ] Fish & Wildlife Region 2
  Jeff Drongesen
- [ ] Fish & Wildlife Region 3
  Charles Armor
- [ ] Fish & Wildlife Region 4
  Julie Vance
- [ ] Fish & Wildlife Region 5
  Leslie Newton-Reed
  Habitat Conservation Program
- [x] Fish & Wildlife Region 6
  Gabrina Gatchel
  Habitat Conservation Program
- [ ] Fish & Wildlife Region 6 I/M
  Heidi Sickler
  Inyo/Mono, Habitat Conservation Program
- [ ] Dept. of Fish & Wildlife 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
  Jeffery Worth
  Dept. of Health/Drinking Water
- [ ] Delta Stewardship Council
  Kevan Samsam

Independent Commissions,Boards

- [ ] Delta Protection Commission
  Michael Machado
- [x] Cal EMA (Emergency Management Agency)
  Dennis Castrillo
- [x] Native American Heritage Comm.
  Debbie Treadway
- [x] Public Utilities Commission
  Leo Wong
- [ ] Santa Monica Bay Restoration
  Guangyu Wang
- [x] 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
- [x] California Highway Patrol
  Suzann Ikeuchi
  Office of Special Projects
- [x] Housing & Community Development
  CEQA Coordinator
  Housing Policy Division

Dept. of Transportation

- [ ] Caltrans, District 1
  Rex Jackman
- [ ] Caltrans, District 2
  Marcelino Gonzalez
- [ ] Caltrans, District 3
  Gary Arnold
- [ ] Caltrans, District 4
  Erik Alm
- [ ] 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 07/09/2013

State of California - Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Inland Deserts Region
3602 Inland Empire Blvd., Suite C-220
Ontario, CA 91764
(909) 484-0167
www.wildlife.ca.gov

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

August 9, 2013

Mr. Charles Fahie
City of Fontana
8353 Sierra Avenue
Fontana, CA 92335

Subject: Notice of Preparation of a Draft Environmental Impact Report for the Westgate Specific Plan, City of Fontana, County of San Bernardino, State Clearinghouse No. 1995052002

Dear Mr. Fahie:

The Department of Fish and Wildlife (Department) appreciates the opportunity to comment on the Notice of Preparation (NOP) for a Draft Environmental Impact Report (DEIR) for the Westgate Specific Plan (Project), City of Fontana, County of San Bernardino, State Clearinghouse No.1995052002. The Department is responding to the NOP as a Trustee Agency for fish and wildlife resources (California 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 the issuance of a Lake or Streambed Alteration Agreement (California Fish and Game Code Sections 1600 *et seq.*) and/or a California Endangered Species Act (CESA) Permit for Incidental Take of Endangered, Threatened, and/or Candidate species (California Fish and Game Code Sections 2080 and 2080.1).

Project Description

The Project encompasses 964 acres in the northwest part of the City of Fontana, consisting of three parcels, located on the east side of Interstate 15 (I-15) from Baseline Road to just north of Summit Ave. The northernmost parcel (parcel 1) is located north of Summit Avenue and east of I-15. The central parcel (parcel 2) is located between the Foothill Freeway (SR-210) to the south, Beech Avenue to the north and Rosena Park to the east. The southern parcel (parcel 3) is located east of I-15, south of SR-210, north of Baseline Road, and west of San Sevaine Road. Since the Westgate Specific Plan was adopted by the City of Fontana in 1996, the region has experienced substantial growth and development.

Biological Resources and Impacts

The NOP mentions the potentially significant impacts the Project could have on sensitive species and habitats, wildlife corridors, and wildlife nursery sites. 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. The CEQA document should not defer impact analysis and mitigation measures to future regulatory discretionary actions, such as a Lake or Streambed Alteration Agreement.

If state or federal endangered or threatened species have the potential to occur on the Project, site species specific surveys should be conducted using methods approved by the Department or assume the presence of the species throughout the project site. The Department recommends that surveys be conducted with one year of submission of the CEQA document. The CEQA document should also address species of special concern and federal critical habitat. To assist with review, an accompanying map showing the areas of impact should be included in the subsequent CEQA document. Additional maps detailing the location of endangered, threatened, or special of special concern should also be included in the subsequent CEQA document.

To compile a complete list of sensitive species and habitats with the potential to be impacted by the Project, the Department recommends the lead agency include steps such as: reviewing all available literature and studies focused on the local area, contacting the Department's California Natural Diversity Database (CNDDB), comparing biological data from current and past CEQA documents, and performing focused surveys that include, but are not limited to, passerine birds, raptors, small mammals, reptiles, sensitive plants, and vegetative assessments. Acceptable species specific surveys have been developed by the Department, and by the U.S. Fish and Wildlife Service, and are accessible through each agencies websites. The Department recommends that assessments for rare plants and rare plant natural communities follow the Department's 2009 Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities.

The DEIR should also examine the potential impacts to wildlife corridors, loss of connectivity to adjacent open space areas, including the San Bernardino Mountains and the Lytle Creek and Cajon Creek areas, the loss of nesting habitat, and the loss of raptor foraging habitat. All potential impacts should be considered with relation to the cumulative impacts within the region.

Lake and Streambed Alteration Program

The Department is responsible for assessing and evaluating impacts to jurisdictional waters; typically accomplished through reviewing jurisdictional delineation (JD) reports, supporting information, and conducting site visits. Following review of a JD, the Department may request changes to the JD. The Department may also recommend that additional project avoidance and/or minimization measures be incorporated, or request additional mitigation for project-related impacts to jurisdictional areas.

The Department recommends submitting a notification early in the project planning process, since modification of the proposed project may be required to avoid or reduce impacts to fish and wildlife resources. To obtain a Lake or Streambed Alteration notification package, please go to http://www.dfg.ca.gov/habcon/1600/forms.html.

The Department opposes the elimination of ephemeral, intermittent, and perennial streams, channels, lakes, and their associated habitats. The Department recommends avoiding stream and riparian habitat to the greatest extent possible. Any unavoidable impacts need to be compensated with the creation and/or restoration of in-kind habitat either on-site or off-site at a minimum 3:1 replacement-to-impact ratio, depending on the impacts and proposed mitigation. Additional mitigation requirements through the Department's Lake and Streambed Alteration Agreement process may be required, depending on the quality of habitat impacted, proposed mitigation, project design, and other factors.

The following information will be required for the processing of a Notification of Lake or Streambed Alteration and the Department recommends incorporating this information into the CEQA document to avoid subsequent documentation and project delays:

1) Delineation of lakes, streams, and associated habitat that will be temporarily and/or permanently impacted by the proposed project (include an estimate of impact to each habitat type);
2) Discussion of avoidance and minimization measures to reduce project impacts; and,
3) Discussion of potential mitigation measures required to reduce the project impacts to a level of insignificance. Please refer to section 15370 of the CEQA Guidelines for the definition of mitigation.

In the absence of specific mitigation measures in the CEQA document, the Department believes that it cannot fulfill its obligations as a Trustee and Responsible Agency for fish and wildlife resources. Permit negotiations conducted after and outside of the CEQA process are not CEQA-compliant because they deprive the public and agencies of their right to know what project impacts are and how they are being mitigated (CEQA Guidelines Section 15002).

Cumulative Impacts

The Project is proposed in a densely populated region of southern California. The regional scarcity of biological resources may increase the cumulative significance of Project activities. The analysis of cumulative impacts should consider all existing projects in the Plan area and any future projects that have been approved by the City. Cumulative effects analysis should be developed as described under CEQA Guidelines Section 15130. Please include all potential direct and indirect project related impacts to riparian areas, wetlands, vernal pools, alluvial fan habitats, wildlife corridors or wildlife movement areas, aquatic habitats, sensitive species and other sensitive habitats, open lands, open space, and adjacent natural habitats in the cumulative effects analysis.

Alternatives Analysis

The CEQA document should analyze a range of fully considered and evaluated alternatives to the Project (CEQA Guidelines Section 15126.6). The analysis should include a range of alternatives which avoid or otherwise minimize impacts to sensitive biological resources. 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. The CEQA document should include an evaluation of specific alternative locations with lower resource sensitivity where appropriate. Off-site compensation for unavoidable impacts through acquisition and protection of high-quality habitat should be addressed.

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

Department Recommendations

The Department has the following concerns about the Project, and requests that these concerns be addressed in the CEQA document:

1. The CEQA document should quantify impacts to habitats and species as per the informational requirements of CEQA. An accompanying map showing the areas of impact should also be included.

2. The CEQA document should include recent biological surveys for fauna and flora (CEQA Guidelines Section 15125(a)). The Department recommends that the Lead Agency contact the Department's California Natural Diversity Database (CNDDB) in Sacramento, (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. If sensitive species may occur within the project area, species specific surveys, conducted at the appropriate time of year and time of day, should be included with the CEQA document. Acceptable species specific surveys have been developed by the Department, and by the U.S. Fish and Wildlife Service, and are accessible through each agencies websites. The Department recommends that assessments for rare plants and rare plant natural communities follow the Department's 2009 Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. The guidance document is available here: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/protocols_for_surveying_and_evaluating_impacts.pdf

3. The analysis in the CEQA document should satisfy the requirements of the Department's Lake and Streambed Alteration Program and CESA (if deemed necessary).

4. The CEQA document should provide a thorough analysis of direct, indirect, and cumulative impacts and identify specific measures to offset such impacts.

5. The CEQA document should analyze a range of fully considered and evaluated alternatives to the Project (CEQA Guidelines Section 15126.6).

In summary, the Department requests that the CEQA document include current information regarding biological resources, provide a thorough analysis of cumulative impacts, and provide an alternative analysis. If you should have any questions pertaining to these comments, please contact Robin Maloney-Rames, Environmental Scientist at (909) 980-3818.

Sincerely,

Jeff Brandt
Senior Environmental Scientist

cc: State Clearinghouse, Sacramento

Cucamonga Valley Water District

10440 Ashford Street • Rancho Cucamonga, CA 91730-2799
P.O. BOX 638 • Rancho Cucamonga, CA 91729-0638
(909) 987-2591 • Fax (909) 476-8032

Martin E. Zvirbulis
Secretary/General Manager/CEO

July 26, 2013

Mr. Charles Fahie, Senior Planner
City of Fontana
Planning Division
8353 Sierra Avenue
Fontana, CA 92335

Re: Notice of Preparation of a Draft Environmental Impact Report
Location: Westgate Specific Plan
East side of Interstate 15 at the Interstate 210 interchange
Applicant: Unitex Management Corporation

Gentlemen:

Thank you for the opportunity to review and comment on the above referenced document. After reviewing the Notice of Preparation of a Draft Environmental Impact Report, Cucamonga Valley Water District has no comments.

Once again, Cucamonga Valley Water District thanks you for including us on this project's distribution list.

Sincerely,

CUCAMONGA VALLEY WATER DISTRICT

Russel C. Silva
Capital Projects Coordinator

Oscar Gonzalez President | **James V. Curatalo, Jr.** Vice President | **Luis Cetina** Director | **Randall James Reed** Director | **Kathleen J. Tiegs** Director

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!
Be energy efficient!

July 19, 2013

Charles Fahie
City of Fontana
8353 Sierra Avenue
Fontana, CA 92335

Notice of Preparation (NOP) for the West Gate Specific Plan Draft Environmental Impact Report, 08-SBD-15 PM7.913

Dear Mr. Fahie,

We have completed our review for the proposal for the West Gate Specific Plan. The West Gate Specific Plan is comprised of four villages, all of the land uses within which are incorporated into 83 development areas, designated as "Planning Areas". Altogether, these PA's include a total of 5,410 residential units, 50.9acres of Commercial Retail, 179.9 acres of business park and professional uses, 71.69 acres of warehouse/distribution uses, 47.8 acres of Open Space/Private Parks, 1.4 acres of Open Space /Landscape, 96.1 acres of Open Space/Utility Corridor, 24 acres of an Elementary School, 60 acres for a High School, and 89.35 acres of major street right-of-way.
The same NOP was submitted February 16, 2012 and we provided our comments on March 21, 2012. The only difference, we observed, was the distribution of acres for different functions in Planning Areas. Our comments stand.

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

Sincerely,

Atch: Copy of the Caltrans letter of 3/21/2012

DANIEL KOPULSKY
Office Chief
Community and Regional Planning

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!
Be energy efficient!

March 21, 2012

Charles Fahie
City of Fontana
8353 Sierra Avenue
Fontana, CA 92335

Notice of Preparation (NOP) for the West Gate Specific Plan draft Environmental Impact Report (EIR), SCH# 1995052002. SBD15-PM 7.913.

Dear Mr. Fahie,

The City of Fontana is proposing Westgate Specific Plan which will replace the original Westgate Specific Plan previously adopted in 1996. The Westgate Specific Plan is comprised of four villages, all of the land uses within which are incorporated into 83 development areas, designated as "Planning Areas"(PAs). Altogether, these PAs include a total of 5,391 residential units, 52.1 acres of Commercial retail, 140.9 acres of Business Park, 69.7 acres of Business Park/Public Facilities, 43.7 acres of Open Space/Public Parks, 12.85 acres of Open Space/Private Parks, 1.4 acres of Open Space/Landscape, 89.8 acres of Open Space/Utility Corridor, 24 acres for an Elementary School, 60 acres for a High School, and 102.85 acres of major street right-of-way.

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 County of San Bernardino due to the Project's potential impact to State facilities it is also subject to the policies and regulations that govern the SHS.

Because this property is located immediately adjacent to State right-of-way, we are concerned with potential impacts to existing facilities that may result with proposed development. We therefore recommend the following to be provided when the Draft EIR is available:

Traffic Study

1. A Traffic Impact Study (TIS) is necessary to determine this proposed project's near-term and long-term impacts to the State facilities and to propose appropriate mitigation measures. The study should be based on Caltrans' *Guide for the Preparation of Traffic Impact Studies (TIS)* which is located at the following website:

http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf

Minimum contents of the traffic impact study are listed in Appendix "A" of the TIS guide. Submit a hard copy of all Traffic Impact Analysis documents and an electronic Synchro Analysis file.

Drainage and Hydrology Study

1. All existing tributary areas, area drainage patterns and runoff volumes having an impact to adjacent route drainage facilities must be identified and analyzed in a project hydrology study.

2. Existing capacity of affected State drainage systems cannot be exceeded. Should 100-year project runoff volumes be determined to exceed the maximum capacity of the existing State drainage facilities, construction of on-site detention basins, new drainage systems or other impact mitigation will be required.

3. Future review of project drainage design will include an evaluation of runoff impacts to adjacent State right-of-way. Where applicable, compliance with pertinent NPDES/water quality standards will be required.

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

Sincerely,

DANIEL KOPULSKY
Office Chief
Community Planning/IGR-CEQA

MWD
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Executive Office

August 9, 2013 **Via Electronic and Regular Mail**

Mr. Charles D. Fahie, Senior Planner
City of Fontana
Planning Division
8353 Sierra Avenue
Fontana, CA 92335

Dear Mr. Fahie:

Notice of Preparation and Public Scoping
Meeting Notice for the Westgate Specific Plan

The Metropolitan Water District of Southern California (Metropolitan) has reviewed the Notice of Preparation (NOP) and Public Scoping Meeting Notice for the Westgate Specific Plan. The city of Fontana, acting as Lead Agency under the California Environmental Quality Act, has determined that an Environmental Impact Report is necessary for analysis of the proposed Westgate Specific Plan. This newly proposed project replaced the original Westgate Specific Plan previously adopted in 1996. The proposed project is comprised of four villages that would include 5,410 residential units, 50.9 acres of Commercial Retail, 179.9 acres of business park and professional office uses, 71.6 acres of warehouse/distribution uses, 47.8 acres of Open Space/Private Parks, 1.4 acres of Open Space/Landscape, 96.1 acres of Open Space/Utility Corridor, 24 acres for an Elementary School, 60 acres of a High School, and 89.35 acres of major street rights-of-way. An NOP for the proposed project was previously distributed for public review on February 15, 2012; however, this new NOP was prepared to address changes to the designation of 71.6 acres of Business Park to warehouse/distribution uses.

The proposed project is located in the City of Fontana in the southwestern portion of San Bernardino County. Metropolitan owns and operates the 144-inch-inside-diameter Etiwanda pipeline, which extends through the proposed project boundaries in a generally northeast to southwest direction and is located within a 100-foot-wide strip of fee-owned property. This letter contains Metropolitan's comments to the proposed project as a potentially affected public agency.

Based on a review of the proposed project boundaries, the project has potential to impact Metropolitan's Etiwanda pipeline. Metropolitan must be allowed to maintain its rights-of-way and requires unobstructed access to its facilities in order to maintain and repair its system. In order to avoid potential conflicts with Metropolitan's facilities and rights-of-way, we require that any design plans for any activity in the area of Metropolitan's pipelines or facilities be submitted for our review and written approval. Approval of the project should be contingent on Metropolitan's approval of design plans for portions of the proposed project that could impact its facilities.

Detailed prints of drawings of Metropolitan's pipelines and rights-of-way may be obtained by calling Metropolitan's Substructures Information Line at (213) 217-6564. To assist the applicant in preparing plans that are compatible with Metropolitan's facilities and easements, we have enclosed a copy of the "Guidelines for Developments in the Area of Facilities, Fee Properties, and/or Easement of The Metropolitan Water District of Southern California." Please note that all submitted designs or plans must clearly identify Metropolitan's facilities and rights-of-way.

We appreciate the opportunity to provide input to your planning process and we look forward to receiving future documentation on this project. For further assistance, please contact Ms. Jennifer Harriger at (213) 217-7658.

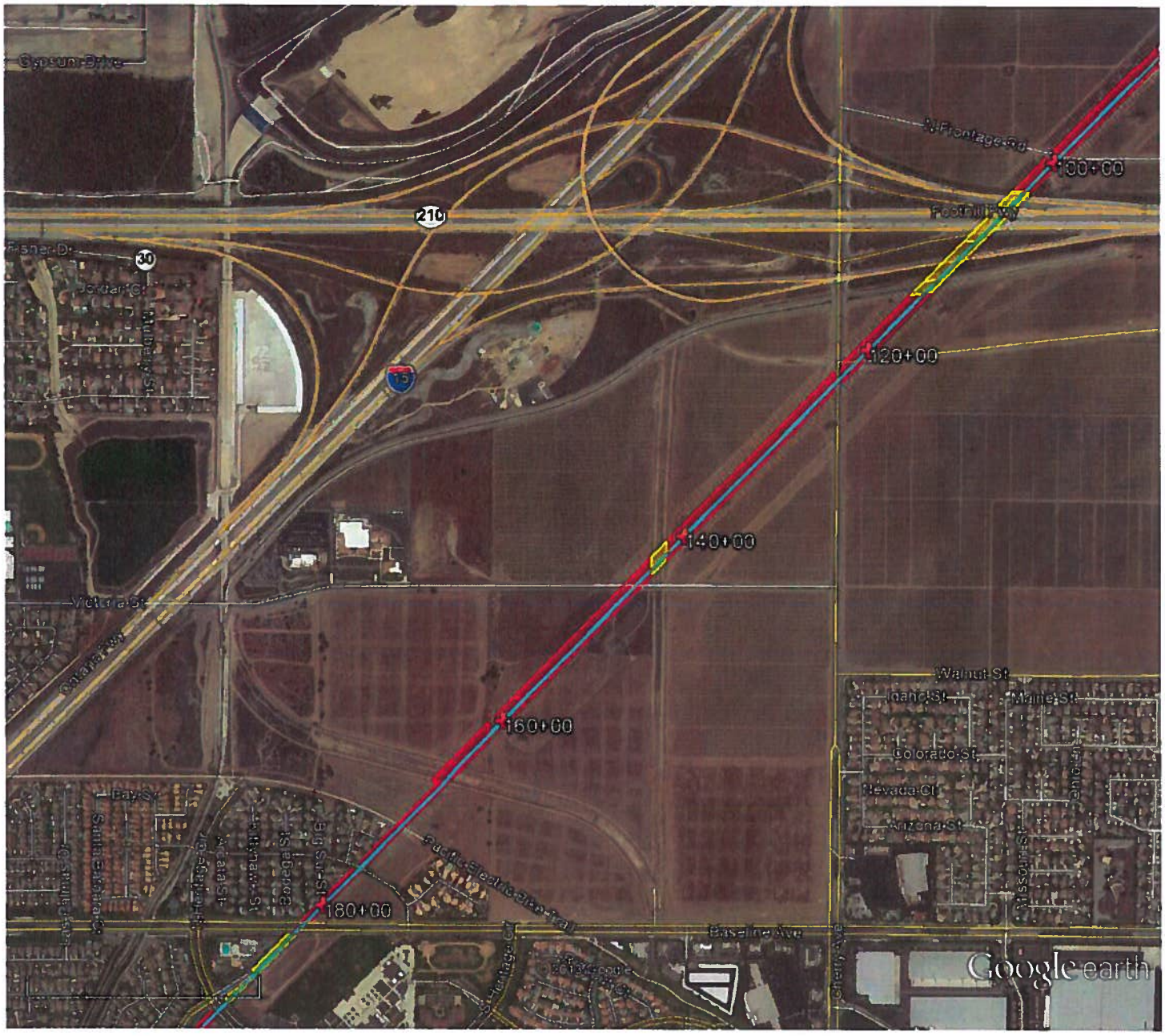
Very truly yours,

David Clack

FOR
Deirdre West
Manager, Environmental Planning Team

JH/jh
J:\Environmental Planing&Compliance\Completed Jobs\August Letters\Job No. 2013030901

Enclosures: Planning Guidelines and Map



Google earth

feet 4000

km 1

Guidelines for Developments in the Area of Facilities, Fee Properties, and/or Easements of The Metropolitan Water District of Southern California

1. Introduction

a. The following general guidelines should be followed for the design of proposed facilities and developments in the area of Metropolitan's facilities, fee properties, and/or easements.

b. We require that 3 copies of your tentative and final record maps, grading, paving, street improvement, landscape, storm drain, and utility plans be submitted for our review and written approval as they pertain to Metropolitan's facilities, fee properties and/or easements, prior to the commencement of any construction work.

2. Plans, Parcel and Tract Maps

The following are Metropolitan's requirements for the identification of its facilities, fee properties, and/or easements on your plans, parcel maps and tract maps:

a. Metropolitan's fee properties and/or easements and its pipelines and other facilities must be fully shown and identified as Metropolitan's on all applicable plans.

b. Metropolitan's fee properties and/or easements must be shown and identified as Metropolitan's with the official recording data on all applicable parcel and tract maps.

c. Metropolitan's fee properties and/or easements and existing survey monuments must be dimensionally tied to the parcel or tract boundaries.

d. Metropolitan's records of surveys must be referenced on the parcel and tract maps.

3. Maintenance of Access Along Metropolitan's Rights-of-Way

a. Proposed cut or fill slopes exceeding 10 percent are normally not allowed within Metropolitan's fee properties or easements. This is required to facilitate the use of construction and maintenance equipment, and provide access to its aboveground and belowground facilities.

b. We require that 16-foot-wide commercial-type driveway approaches be constructed on both sides of all streets crossing Metropolitan's rights-of-way. Openings are required in any median island. Access ramps, if necessary, must be at least 16-feet-wide. Grades of ramps are normally not allowed to exceed 10 percent. If the slope of an access ramp must exceed 10 percent due to the topography, the ramp must be paved. We require a 40-foot-long level area on the driveway approach to access ramps where the ramp meets the street. At Metropolitan's fee properties, we may require fences and gates.

c. The terms of Metropolitan's permanent easement deeds normally preclude the building or maintenance of structures of any nature or kind within its easements, to ensure safety and avoid interference with operation and maintenance of Metropolitan's pipelines or other facilities. Metropolitan must have vehicular access along the easements at all times for inspection, patrolling, and for maintenance of the pipelines and other facilities on a routine basis. We require a 20-foot-wide clear zone around all above-ground facilities for this routine access. This clear zone should slope away from our facility on a grade not to exceed 2 percent. We must also have access along the easements with construction equipment. An example of this is shown on Figure 1.

d. The footings of any proposed buildings adjacent to Metropolitan's fee properties and/or easements must not encroach into the fee property or easement or impose additional loading on Metropolitan's pipelines or other facilities therein. A typical situation is shown on Figure 2. Prints of the detail plans of the footings for any building or structure adjacent to the fee property or easement must be submitted for our review and written approval as they pertain to the pipeline or other facilities therein. Also, roof eaves of buildings adjacent to the easement or fee property must not overhang into the fee property or easement area.

e. Metropolitan's pipelines and other facilities, e.g. structures, manholes, equipment, survey monuments, etc. within its fee properties and/or easements must be protected from damage by the easement holder on Metropolitan's property or the property owner where Metropolitan has an easement, at no expense to Metropolitan. If the facility is a cathodic protection station it shall be located prior to any grading or excavation. The exact location, description and way of protection shall be shown on the related plans for the easement area.

4. Easements on Metropolitan's Property

a. We encourage the use of Metropolitan's fee rights-of-way by governmental agencies for public street and utility purposes, provided that such use does not interfere with Metropolitan's use of the property, the entire width of the property is accepted into the agency's public street system and fair market value is paid for such use of the right-of-way.

b. Please contact the Director of Metropolitan's Right of Way and Land Division, telephone (213) 250-6302, concerning easements for landscaping, street, storm drain, sewer, water or other public facilities proposed within Metropolitan's fee properties. A map and legal description of the requested easements must be submitted. Also, written evidence must be submitted that shows the city or county will accept the easement for the specific purposes into its public system. The grant of the easement will be subject to Metropolitan's rights to use its land for water pipelines and related purposes to the same extent as if such grant had not been made. There will be a charge for the easement. Please note that, if entry is required on the property prior to issuance of the easement, an entry permit must be obtained. There will also be a charge for the entry permit.

5. Landscaping

Metropolitan's landscape guidelines for its fee properties and/or easements are as follows:

a. A green belt may be allowed within Metropolitan's fee property or easement.

b. All landscape plans shall show the location and size of Metropolitan's fee property and/or easement and the location and size of Metropolitan's pipeline or other facilities therein.

c. Absolutely no trees will be allowed within 15 feet of the centerline of Metropolitan's existing or future pipelines and facilities.

d. Deep-rooted trees are prohibited within Metropolitan's fee properties and/or easements. Shallow-rooted trees are the only trees allowed. The shallow-rooted trees will not be permitted any closer than 15 feet from the centerline of the pipeline, and such trees shall not be taller than 25 feet with a root spread no greater than 20 feet in diameter at maturity. Shrubs, bushes, vines, and ground cover are permitted, but larger shrubs and bushes should not be planted directly over our pipeline. Turf is acceptable. We require submittal of landscape plans for Metropolitan's prior review and written approval. (See Figure 3).

e. The landscape plans must contain provisions for Metropolitan's vehicular access at all times along its rights-of-way to its pipelines or facilities therein. Gates capable of accepting Metropolitan's locks are required in any fences across its rights-of-way. Also, any walks or drainage facilities across its access route must be constructed to AASHTO H-20 loading standards.

f. Rights to landscape any of Metropolitan's fee properties must be acquired from its Right of Way and Land Division. Appropriate entry permits must be obtained prior to any entry on its property. There will be a charge for any entry permit or easements required.

6. Fencing

Metropolitan requires that perimeter fencing of its fee properties and facilities be constructed of universal chain link, 6 feet in height and topped with 3 strands of barbed wire angled upward and outward at a 45 degree angle or an approved equal for a total fence height of 7 feet. Suitable substitute fencing may be considered by Metropolitan. (Please see Figure 5 for details).

7. Utilities in Metropolitan's Fee Properties and/or Easements or Adjacent to Its Pipeline in Public Streets

Metropolitan's policy for the alinement of utilities permitted within its fee properties and/or easements and street rights-of-way is as follows:

a. Permanent structures, including catch basins, manholes, power poles, telephone riser boxes, etc., shall not be located within its fee properties and/or easements.

b. We request that permanent utility structures within public streets, in which Metropolitan's facilities are constructed under the Metropolitan Water District Act, be placed as far from our pipeline as possible, but not closer than 5 feet from the outside of our pipeline.

c. The installation of utilities over or under Metropolitan's pipeline(s) must be in accordance with the requirements shown on the enclosed prints of Drawings Nos. C-11632 and C-9547. Whenever possible we request a minimum of one foot clearance between Metropolitan's pipe and your facility. Temporary support of Metropolitan's pipe may also be required at undercrossings of its pipe in an open trench. The temporary support plans must be reviewed and approved by Metropolitan.

d. Lateral utility crossings of Metropolitan's pipelines must be as perpendicular to its pipeline alinement as practical. Prior to any excavation our pipeline shall be located manually and any excavation within two feet of our pipeline must be done by hand. This shall be noted on the appropriate drawings.

e. Utilities constructed longitudinally within Metropolitan's rights-of-way must be located outside the theoretical trench prism for uncovering its pipeline and must be located parallel to and as close to its rights-of-way lines as practical.

f. When piping is jacked or installed in jacked casing or tunnel under Metropolitan's pipe, there must be at least two feet of vertical clearance between the bottom of Metropolitan's pipe and the top of the jacked pipe, jacked casing or tunnel. We also require that detail drawings of the shoring for the jacking or tunneling pits be submitted for our review and approval. Provisions must be made to grout any voids around the exterior of the jacked pipe, jacked casing or tunnel. If the piping is installed in a jacked casing or tunnel the annular space between the piping and the jacked casing or tunnel must be filled with grout.

g. Overhead electrical and telephone line requirements:

1) Conductor clearances are to conform to the California State Public Utilities Commission, General Order 95, for Overhead Electrical Line Construction or at a greater clearance if required by Metropolitan. Under no circumstances shall clearance be less than 35 feet.

2) A marker must be attached to the power pole showing the ground clearance and line voltage, to help prevent damage to your facilities during maintenance or other work being done in the area.

3) Line clearance over Metropolitan's fee properties and/or easements shall be shown on the drawing to indicate the lowest point of the line under the most adverse conditions including consideration of sag, wind load, temperature change, and support type. We require that overhead lines be located at least 30 feet laterally away from all above-ground structures on the pipelines.

4) When underground electrical conduits, 120 volts or greater, are installed within Metropolitan's fee property and/or easement, the conduits must be incased in a minimum of three inches of red concrete. Where possible, above ground warning signs must also be placed at the right-of-way lines where the conduits enter and exit the right-of-way.

h. The construction of sewerlines in Metropolitan's fee properties and/or easements must conform to the California Department of Health Services Criteria for the Separation of Water Mains and Sanitary Services and the local City or County Health Code Ordinance as it relates to installation of sewers in the vicinity of pressure waterlines. The construction of sewerlines should also conform to these standards in street rights-of- way.

i. Cross sections shall be provided for all pipeline crossings showing Metropolitan's fee property and/or easement limits and the location of our pipeline(s). The exact locations of the crossing pipelines and their elevations shall be marked on as-built drawings for our information.

j. Potholing of Metropolitan's pipeline is required if the vertical clearance between a utility and Metropolitan's pipeline is indicated on the plan to be one foot or less. If the indicated clearance is between one and two feet, potholing is suggested. Metropolitan will provide a representative to assists others in locating and identifying its pipeline. Two-working days notice is requested.

k. Adequate shoring and bracing is required for the full depth of the trench when the excavation encroaches within the zone shown on Figure 4.

l. The location of utilities within Metropolitan's fee property and/or easement shall be plainly marked to help prevent damage during maintenance or other work done in the area. Detectable tape over buried utilities should be placed a minimum of 12 inches above the utility and shall conform to the following requirements:

1) Water pipeline: A two-inch blue warning tape shall be imprinted with:

"CAUTION BURIED WATER PIPELINE"

2) Gas, oil, or chemical pipeline: A two-inch yellow warning tape shall be imprinted with:

"CAUTION BURIED _____ PIPELINE"

3) Sewer or storm drain pipeline: A two-inch green warning tape shall be imprinted with:

"CAUTION BURIED _____ PIPELINE"

4) Electric, street lighting, or traffic signals conduit: A two-inch red warning tape shall be imprinted with:

"CAUTION BURIED _____ CONDUIT"

5) Telephone, or television conduit: A two-inch orange warning tape shall be imprinted with:

"CAUTION BURIED _____ CONDUIT"

m. Cathodic Protection requirements:

1) If there is a cathodic protection station for Metropolitan's pipeline in the area of the proposed work, it shall be located prior to any grading or excavation. The exact location, description and manner of protection shall be shown on all applicable plans. Please contact Metropolitan's Corrosion Engineering Section, located at Metropolitan's F. E. Weymouth Softening and Filtration Plant, 700 North Moreno Avenue, La Verne, California 91750, telephone (714) 593-7474, for the locations of Metropolitan's cathodic protection stations.

2) If an induced-current cathodic protection system is to be installed on any pipeline crossing Metropolitan's pipeline, please contact Mr. Wayne E. Risner at (714) 593-7474 or (213) 250-5085. He will review the proposed system and determine if any conflicts will arise with the existing cathodic protection systems installed by Metropolitan.

3) Within Metropolitan's rights-of-way, pipelines and carrier pipes (casings) shall be coated with an approved protective coating to conform to Metropolitan's requirements, and shall be maintained in a neat and orderly condition as directed by Metropolitan. The application and monitoring of cathodic protection on the pipeline and casing shall conform to Title 49 of the Code of Federal Regulations, Part 195.

4) If a steel carrier pipe (casing) is used:

(a) Cathodic protection shall be provided by use of a sacrificial magnesium anode (a sketch showing the cathodic protection details can be provided for the designers information).

(b) The steel carrier pipe shall be protected with a coal tar enamel coating inside and out in accordance with AWWA C203 specification.

n. All trenches shall be excavated to comply with the CAL/OSHA Construction Safety Orders, Article 6, beginning with Sections 1539 through 1547. Trench backfill shall be placed in 8-inch lifts and shall be compacted to 95 percent relative compaction (ASTM D698) across roadways and through protective dikes. Trench backfill elsewhere will be compacted to 90 percent relative compaction (ASTM D698).

o. Control cables connected with the operation of Metropolitan's system are buried within streets, its fee properties and/or easements. The locations and elevations of these cables shall be shown on the drawings. The drawings shall note that prior to any excavation in the area, the control cables shall be located and measures shall be taken by the contractor to protect the cables in place.

p. Metropolitan is a member of Underground Service Alert (USA). The contractor (excavator) shall contact USA at 1-800-422-4133 (Southern California) at least 48 hours prior to starting any excavation work. The contractor will be liable for any damage to Metropolitan's facilities as a result of the construction.

8. Paramount Right

Facilities constructed within Metropolitan's fee properties and/or easements shall be subject to the paramount right of Metropolitan to use its fee properties and/or easements for the purpose for which they were acquired. If at any time Metropolitan or its assigns should, in the exercise of their rights, find it necessary to remove any of the facilities from the fee properties and/or easements, such removal and replacement shall be at the expense of the owner of the facility.

9. Modification of Metropolitan's Facilities

When a manhole or other of Metropolitan's facilities must be modified to accommodate your construction or reconstruction, Metropolitan will modify the facilities with its forces. This should be noted on the construction plans. The estimated cost to perform this modification will be given to you and we will require a deposit for this amount before the work is performed. Once the deposit is received, we will schedule the work. Our forces will coordinate the work with your contractor. Our final billing will be based on actual cost incurred, and will include materials, construction, engineering plan review, inspection, and administrative overhead charges calculated in accordance with Metropolitan's standard accounting practices. If the cost is less than the deposit, a refund will be made; however, if the cost exceeds the deposit, an invoice will be forwarded for payment of the additional amount.

10. Drainage

a. Residential or commercial development typically increases and concentrates the peak storm water runoff as well as the total yearly storm runoff from an area, thereby increasing the requirements for storm drain facilities downstream of the development. Also, throughout the year water from landscape irrigation, car washing, and other outdoor domestic water uses flows into the storm drainage system resulting in weed abatement, insect infestation, obstructed access and other problems. Therefore, it is Metropolitan's usual practice not to approve plans that show discharge of drainage from developments onto its fee properties and/or easements.

b. If water must be carried across or discharged onto Metropolitan's fee properties and/or easements, Metropolitan will insist that plans for development provide that it be carried by closed conduit or lined open channel approved in writing by Metropolitan. Also the drainage facilities must be maintained by others, e.g., city, county, homeowners association, etc. If the development proposes changes to existing drainage features, then the developer shall make provisions to provide for replacement and these changes must be approved by Metropolitan in writing.

11. Construction Coordination

During construction, Metropolitan's field representative will make periodic inspections. We request that a stipulation be added to the plans or specifications for notification of Mr. _____ of Metropolitan's Operations Services Branch, telephone (213) 250-____, at least two working days prior to any work in the vicinity of our facilities.

12. Pipeline Loading Restrictions

a. Metropolitan's pipelines and conduits vary in structural strength, and some are not adequate for AASHTO H-20 loading. Therefore, specific loads over the specific sections of pipe or conduit must be reviewed and approved by Metropolitan. However, Metropolitan's pipelines are typically adequate for AASHTO H-20 loading provided that the cover over the pipeline is not less than four feet or the cover is not substantially increased. If the temporary cover over the pipeline during construction is between three and four feet, equipment must restricted to that which

imposes loads no greater than AASHTO H-10. If the cover is between two and three feet, equipment must be restricted to that of a Caterpillar D-4 tract-type tractor. If the cover is less than two feet, only hand equipment may be used. Also, if the contractor plans to use any equipment over Metropolitan's pipeline which will impose loads greater than AASHTO H-20, it will be necessary to submit the specifications of such equipment for our review and approval at least one week prior to its use. More restrictive requirements may apply to the loading guideline over the San Diego Pipelines 1 and 2, portions of the Orange County Feeder, and the Colorado River Aqueduct. Please contact us for loading restrictions on all of Metropolitan's pipelines and conduits.

b. The existing cover over the pipeline shall be maintained unless Metropolitan determines that proposed changes do not pose a hazard to the integrity of the pipeline or an impediment to its maintenance.

13. Blasting

a. At least 20 days prior to the start of any drilling for rock excavation blasting, or any blasting, in the vicinity of Metropolitan's facilities, a two-part preliminary conceptual plan shall be submitted to Metropolitan as follows:

b. Part 1 of the conceptual plan shall include a complete summary of proposed transportation, handling, storage, and use of explosions.

c. Part 2 shall include the proposed general concept for blasting, including controlled blasting techniques and controls of noise, fly rock, airblast, and ground vibration.

14. CEQA Requirements

a. When Environmental Documents Have Not Been Prepared

1) Regulations implementing the California Environmental Quality Act (CEQA) require that Metropolitan have an opportunity to consult with the agency or consultants preparing any environmental documentation. We are required to review and consider the environmental effects of the project as shown in the Negative Declaration or Environmental Impact Report (EIR) prepared for your project before committing Metropolitan to approve your request.

2) In order to ensure compliance with the regulations implementing CEQA where Metropolitan is not the Lead Agency, the following minimum procedures to ensure compliance with the Act have been established:

a) Metropolitan shall be timely advised of any determination that a Categorical Exemption applies to the project. The Lead Agency is to advise Metropolitan that it and other agencies participating in the project have complied with the requirements of CEQA prior to Metropolitan's participation.

b) Metropolitan is to be consulted during the preparation of the Negative Declaration or EIR.

c) Metropolitan is to review and submit any necessary comments on the Negative Declaration or draft EIR.

d) Metropolitan is to be indemnified for any costs or liability arising out of any violation of any laws or regulations including but not limited to the California Environmental Quality Act and its implementing regulations.

b. <u>When Environmental Documents Have Been Prepared</u>

If environmental documents have been prepared for your project, please furnish us a copy for our review and files in a timely manner so that we may have sufficient time to review and comment. The following steps must also be accomplished:

1) The Lead Agency is to advise Metropolitan that it and other agencies participating in the project have complied with the requirements of CEQA prior to Metropolitan's participation.

2) You must agree to indemnify Metropolitan, its officers, engineers, and agents for any costs or liability arising out of any violation of any laws or regulations including but not limited to the California Environmental Quality Act and its implementing regulations.

15. <u>Metropolitan's Plan-Review Cost</u>

a. An engineering review of your proposed facilities and developments and the preparation of a letter response

giving Metropolitan's comments, requirements and/or approval that will require 8 man-hours or less of effort is typically performed at no cost to the developer, unless a facility must be modified where Metropolitan has superior rights. If an engineering review and letter response requires more than 8 man-hours of effort by Metropolitan to determine if the proposed facility or development is compatible with its facilities, or if modifications to Metropolitan's manhole(s) or other facilities will be required, then all of Metropolitan's costs associated with the project must be paid by the developer, unless the developer has superior rights.

b. A deposit of funds will be required from the developer before Metropolitan can begin its detailed engineering plan review that will exceed 8 hours. The amount of the required deposit will be determined after a cursory review of the plans for the proposed development.

c. Metropolitan's final billing will be based on actual cost incurred, and will include engineering plan review, inspection, materials, construction, and administrative overhead charges calculated in accordance with Metropolitan's standard accounting practices. If the cost is less than the deposit, a refund will be made; however, if the cost exceeds the deposit, an invoice will be forwarded for payment of the additional amount. Additional deposits may be required if the cost of Metropolitan's review exceeds the amount of the initial deposit.

16. Caution

We advise you that Metropolitan's plan reviews and responses are based upon information available to Metropolitan which was prepared by or on behalf of Metropolitan for general record purposes only. Such information may not be sufficiently detailed or accurate for your purposes. No warranty of any kind, either express or implied, is attached to the information therein conveyed as to its accuracy, and no inference should be drawn from Metropolitan's failure to comment on any aspect of your project. You are therefore cautioned to make such surveys and other field investigations as you may deem prudent to assure yourself that any plans for your project are correct.

17. Additional Information

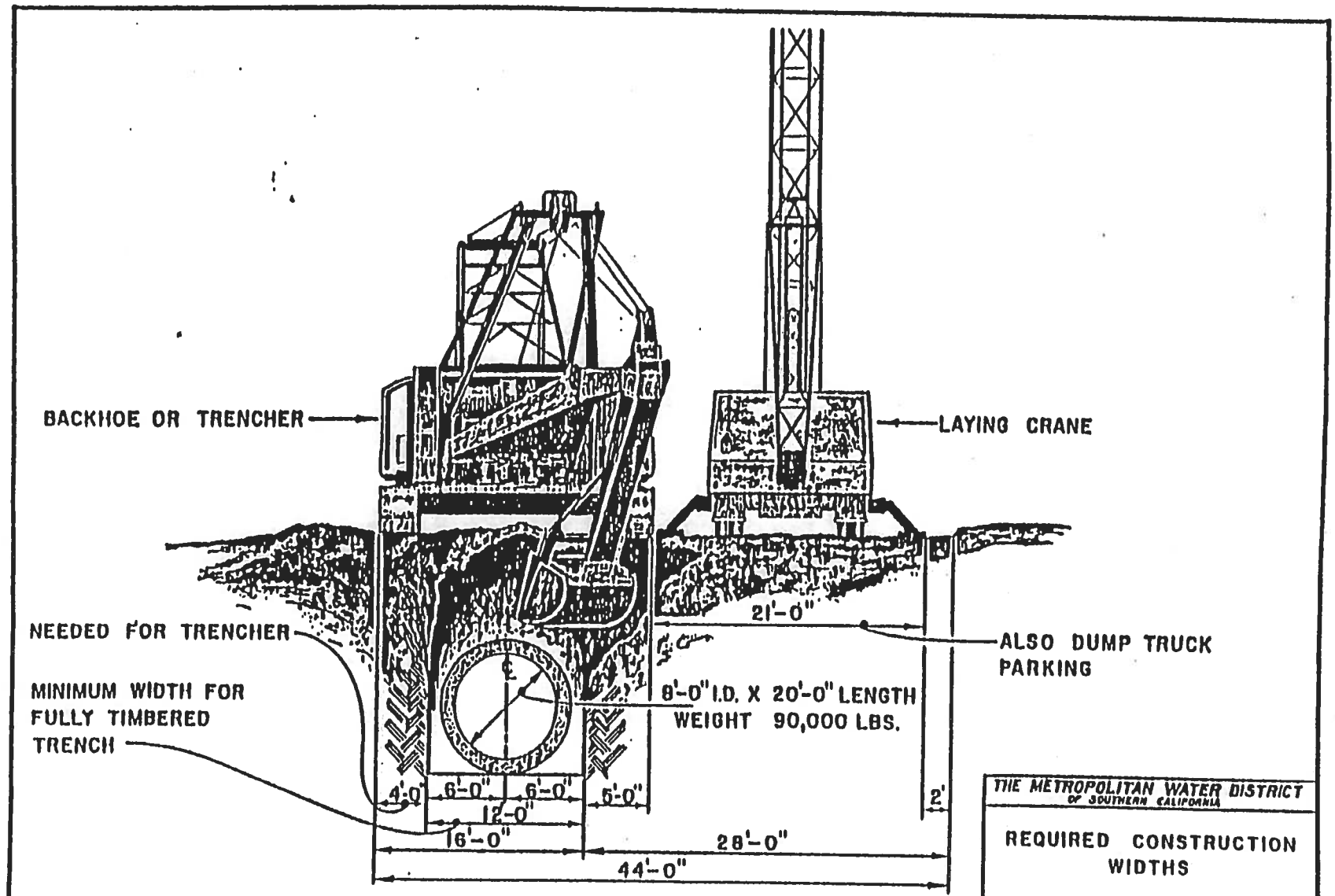
Should you require additional information, please contact:

Civil Engineering Substructures Section
Metropolitan Water District
of Southern California
P.O. Box 54153
Los Angeles, California 90054-0153
(213) 217-6000

JEH/MRW/lk

Rev. January 22, 1989

Encl.



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

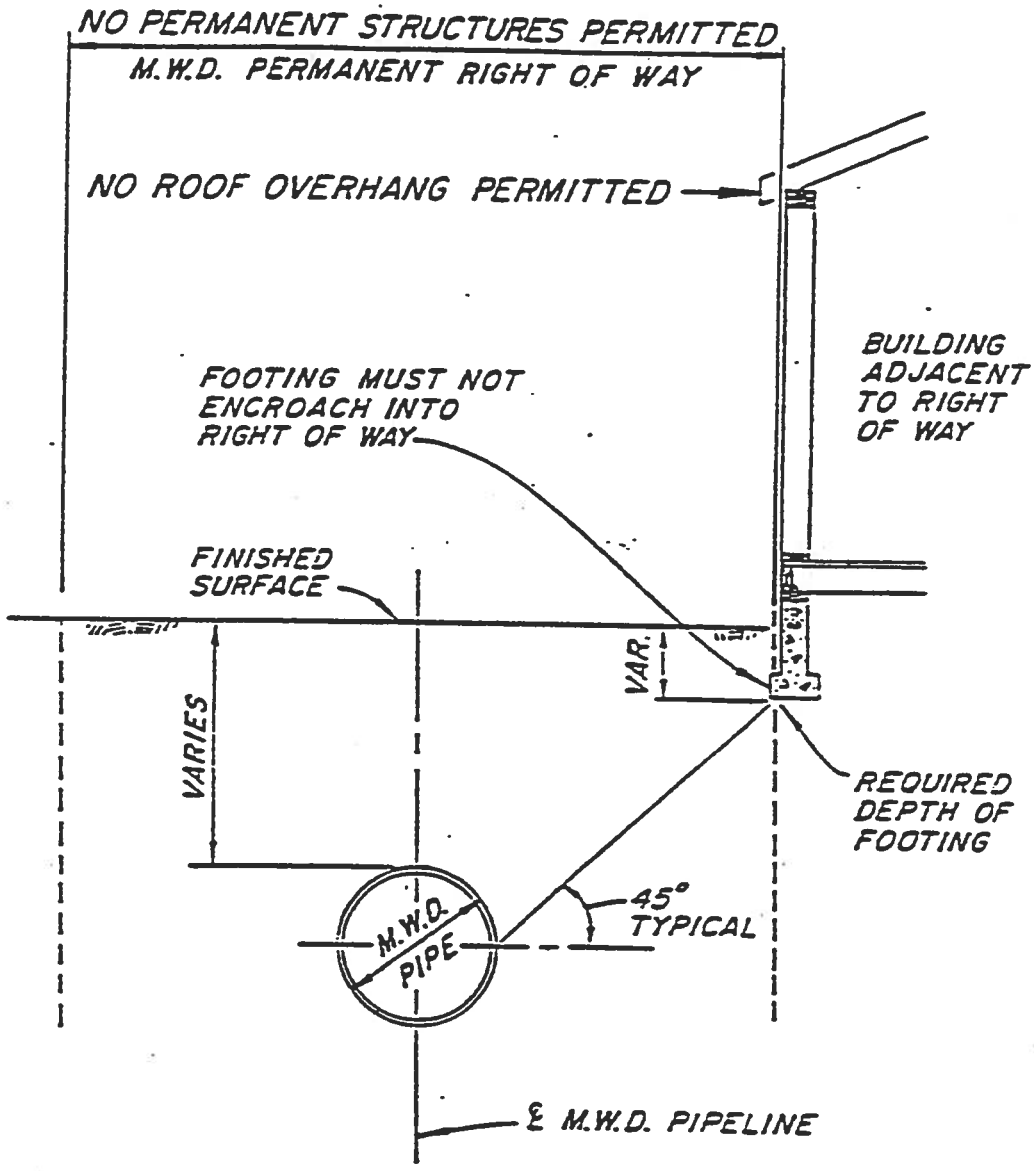
REQUIRED CONSTRUCTION
WIDTHS

DRAWN..... RECOMMENDED.....
TRACED.....
CHECKED..... APPROVED.....

FIGURE 1

DIETZGEN-POST CLEARPRINT 1023

FORM NO 39 9 1000 11-68 P.O. NO. 68-6607



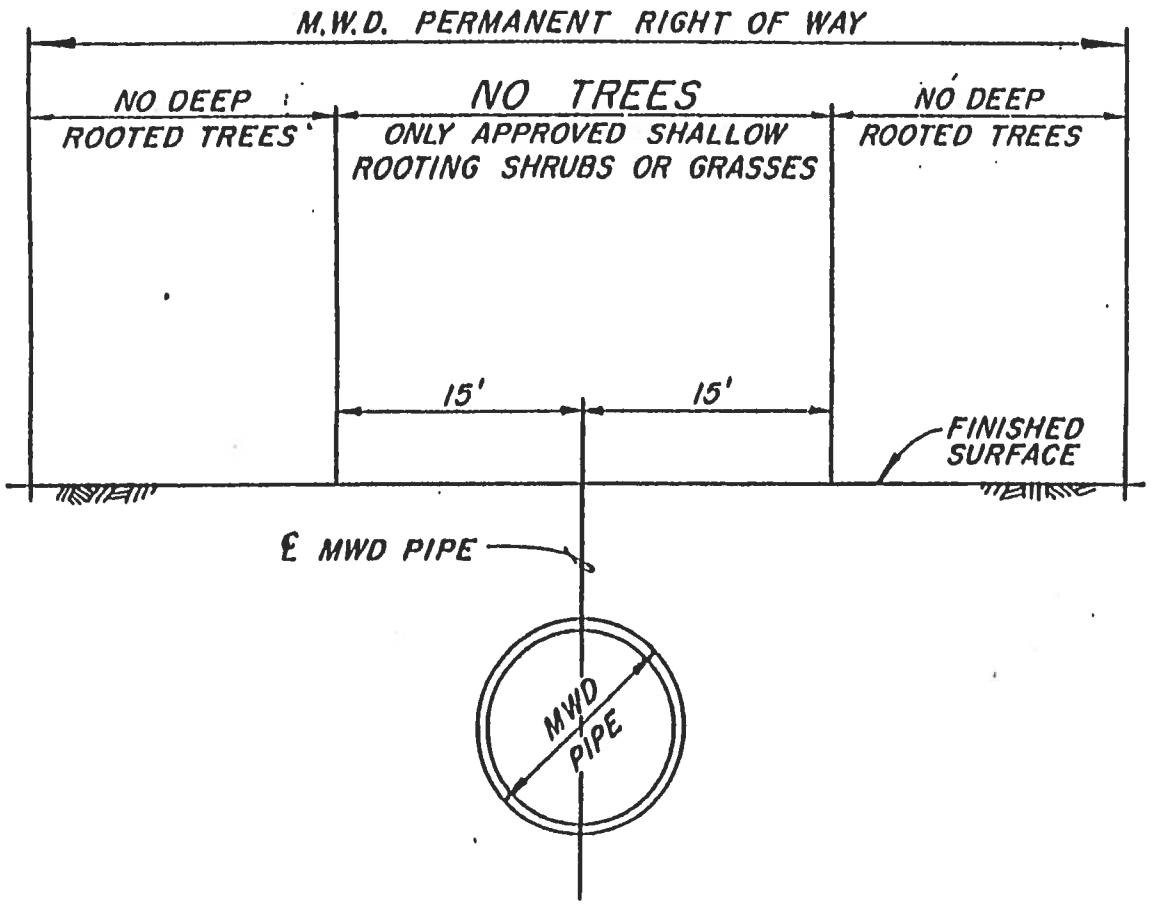
NOTE: M.W.D. PIPELINE SIZE, DEPTH, LOCATION AND WIDTH OF PERMANENT RIGHT OF WAY VARIES.

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

REQUIREMENTS FOR BUILDINGS AND FOOTINGS ADJACENT TO M.W.D. RIGHT OF WAY

DRAWN
TRACED
CHECKED
RECOMMENDED
APPROVED

FIGURE 2



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

LANDSCAPE GUIDELINES FOR M.W.D. RIGHT OF WAY

DRAWN..... RECOMMENDED.....
TRACED.....
CHECKED..... APPROVED.....

FIGURE 3

11-69 DIETZGEN-POST CLEARPRINT 1023

FORM NO. 39 9 1000 11 69 P.O. NO. 68 3807

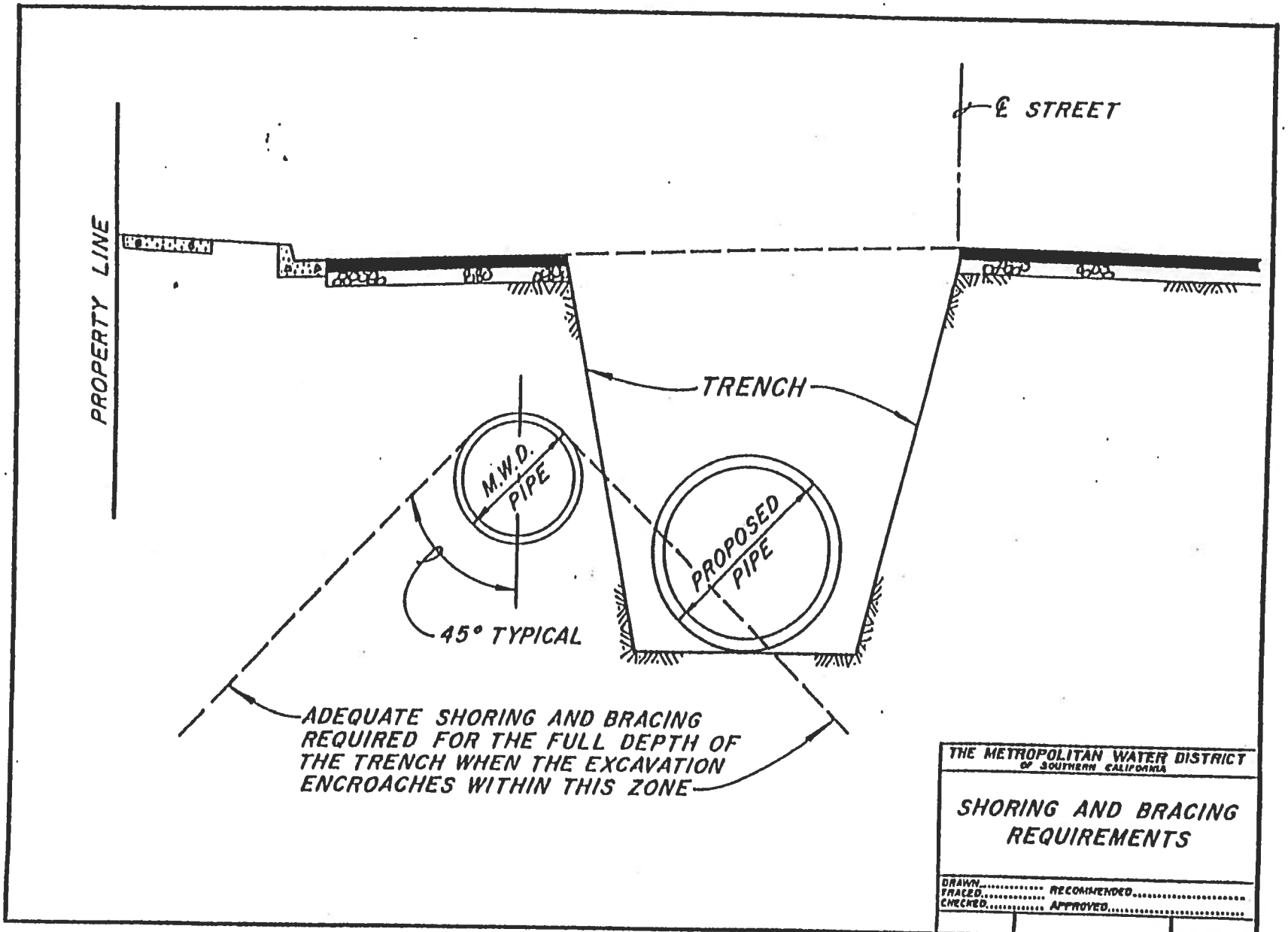
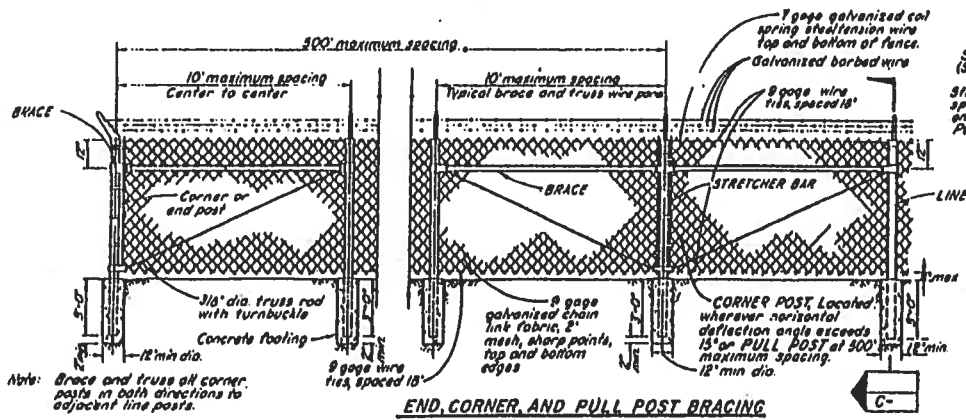


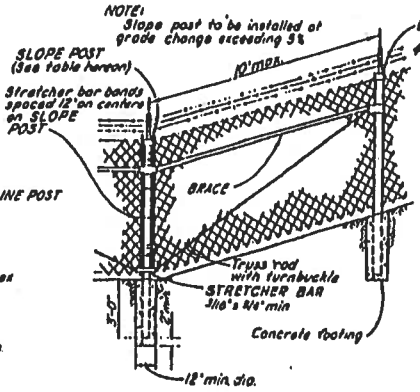
FIGURE 4

11-48 DISTRICT-POST CLEARPRINT 1023

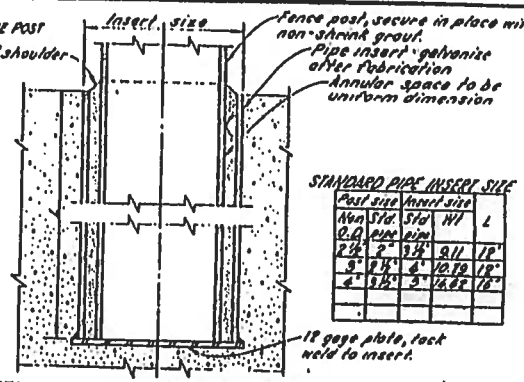
FORM NO. SP 9 1000 11-48 P.O. NO 48-4407



END, CORNER, AND PULL POST BRACING
(Not to scale)



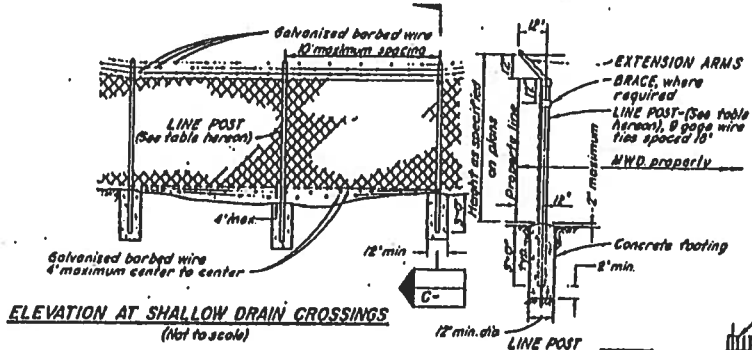
TYPICAL FENCE ON SLOPE
(Not to scale)



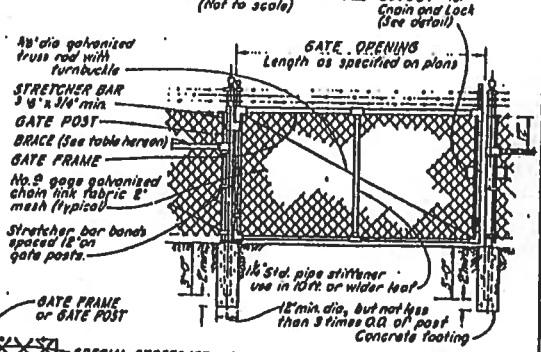
STANDARD PIPE INSERT SIZE

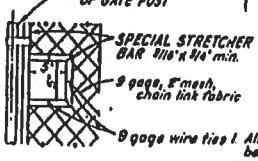
Post size Nom O.D.	Insert size Std. pipe	Std. dim	Wt	L
2½"	2"	3¼"	3.11	12"
3"	2½"	4"	10.79	18"
4"	3½"	5"	14.62	18"

FENCE POST INSERT FOR CONCRETE WALL AND CONCRETE CURB
(Not to scale)



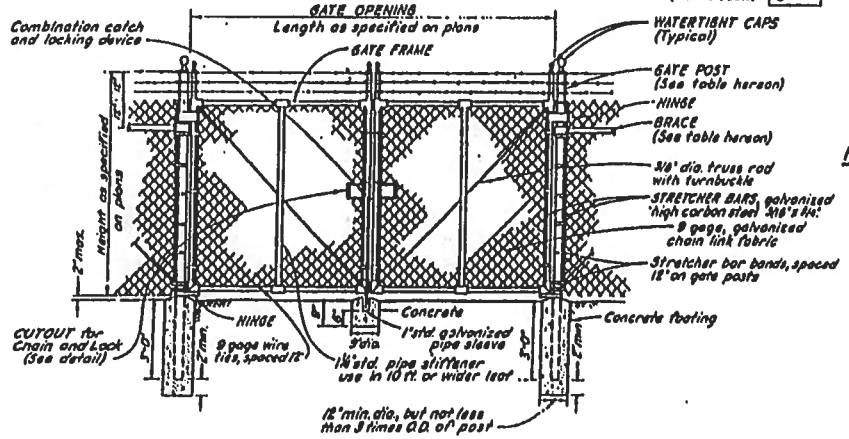
ELEVATION AT SHALLOW DRAIN CROSSINGS
(Not to scale)





SINGLE SWING GATE DETAIL
(Not to scale)

Use	Type	Nominal Size (Inches)	Actual O.D. (Inches)	Weight per foot (Pounds)
End, corner, slope, pull and gate posts (for single gates 6 feet or less in width and double gates 12 feet or less in width) for chain link fabric 72 inches or higher	Pipe	2½	2.875	3.79
End, corner, slope, pull and gate posts (for single gates 6 feet or less in width and double gates 12 feet or less in width) for chain link fabric less than 72 inches height	Pipe	2	2.375	3.65
Gate posts for single swing gates over 6 feet but not over 13 feet in width and double swing gates over 12 feet but not over 26 feet in width.	Pipe	3½	4.000	9.11
Gate posts for single swing gates over 13 feet but not over 18 feet in width and double swing gates over 26 feet but not over 36 feet in width.	Pipe	6	6.625	18.97
Gate posts for single swing gates over 18 feet in width and double swing gates over 36 feet in width	Pipe	8	8.625	24.70
Line posts for chain link fabric 72 inches or higher	Pipe H-Section	2 2 1/2 x 1 7/8	2.375	3.65 4.10
Line posts for chain link fabric ..ss than 72 inches in height	Pipe H-Section	1¼ 1⅜	1.900	2.72 2.80
Braces	Pipe H-Section	1½ 1⅝ x 1⅝ x ⅛	1.660	2.27 2.80
Frame for gates	Pipe	1½	1.900	2.72
Stiffeners for gates	Pipe	1¼	1.660	2.27



DOUBLE SWING GATE DETAIL
(Not to scale)

DETAIL OF CUTOUT FOR CHAIN AND LOCK
(Not to scale)

GENERAL NOTES

1. All ferrous parts and materials shall be galvanized after fabrication
2. Adjustable tighteners shall be turnbuckle or equivalent, having minimum 6" take-up
3. Extension arms for barbed wire shall be steel, malleable iron or wrought iron and shall be attached to the top of the post with a ⅜ inch round head rivet. The extension arms shall carry three wires each at approximately 8 inch centers in a plane approximately 45° from the vertical.
4. All gate hinges shall be heavy duty malleable iron or steel, industrial service type, 270 degree swing, or approved quality and design.
5. Secure cap to post with ⅜ inch round head rivet

REVISION COORDINATION CHECK
ORIGINAL RELEASE | MECH. | STRUCT. | ELEC. | CIVIL | SPECS. | DATE
INTERSECTIONAL COORDINATION CHECK

NO.	DATE	DWN.	CKD.	REVISION	REC.	APP.

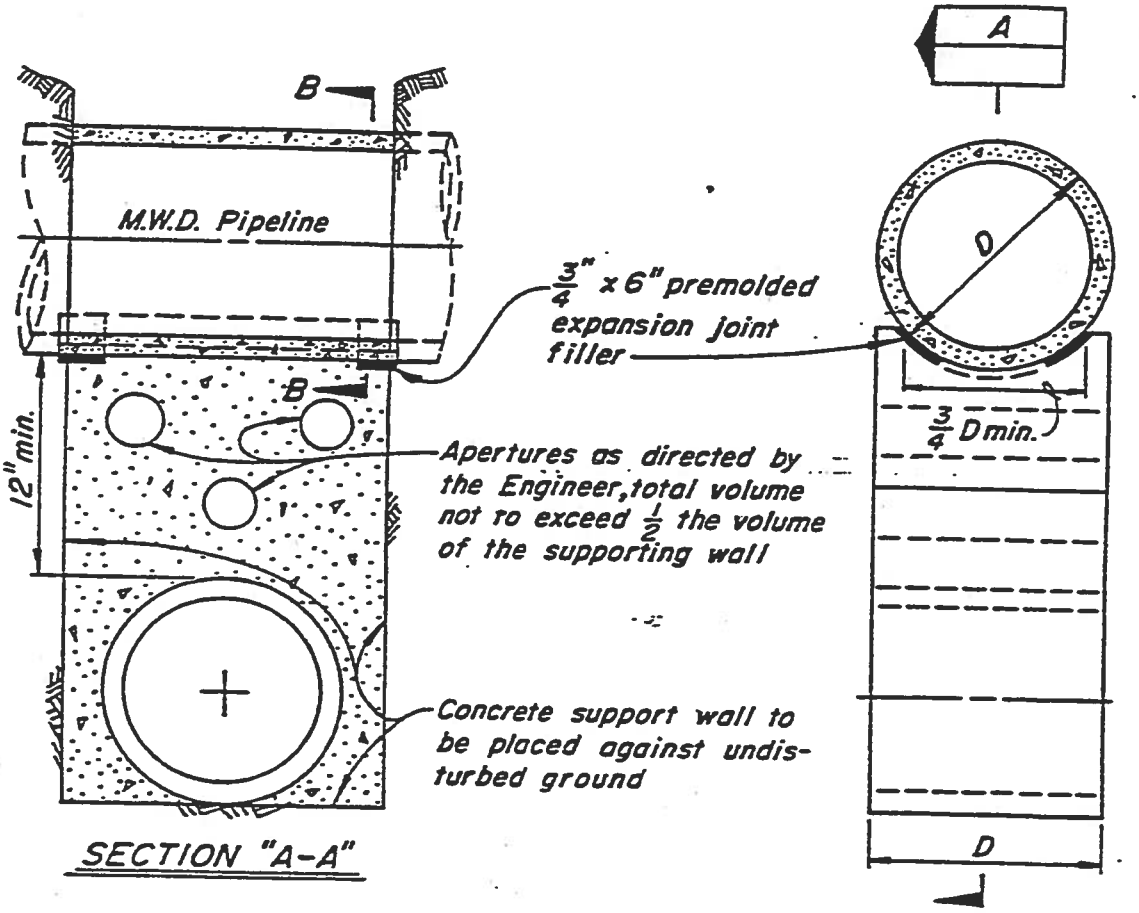
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
DISTRIBUTION SYSTEM

CHAIN LINK FENCE DETAILS

DESIGNED
DRAWN
CHECKED
RECOMMENDED
APPROVED
WORK ORDER NO.
LOS ANGELES

FIGURE 5

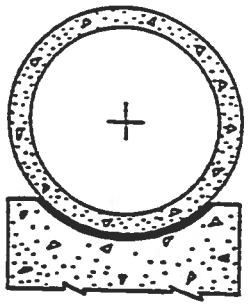
FORM NO. 88-8 1000 11-67 P.O. 618-814



SECTION "A-A"

CROSS SECTION

1. Supporting wall shall have a firm bearing on the subgrade and against the side of the excavation.
2. Premolded expansion joint filler per ASTM D-1751-73 to be used in support for steel pipe only.
3. If trench width is 4 feet or greater, measured along centerline of M.W.D. pipe, concrete support must be constructed.
4. If trench width is less than 4 feet, clean sand backfill, compacted to 90% density in accordance with the provisions of ASTM Standard D-1557-70 may be used in lieu of the concrete support wall.



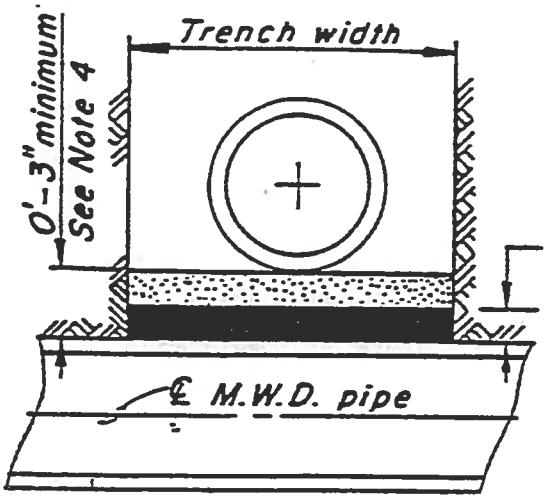
SECTION "B-B"

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

TYPICAL SUPPORT FOR M.W.D. PIPELINE

DRAWN _____ RECOMMENDED _____
TRACED _____
CHECKED _____ APPROVED _____

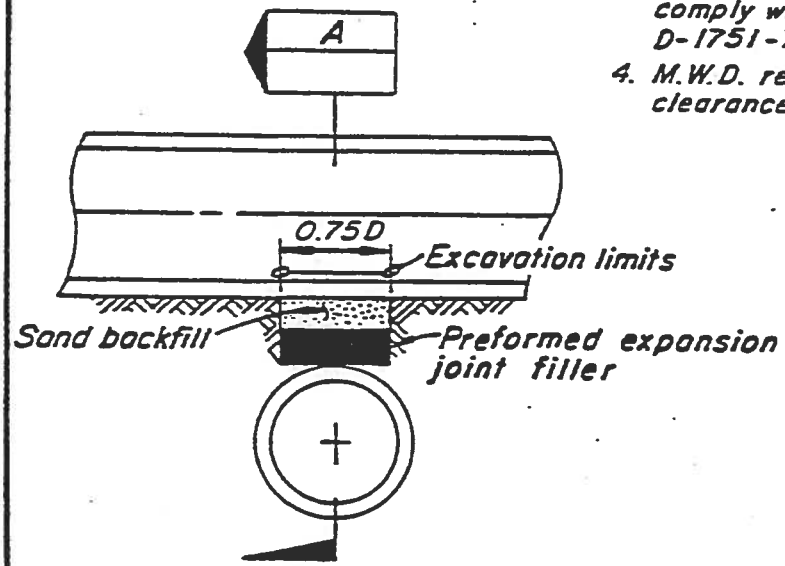
C-9547



SECTION A

NOTES

1. This method to be used where the utility line is 24" or greater in diameter and the clearance between the utility line and M.W.D. pipe is 12" or less.
2. Special protection may be required if the utility line diameter is greater than M.W.D. pipe or if the cover over the utility line to the street surface is minimal and there is 12" or less clearance between M.W.D. pipe and the utility line.
3. Preformed expansion joint filler to comply with ASTM designation D-1751-73.
4. M.W.D. requests 12" minimum clearance whenever possible.



CROSS SECTION

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

TYPICAL EXPANSION JOINT FILLER PROTECTION FOR OVERCROSSING OF M.W.D. PIPELINE

DRAWN _____ RECOMMENDED _____
TRACED _____
CHECKED _____ APPROVED _____

C-11632

FORM NO. 8 8 (1000) 11-67 P.O. 67-9114

11-67 DIETERICH-POST CLEARPRINT 1023

STATE OF CALIFORNIA

Edmund G. Brown, Jr.Governor

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Boulevard, Suite 100
West Sacramento, CA 95691
(916) 373-3715
Fax (916) 373-5471
Web Site www.nahc.ca.gov
Ds_nahc@pacbell.net

July 22, 2013

Mr. Charles Fahie, Project Planner
City of Fontana
8353 Sierra Avenue
Fontana, CA 92335

Sent by U.S. Mail
No. of Pages: 3

RE: Native American Consultation pursuant to California Government Code Sections 6540.2, 65092, 65351, 65352.3,, 65352.4, 65562.5 *et seq.* for the proposed **"West Gate Specific Plan Amendment (SPA) (State Clearinghouse No. 1995052002 CEQA NOP DEIR);"** located in the City of Fontana; San Bernardino County, California.

Dear Mr. Fahie

Government Code Sections 65351, 65352.3, 65562.5, *et seq.* requires local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of protecting and/or mitigating impacts to cultural places. The Native American Heritage Commission (NAHC) is the state 'agency with responsibilities for Native American cultural resources.

In the 1985 Appellate Court decision (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 to Native American burial sites. Note that the NAHC does NOT APPROVE General or Specific Plan; rather, it provides a list of tribal governments with which local jurisdictions must consult concerning any proposed impact to cultural resources as a result of the proposed action.

An NAHC Sacred Lands File search was not conducted. As part of the consultation process, the NAHC recommends that local governments and project developers contact the tribal governments and individuals to determine if any cultural places might be impacted by the proposed action. Also, the absence of specific site information in the sacred lands file

does not preclude their existence. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a consultation list of tribal governments with traditional lands or cultural places located in the vicinity of the Project Area (APE). The tribal entities on the list are for your guidance for **government-to-government consultation** purposes.

A Native American tribe or individual may be the only source of the presence of traditional cultural places. For that reason, a list of Native American Contacts is enclosed as they may have knowledge of cultural resources and about potential impact, if any, of the proposed project.

If you have any questions, please contact me at (916) 373-3715.

Best regards,

Dave Singleton
Program Analyst

Attachment

x**Native American Tribal Government Consultation**
San Bernardino County
July 22, 2013

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

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

San Manuel Band of Mission Indians
Carla Rodriguez, Chairwoman
26569 Community Center Drive Serrano
Highland , CA 92346
(909) 864-8933
(909) 864-3724 - FAX

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

(909) 528-9027 or
(909) 528-9032

Soboba Band of Mission Indians
Rosemary Morillo, Chairperson; Attn: Carrie Garcia
P.O. Box 487 Luiseno
San Jacinto , CA 92581
carrieg@soboba-nsn.gov
(951) 654-2765

Gabrieleno/Tongva San Gabriel Band of Mission
Anthony Morales, Chairperson
PO Box 693 Gabrielino Tongva
San Gabriel , CA 91778
GTTribalcouncil@aol.com
(626) 286-1632
(626) 286-1758 - Home
(626) 483--3564 cell

Gabrielino Tongva Nation
Sam Dunlap, Cultural Resources Director
P.O. Box 86908 Gabrielino Tongva
Los Angeles , CA 90086
samdunlap@earthlink.net

(909) 262-9351 - cell

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

Distribution of this list does not relieve any person of 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 only for consultation with Native American tribes under Government Code Section 65352.3. and 65362.4. et seq.

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

Main Office
818 West Seventh Street
12th Floor
Los Angeles, California
90017-3435

t (213) 236-1800
f (213) 236-1825

www.scag.ca.gov

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Carl Morehouse, San Buenaventura

Immediate Past President
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Executive/Administration Committee Chair
Glen Becerra, Simi Valley

Policy Committee Chairs
Community, Economic and Human Development
Paula Lantz, Pomona

Energy & Environment
Cheryl Viegas-Walker, El Centro

Transportation
Keith Millhouse, Ventura County Transportation Commission

August 7, 2013

Mr. Charles D. Fahie, AICP
Senior Planner
City of Fontana
Development Services Organization – Planning Division
8353 Sierra Avenue
Fontana, CA 92335

RE: SCAG Comments on the Notice of Preparation of a Draft Environmental Impact Report for the Westgate Specific Plan [I20130175]

Dear Mr. Fahie:

Thank you for submitting the Notice of Preparation of a Draft Environmental Impact Report for the Westgate Specific Plan to the Southern California Association of Governments (SCAG) for review and comment. SCAG is the authorized regional agency for Inter-Governmental Review (IGR) of programs proposed for federal financial assistance and direct development activities, pursuant to Presidential Executive Order 12372. Additionally, SCAG reviews the Environmental Impact Reports of projects of regional significance for consistency with regional plans pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.

SCAG is also the designated Regional Transportation Planning Agency under state law, and is responsible for preparation of the Regional Transportation Plan (RTP) including its Sustainable Communities Strategy (SCS) component pursuant to SB 375. As the clearinghouse for regionally significant projects per Executive Order 12372, SCAG reviews the consistency of local plans, projects, and programs with regional plans.[1] Guidance provided by these reviews is intended to assist local agencies and project sponsors to take actions that contribute to the attainment of the regional goals and policies in the RTP/SCS.

SCAG staff has reviewed the Notice of Preparation of a Draft Environmental Impact Report for the Westgate Specific Plan. The proposed project is comprised of four villages incorporated into 83 development areas including residential, commercial retail, business and professional office, warehouse/distribution, and open space uses in the City of Fontana, California. As set forth in the attached, SCAG recommends that the Draft EIR include a review and consideration of the adopted RTP/SCS goals and that the analyses reflect the most recently adopted growth forecasts.

When available, please send environmental documentation to SCAG's *office in Los Angeles or by email to leep@scag.ca.gov* providing, at a minimum, the full comment period for review. If you have any questions regarding the attached comments, please contact Pamela Lee at (213) 236-1895 or leep@scag.ca.gov. Thank you.

Sincerely,

Jonathan Nadler
Manager, Compliance and Performance Assessment

[1] SB 375 amends CEQA to add Chapter 4.2 Implementation of the Sustainable Communities Strategy, which allows for certain CEQA streamlining for projects consistent with the RTP/SCS. Lead agencies (including local jurisdictions) maintain the discretion and will be solely responsible for determining "consistency" of any future project with the SCS. Any "consistency" finding by SCAG pursuant to the IGR process should not be construed as a finding of consistency under SB 375 for purposes of CEQA streamlining.

COMMENTS ON THE NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT FOR THE WESTGATE SPECIFIC PLAN [SCAG NO. I201300175]

CONSISTENCY WITH RTP/SCS

SCAG reviews environmental documents for regionally significant projects for their consistency with the adopted RTP/SCS.

RTP/SCS Goals

The 2012-2035 RTP/SCS links the goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic and commercial limitations (see http://rtpscs.scag.ca.gov). The goals included in the 2012-2035 RTP/SCS may be pertinent to the proposed project. These goals are meant to provide guidance for considering the proposed project within the context of regional goals and policies. Among the relevant goals of the 2012-2035 RTP/SCS are the following:

SCAG 2012-2035 RTP/SCS GOALS	
RTP/SCS G1:	*Align the plan investments and policies with improving regional economic development and competitiveness*
RTP/SCS G2:	*Maximize mobility and accessibility for all people and goods in the region*
RTP/SCS G3:	*Ensure travel safety and reliability for all people and goods in the region*
RTP/SCS G4:	*Preserve and ensure a sustainable regional transportation system*
RTP/SCS G5:	*Maximize the productivity of our transportation system*
RTP/SCS G6:	*Protect the environment and health for our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking)*
RTP/SCS G7:	*Actively encourage and create incentives for energy efficiency, where possible*
RTP/SCS G8:	*Encourage land use and growth patterns that facilitate transit and non-motorized transportation*
RTP/SCS G9:	*Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies*

For ease of review, we encourage the use of a side-by-side comparison of SCAG goals with discussions of the consistency, non-consistency or non-applicability of the policy and supportive analysis in a table format. Suggested format is as follows:

SCAG 2012-2035 RTP/SCS Goals		
Goal		**Analysis**
RTP/SCS G1:	*Align the plan investments and policies with improving regional economic development and competitiveness.*	*Consistent: Statement as to why* *Not-Consistent: Statement as to why* *or* *Not Applicable: Statement as to why* *DEIR page number reference*
RTP/SCS G2:	*Maximize mobility and accessibility for all people and goods in the region.*	*Consistent: Statement as to why* *Not-Consistent: Statement as to why* *or* *Not Applicable: Statement as to why* *DEIR page number reference*
RTP/SCS G3:	*Ensure travel safety and reliability for all people and goods in the region.*	*Consistent: Statement as to why* *Not-Consistent: Statement as to why* *or* *Not Applicable: Statement as to why* *DEIR page number reference*
etc.	etc.	etc.

Regional Growth Forecasts

The Draft EIR for the Westgate Specific Plan should reflect the most recently adopted SCAG forecasts (see http://scag.ca.gov/forecast/index.htm), which are the 2012-2035 RTP/SCS population, household and employment forecasts. The forecasts for the region and applicable jurisdictions are below.

	Adopted SCAG Region Wide Forecasts		**Adopted City of Fontana Forecasts**	
Forecast	**Year 2020**	**Year 2035**	**Year 2020**	**Year 2035**
Population	19,663,000	22,091,000	222,700	259,100
Households	6,458,000	7,325,000	57,500	66,700
Employment	8,414,000	9,441,000	53,700	69,000

MITIGATION

SCAG staff recommends that you review the SCAG 2012-2035 RTP/SCS Final Program EIR List of Mitigation Measures Appendix for additional guidance, as appropriate. The SCAG List of Mitigation Measures may be found here: http://scag.ca.gov/igr/pdf/SCAG_IGRMMRP_2012.pdf

OmniTrans
Connecting Our Community.

1700 W. Fifth St.
San Bernardino, CA 92411
909-379-7100
www.omnitrans.org

July 22, 2013

Mr. Charles D. Fahie, AICP, Senior Planner
City of Fontana, Planning Division
8353 Sierra Avenue
Fontana, CA 92335

Subject: Comments regarding Notice of Preparation (NOP) of a Draft Environmental Impact Report for the Westgate Specific Plan

Dear Mr. Fahie,

Thank you for providing Omnitrans, the public transportation provider for the San Bernardino Valley, the opportunity to offer comments with respect to the Westgate Specific Plan. Omnitrans has two existing bus routes that touch the project site, Route 67 on Baseline Road (with a stop on Baseline at Cherry) and Route 82 on Summit Avenue (with a stop on Summit at Lytle Creek).

In line with Project Goal 5, "Create pedestrian friendly connectivity to main activity nodes, including employment, shopping, schools and recreation," it is recommended that the developer be asked to improve the bus stops located within the Westgate Specific Plan area and provide amenities, such as shelters, benches, and bicycle parking, at the stops. This will facilitate access for residents to employment, shopping, schools, and recreation via active transportation modes. Omnitrans staff will meet with City staff to review the bus stop locations and discuss the optimal locations of bus stops to serve the Specific Plan area, along routes 67 and 82 and/or potential future routes.

Omnitrans has a Transit Design Guidelines document (available online at http://www.omnitrans.org/about/reports/pdf/Omnitrans-Transit-Design-Guidelines.pdf) that contains a site plan review checklist / sample development agreement language (Chapter 4), templates for bus stop design (Chapters 5-7), and guidelines for provision of passenger amenities (Chapter 8).

In addition to the provision of bus stops and passenger amenities, it is also important to ensure that pedestrian and bicycle connections to bus stops are as convenient as possible. For example, pedestrian pathways should be continuous from each exterior door of each building to the nearest bus stop. Where there are walls or fences, pedestrian gates should be strategically placed and conveniently located to facilitate access to bus stops.

Omnitrans looks forward to working with the City of Fontana on this project. For additional information on the Transit Design Guidelines and bus stop design and amenities, feel free to contact me at (909) 379-7256 (Anna.Rahtz@Omnitrans.org). To discuss bus routing and bus stop locations, please contact Jeremiah Bryant, Planning & Scheduling Manager, at (909) 379-7252 (Jeremiah.Bryant@Omnitrans.org).

Respectfully,

Anna Rahtz
Planning Project Manager

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

August 7, 2013

Charles D. Fahie, AICP, Senior Planner
City of Fontana, Development Services Organization – Planning Division
8353 Sierra Avenue
Fontana, CA 92335

Notice of Preparation of a CEQA Document for the
Westgate Specific Plan

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. The SCAQMD staff'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. More recent guidance developed since this Handbook was published is also available on SCAQMD's website here: www.aqmd.gov/ceqa/hdbk.html. SCAQMD staff also recommends that the lead agency use the CalEEMod land use emissions software. This software has recently been updated to incorporate up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development. CalEEMod is the only software model maintained by the California Air Pollution Control Officers Association (CAPCOA) and replaces the now outdated URBEMIS. This model is available free of charge at: www.caleemod.com.

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 also developed both regional and localized significance thresholds. The SCAQMD staff requests that the lead agency quantify criteria pollutant emissions and compare the results to the recommended regional significance thresholds found here: http://www.aqmd.gov/ceqa/handbook/signthres.pdf. In addition to analyzing regional air quality impacts, the SCAQMD staff 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 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 at: http://www.aqmd.gov/ceqa/handbook/mobile_toxic/mobile_toxic.html. An analysis of all toxic air contaminant impacts due to the use of equipment potentially generating such air pollutants should also be included.

In addition, guidance on siting incompatible land uses (such as placing homes near freeways) 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.

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 these impacts. Pursuant to state CEQA Guidelines §15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed. Several resources are available to assist the Lead Agency with identifying possible mitigation measures for the project, including:

- Chapter 11 of the SCAQMD *CEQA Air Quality Handbook*
- SCAQMD's CEQA web pages at: www.aqmd.gov/ceqa/handbook/mitigation/MM_intro.html
- CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures* available here: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.
- SCAQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook for controlling construction-related emissions
- 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.

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 webpage (http://www.aqmd.gov).

The SCAQMD staff is available to work with the Lead Agency to ensure that project emissions are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact me at imacmillan@aqmd.gov or call me at (909) 396-3244.

Sincerely,

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

SBC130716-03
Control Number

Erik Milham
7158 Wake Ct
Fontana, CA 92336-2926
(909) 355-2828

City of Fontana
Planning Division
8353 Sierra Avenue
Fontana, CA 92335
(909) 350-6724

July 17, 2013

RE: Westgate Specific Plan

Dear Sir,

I am a resident directly adjacent to the proposed Westgate Specific Plan. I am very concerned about this project and its proceedings. I would like to be notified as part to the review process. Please add me to all mailing list that will be associated with and to this specific project. Please start with the CEQA EIR review. Then please continue adding me to the General Plan Amendments, Zone Changes, Specific Plan, EIR Certification and Development Agreements. If there is an electronic notification option of email, I will accept that instead of mail.

Additionally could you please send me an electronic copy of the 1996 Original and 2012 Amended copy of the Westgate Specific Plan to erik@milham.net.

Thank you,

Erik Milham
C: 949-680-0808
H: 909-355-2828

Appendix B - Air Quality Technical Appendix

WESTGATE SPECIFIC PLAN PROJECT

Draft EIR

Appendix B

Air Quality Assessment Files

Provided by PCR Services Corporation

December 2014

B.1 Construction Emissions
- CalEEMod Output Files
- SCAQMD Rule 403 (Fugitive Dust) Control Requirements

B.2 Operational Emissions

B.3 High-Cube Warehouse Health Risk Assessment Results

B.4 Freeway Health Risk Assessment Results

Appendix B.1
Construction Emissions

- Construction Emissions
  - CalEEMod Output Files
  - SCAQMD Rule 403 (Fugitive Dust) Control Requirements

Fontana Westgate SP - Phase 1 Construction

San Bernardino-South Coast County Summer

1.0 Pro ect Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	1,030.00	Student	12.00	86,111.47	0
Unrefrigerated Warehouse-No Rail	406.00	1000sqft	12.65	406,000.00	0
City Park	13.72	Acre	13.72	597,643.20	0
Condo/Townhouse	458.00	Dwelling Unit	74.90	458,000.00	1310
Single Family Housing	139.00	Dwelling Unit	24.00	250,200.00	398
Strip Mall	52.41	1000sqft	1.20	52,410.00	0
Other Asphalt Surfaces	15.00	Acre	15.00	653,400.00	0

1.2 Other Pro ect Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate one	10			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - [Draft EIR Section 2.0, Project Description]. Conservative assumption that up to approximately one-third of the Phase 1 land uses would be under construction at any given time.

Construction Phase - Site Preparation, Grading, Building Construction/Architectural Coating/Paving.

Off-road Equipment - 4 Air Compressors.

Off-road Equipment - 4 Cranes, 4 Forklifts, 4 Tractors/Loaders/Backhoes, 4 Welders, 4 Aerial Lifts, 4 Other Construction Equipment, 4 Other General Industrial Equipment.
Off-road Equipment - 4 Excavators, 4 Graders, 4 Rubber Tired Dozers, 4 Scrapers, 4 Tractors/Loaders Backhoes, 4 Other Material Handling Equipment, 4 Sweepers/Scrubbers.
Off-road Equipment - 4 Pavers, 4 Paving Equipment, 4 Rollers, 8 Cement and Mortar Mixers.

Off-road Equipment - 4 Rubber Tired Dozers, 4 Tractors/Loaders/Backhoes.

Grading -

Construction Off-road Equipment Mitigation - Use Water/Soil Stabilizers on exposed areas and unpaved roads three times daily; Limit vehicle speeds to 15 mph on unpaved roads.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	10
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	10
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	10
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	220.00	131.00
tblConstructionPhase	NumDays	3,100.00	305.00
tblConstructionPhase	NumDays	310.00	65.00
tblConstructionPhase	NumDays	220.00	87.00
tblConstructionPhase	NumDays	120.00	23.00
tblConstructionPhase	PhaseEndDate	7/3/2017	12/31/2016
tblConstructionPhase	PhaseEndDate	12/30/2016	12/31/2016
tblConstructionPhase	PhaseEndDate	10/30/2015	10/31/2015
tblConstructionPhase	PhaseEndDate	5/2/2017	12/31/2016
tblConstructionPhase	PhaseStartDate	1/1/2017	7/1/2016
tblConstructionPhase	PhaseStartDate	1/1/2017	9/1/2016
tblGrading	MaterialExported	0.00	108,450.00
tblLandUse	LotAcreage	1.98	12.00

tblLandUse	LotAcreage	9.32	12.65
tblLandUse	LotAcreage	28.63	74.90
tblLandUse	LotAcreage	45.13	24.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblProjectCharacteristics	OperationalYear	2014	2018

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					
2015	26.8584	315.0939	207.8471	0.3498	35.0546	14.0000	49.0546	15.1585	12.8798	28.0383	0.0000	36,066.1268	36,066.1268	6.0285	0.0000	36,192.7261
2016	266.6248	157.4153	183.1605	0.3354	13.5929	8.5690	22.1618	3.6369	8.0999	11.7369	0.0000	30,926.6214	30,926.6214	3.7749	0.0000	31,005.8944
Total	**293.4832**	**472.5092**	**391.0076**	**0.6852**	**48.6475**	**22.5689**	**71.2164**	**18.7955**	**20.9797**	**39.7752**	**0.0000**	**66 992.7481**	**66 992.7481**	**9.8035**	**0.0000**	**67 198.6206**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2015	7/31/2015	5	23	
2	Grading	Grading	8/1/2015	10/31/2015	5	65	
3	Building Construction	Building Construction	11/1/2015	12/31/2016	5	305	
4	Architectural Coating	Architectural Coating	7/1/2016	12/31/2016	5	131	
5	Paving	Paving	9/1/2016	12/31/2016	5	87	

Acres of Grading (Grading Phase): 390

Residential Indoor: 1 434 105 Residential Outdoor: 478 035 Non-Residential Indoor: 1 713 247 Non-Residential Outdoor: 571 082

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	4	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	4	8.00	162	0.38
Grading	Graders	4	8.00	174	0.41
Grading	Other Material Handling Equipment	4	8.00	167	0.40
Grading	Rubber Tired Dozers	4	8.00	255	0.40
Grading	Scrapers	4	8.00	361	0.48
Grading	Sweepers/Scrubbers	4	8.00	64	0.46
Grading	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Aerial Lifts	4		62	0.31
Building Construction	Cranes	4	7.00	226	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	4	8.00	84	0.74
Building Construction	Other Construction Equipment	4		171	0.42
Building Construction	Other General Industrial Equipment	4		87	0.34
Building Construction	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Building Construction	Welders	4	8.00	46	0.45
Architectural Coating	Air Compressors	4	6.00	78	0.48
Paving	Cement and Mortar Mixers	8		9	0.56
Paving	Pavers	4	8.00	125	0.42
Paving	Paving Equipment	4	8.00	130	0.36
Paving	Rollers	4	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	28	70.00	0.00	13,556.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	32	854.00	251.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	4	171.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	20	50.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2015

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					24.0883	0.0000	24.0883	13.2409	0.0000	13.2409			0.0000			0.0000
Off-Road	6.5341	71.2767	53.6082	0.0480		3.7595	3.7595		3.4588	3.4588		5,045.6756	5,045.6756	1.5063		5,077.3089
Total	**6.5341**	**71.2767**	**53.6082**	**0.0480**	**24.0883**	**3.7595**	**27.8479**	**13.2409**	**3.4588**	**16.6997**		**5 045.6756**	**5 045.6756**	**1.5063**		**5 077.3089**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0962	0.1168	1.5321	2.8100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6000e-003	0.0609		242.2506	242.2506	0.0127		242.5173
Total	**0.0962**	**0.1168**	**1.5321**	**2.8100e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6000e-003**	**0.0609**		**242.2506**	**242.2506**	**0.0127**		**242.5173**

3.3 Grading - 2015

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					30.6400	0.0000	30.6400	13.9565	0.0000	13.9565			0.0000			0.0000
Off-Road	22.4256	249.5057	158.2813	0.1869		12.8785	12.8785		11.8482	11.8482		19,632.0763	19,632.0763	5.8610		19,755.1572
Total	**22.4256**	**249.5057**	**158.2813**	**0.1869**	**30.6400**	**12.8785**	**43.5185**	**13.9565**	**11.8482**	**25.8047**		**19 632.0763**	**19 632.0763**	**5.8610**		**19 755.1572**

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	4.0959	65.1796	44.2033	0.1531	3.6321	1.1154	4.7475	0.9945	1.0260	2.0205		15,586.1733	15,586.1733	0.1231		15,588.7585
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3368	0.4086	5.3625	9.8400e-003	0.7824	6.1100e-003	0.7886	0.2075	5.6000e-003	0.2131		847.8772	847.8772	0.0444		848.8105
Total	**4.4327**	**65.5882**	**49.5658**	**0.1629**	**4.4145**	**1.1215**	**5.5361**	**1.2020**	**1.0316**	**2.2336**		**16 434.0505**	**16 434.0505**	**0.1675**		**16 437.5689**

3.4 Building Construction - 2015

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					
Off-Road	10.1837	79.5165	47.7935	0.0733		5.1939	5.1939		4.9503	4.9503		7,182.9611	7,182.9611	1.6319		7,217.2306
Total	**10.1837**	**79.5165**	**47.7935**	**0.0733**		**5.1939**	**5.1939**		**4.9503**	**4.9503**		**7 182.9611**	**7 182.9611**	**1.6319**		**7 217.2306**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.4248	24.8364	27.1521	0.0547	1.5768	0.4360	2.0128	0.4502	0.4009	0.8511		5,536.0258	5,536.0258	0.0437		5,536.9425
Worker	4.1091	4.9853	65.4225	0.1201	9.5457	0.0746	9.6203	2.5316	0.0683	2.5999		10,344.1015	10,344.1015	0.5422		10,355.4879
Total	**6.5339**	**29.8217**	**92.5746**	**0.1747**	**11.1226**	**0.5106**	**11.6331**	**2.9818**	**0.4692**	**3.4509**		**15 880.1273**	**15 880.1273**	**0.5859**		**15 892.4304**

3.4 Building Construction - 2016

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					
Off-Road	9.4254	75.6135	47.0341	0.0733		4.8086	4.8086		4.5777	4.5777		7,141.6291	7,141.6291	1.5817		7,174.8444
Total	**9.4254**	**75.6135**	**47.0341**	**0.0733**		**4.8086**	**4.8086**		**4.5777**	**4.5777**		**7 141.6291**	**7 141.6291**	**1.5817**		**7 174.8444**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.1273	21.9211	24.9049	0.0546	1.5769	0.3628	1.9398	0.4502	0.3337	0.7839		5,472.8360	5,472.8360	0.0394		5,473.6635
Worker	3.6736	4.4645	58.8271	0.1201	9.5457	0.0708	9.6166	2.5316	0.0651	2.5967		9,972.8218	9,972.8218	0.4955		9,983.2268
Total	**5.8009**	**26.3857**	**83.7320**	**0.1746**	**11.1226**	**0.4337**	**11.5563**	**2.9818**	**0.3988**	**3.3806**		**15 445.6579**	**15 445.6579**	**0.5349**		**15 456.8903**

3.5 Architectural Coating - 2016

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					
Archit. Coating	244.3427					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	1.4739	9.4889	7.5357	0.0119		0.7865	0.7865		0.7865	0.7865		1,125.7922	1,125.7922	0.1327		1,128.5794
Total	**245.8165**	**9.4889**	**7.5357**	**0.0119**		**0.7865**	**0.7865**		**0.7865**	**0.7865**		**1 125.7922**	**1 125.7922**	**0.1327**		**1 128.5794**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.7356	0.8940	11.7792	0.0240	1.9114	0.0142	1.9256	0.5069	0.0130	0.5199		1,996.8999	1,996.8999	0.0992		1,998.9833
Total	**0.7356**	**0.8940**	**11.7792**	**0.0240**	**1.9114**	**0.0142**	**1.9256**	**0.5069**	**0.0130**	**0.5199**		**1 996.8999**	**1 996.8999**	**0.0992**		**1 998.9833**

3.6 Paving - 2016

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					
Off-Road	4.1795	44.7718	29.6353	0.0446		2.5219	2.5219		2.3202	2.3202		4,632.7535	4,632.7535	1.3974		4,662.0989
Paving	0.4517					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**4.6313**	**44.7718**	**29.6353**	**0.0446**		**2.5219**	**2.5219**		**2.3202**	**2.3202**		**4 632.7535**	**4 632.7535**	**1.3974**		**4 662.0989**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2151	0.2614	3.4442	7.0300e-003	0.5589	4.1500e-003	0.5630	0.1482	3.8100e-003	0.1520		583.8889	583.8889	0.0290		584.4981
Total	**0.2151**	**0.2614**	**3.4442**	**7.0300e-003**	**0.5589**	**4.1500e-003**	**0.5630**	**0.1482**	**3.8100e-003**	**0.1520**		**583.8889**	**583.8889**	**0.0290**		**584.4981**

Fontana Westgate SP - Phase 1 Construction

San Bernardino-South Coast County Winter

1.0 Pro ect Characteristics

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Strip Mall	52.41	1000sqft	1.20	52,410.00	0
Other Asphalt Surfaces	15.00	Acre	15.00	653,400.00	0

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Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
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Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	10
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	10
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	10
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	220.00	131.00
tblConstructionPhase	NumDays	3,100.00	305.00
tblConstructionPhase	NumDays	310.00	65.00
tblConstructionPhase	NumDays	220.00	87.00
tblConstructionPhase	NumDays	120.00	23.00
tblConstructionPhase	PhaseEndDate	7/3/2017	12/31/2016
tblConstructionPhase	PhaseEndDate	12/30/2016	12/31/2016
tblConstructionPhase	PhaseEndDate	10/30/2015	10/31/2015
tblConstructionPhase	PhaseEndDate	5/2/2017	12/31/2016
tblConstructionPhase	PhaseStartDate	1/1/2017	7/1/2016
tblConstructionPhase	PhaseStartDate	1/1/2017	9/1/2016
tblGrading	MaterialExported	0.00	108,450.00
tblLandUse	LotAcreage	1.98	12.00

tblLandUse	LotAcreage	9.32	12.65
tblLandUse	LotAcreage	28.63	74.90
tblLandUse	LotAcreage	45.13	24.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblProjectCharacteristics	OperationalYear	2014	2018

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					
2015	26.9988	317.7101	211.3159	0.3486	35.0546	14.0038	49.0584	15.1585	12.8833	28.0419	0.0000	35,953.5398	35,953.5398	6.0301	0.0000	36,080.1717
2016	266.4799	158.3917	176.1351	0.3214	13.5929	8.5726	22.1655	3.6369	8.1033	11.7402	0.0000	29,762.2978	29,762.2978	3.7761	0.0000	29,841.5954
Total	**293.4788**	**476.1018**	**387.4510**	**0.6700**	**48.6475**	**22.5764**	**71.2239**	**18.7955**	**20.9866**	**39.7821**	**0.0000**	**65 715.8377**	**65 715.8377**	**9.8062**	**0.0000**	**65 921.7671**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2015	7/31/2015	5	23	
2	Grading	Grading	8/1/2015	10/31/2015	5	65	
3	Building Construction	Building Construction	11/1/2015	12/31/2016	5	305	
4	Architectural Coating	Architectural Coating	7/1/2016	12/31/2016	5	131	
5	Paving	Paving	9/1/2016	12/31/2016	5	87	

Acres of Grading (Grading Phase): 390

Residential Indoor: 1 434 105 Residential Outdoor: 478 035 Non-Residential Indoor: 1 713 247 Non-Residential Outdoor: 571 082

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	4	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	4	8.00	162	0.38
Grading	Graders	4	8.00	174	0.41
Grading	Other Material Handling Equipment	4	8.00	167	0.40
Grading	Rubber Tired Dozers	4	8.00	255	0.40
Grading	Scrapers	4	8.00	361	0.48
Grading	Sweepers/Scrubbers	4	8.00	64	0.46
Grading	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Aerial Lifts	4		62	0.31
Building Construction	Cranes	4	7.00	226	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	4	8.00	84	0.74
Building Construction	Other Construction Equipment	4		171	0.42
Building Construction	Other General Industrial Equipment	4		87	0.34
Building Construction	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Building Construction	Welders	4	8.00	46	0.45
Architectural Coating	Air Compressors	4	6.00	78	0.48
Paving	Cement and Mortar Mixers	8		9	0.56
Paving	Pavers	4	8.00	125	0.42
Paving	Paving Equipment	4	8.00	130	0.36
Paving	Rollers	4	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	28	70.00	0.00	13,556.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	32	854.00	251.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	4	171.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	20	50.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2015

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					24.0883	0.0000	24.0883	13.2409	0.0000	13.2409			0.0000			0.0000
Off-Road	6.5341	71.2767	53.6082	0.0480		3.7595	3.7595		3.4588	3.4588		5,045.6756	5,045.6756	1.5063		5,077.3089
Total	**6.5341**	**71.2767**	**53.6082**	**0.0480**	**24.0883**	**3.7595**	**27.8479**	**13.2409**	**3.4588**	**16.6997**		**5 045.6756**	**5 045.6756**	**1.5063**		**5 077.3089**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0907	0.1248	1.3139	2.5600e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6000e-003	0.0609		220.6996	220.6996	0.0127		220.9663
Total	**0.0907**	**0.1248**	**1.3139**	**2.5600e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6000e-003**	**0.0609**		**220.6996**	**220.6996**	**0.0127**		**220.9663**

3.3 Grading - 2015

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					30.6400	0.0000	30.6400	13.9565	0.0000	13.9565			0.0000			0.0000
Off-Road	22.4256	249.5057	158.2813	0.1869		12.8785	12.8785		11.8482	11.8482		19,632.0763	19,632.0763	5.8610		19,755.1572
Total	**22.4256**	**249.5057**	**158.2813**	**0.1869**	**30.6400**	**12.8785**	**43.5185**	**13.9565**	**11.8482**	**25.8047**		**19 632.0763**	**19 632.0763**	**5.8610**		**19 755.1572**

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	4.2559	67.7675	48.4358	0.1528	3.6321	1.1193	4.7514	0.9945	1.0295	2.0240		15,549.0149	15,549.0149	0.1247		15,551.6325
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3173	0.4370	4.5988	8.9600e-003	0.7824	6.1100e-003	0.7886	0.2075	5.6000e-003	0.2131		772.4487	772.4487	0.0444		773.3820
Total	**4.5732**	**68.2045**	**53.0346**	**0.1618**	**4.4145**	**1.1254**	**5.5399**	**1.2020**	**1.0351**	**2.2371**		**16 321.4635**	**16 321.4635**	**0.1691**		**16 325.0145**

3.4 Building Construction - 2015

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					
Off-Road	10.1837	79.5165	47.7935	0.0733		5.1939	5.1939		4.9503	4.9503		7,182.9611	7,182.9611	1.6319		7,217.2306
Total	**10.1837**	**79.5165**	**47.7935**	**0.0733**		**5.1939**	**5.1939**		**4.9503**	**4.9503**		**7 182.9611**	**7 182.9611**	**1.6319**		**7 217.2306**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.5805	25.5283	30.7754	0.0543	1.5768	0.4412	2.0180	0.4502	0.4057	0.8559		5,489.8332	5,489.8332	0.0449		5,490.7756
Worker	3.8706	5.3308	56.1051	0.1093	9.5457	0.0746	9.6203	2.5316	0.0683	2.5999		9,423.8737	9,423.8737	0.5422		9,435.2601
Total	**6.4511**	**30.8591**	**86.8805**	**0.1635**	**11.1226**	**0.5158**	**11.6383**	**2.9818**	**0.4740**	**3.4557**		**14 913.7069**	**14 913.7069**	**0.5871**		**14 926.0356**

3.4 Building Construction - 2016

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					
Off-Road	9.4254	75.6135	47.0341	0.0733		4.8086	4.8086		4.5777	4.5777		7,141.6291	7,141.6291	1.5817		7,174.8444
Total	**9.4254**	**75.6135**	**47.0341**	**0.0733**		**4.8086**	**4.8086**		**4.5777**	**4.5777**		**7 141.6291**	**7 141.6291**	**1.5817**		**7 174.8444**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.2632	22.5127	28.5989	0.0542	1.5769	0.3665	1.9434	0.4502	0.3370	0.7873		5,426.9406	5,426.9406	0.0406		5,427.7925
Worker	3.4506	4.7702	50.3114	0.1092	9.5457	0.0708	9.6166	2.5316	0.0651	2.5967		9,084.3218	9,084.3218	0.4955		9,094.7267
Total	**5.7138**	**27.2829**	**78.9103**	**0.1634**	**11.1226**	**0.4373**	**11.5600**	**2.9818**	**0.4021**	**3.3839**		**14 511.2623**	**14 511.2623**	**0.5360**		**14 522.5192**

3.5 Architectural Coating - 2016

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					
Archit. Coating	244.3427					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	1.4739	9.4889	7.5357	0.0119		0.7865	0.7865		0.7865	0.7865		1,125.7922	1,125.7922	0.1327		1,128.5794
Total	**245.8165**	**9.4889**	**7.5357**	**0.0119**		**0.7865**	**0.7865**		**0.7865**	**0.7865**		**1 125.7922**	**1 125.7922**	**0.1327**		**1 128.5794**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6909	0.9552	10.0741	0.0219	1.9114	0.0142	1.9256	0.5069	0.0130	0.5199		1,818.9918	1,818.9918	0.0992		1,821.0753
Total	**0.6909**	**0.9552**	**10.0741**	**0.0219**	**1.9114**	**0.0142**	**1.9256**	**0.5069**	**0.0130**	**0.5199**		**1 818.9918**	**1 818.9918**	**0.0992**		**1 821.0753**

3.6 Paving - 2016

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					
Off-Road	4.1795	44.7718	29.6353	0.0446		2.5219	2.5219		2.3202	2.3202		4,632.7535	4,632.7535	1.3974		4,662.0989
Paving	0.4517					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**4.6313**	**44.7718**	**29.6353**	**0.0446**		**2.5219**	**2.5219**		**2.3202**	**2.3202**		**4 632.7535**	**4 632.7535**	**1.3974**		**4 662.0989**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2020	0.2793	2.9456	6.3900e-003	0.5589	4.1500e-003	0.5630	0.1482	3.8100e-003	0.1520		531.8690	531.8690	0.0290		532.4781
Total	**0.2020**	**0.2793**	**2.9456**	**6.3900e-003**	**0.5589**	**4.1500e-003**	**0.5630**	**0.1482**	**3.8100e-003**	**0.1520**		**531.8690**	**531.8690**	**0.0290**		**532.4781**

Fontana Westgate SP - Phase 1 Construction (Mitigated)

San Bernardino-South Coast County Summer

1.0 Pro ect Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	1,030.00	Student	12.00	86,111.47	0
Unrefrigerated Warehouse-No Rail	406.00	1000sqft	12.65	406,000.00	0
City Park	13.72	Acre	13.72	597,643.20	0
Condo/Townhouse	458.00	Dwelling Unit	74.90	458,000.00	1310
Single Family Housing	139.00	Dwelling Unit	24.00	250,200.00	398
Strip Mall	52.41	1000sqft	1.20	52,410.00	0
Other Asphalt Surfaces	15.00	Acre	15.00	653,400.00	0

1.2 Other Pro ect Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate one	10			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - [Draft EIR Section 2.0, Project Description]. Conservative assumption that up to approximately one-third of the Phase 1 land uses would be under construction at any given time.

Construction Phase - Site Preparation, Grading, Building Construction/Architectural Coating/Paving.

Off-road Equipment - 4 Air Compressors.

Off-road Equipment - 4 Cranes, 4 Forklifts, 4 Tractors/Loaders/Backhoes, 4 Welders, 4 Aerial Lifts, 4 Other Construction Equipment, 4 Other General Industrial Equipment.
Off-road Equipment - 4 Excavators, 4 Graders, 4 Rubber Tired Dozers, 4 Scrapers, 4 Tractors/Loaders Backhoes, 4 Other Material Handling Equipment, 4 Sweepers/Scrubbers.
Off-road Equipment - 4 Pavers, 4 Paving Equipment, 4 Rollers, 8 Cement and Mortar Mixers.

Off-road Equipment - 4 Rubber Tired Dozers, 4 Tractors/Loaders/Backhoes.

Grading -

Architectural Coating - Architectural coatings that meet the SCAQMD “super-compliant” VOC standard of <10 g/L (assumes all coating meet standard for interior and 50% of coatings meet standard for exterior).
Construction Off-road Equipment Mitigation - Use Water/Soil Stabilizers on exposed areas and unpaved roads three times daily; Limit vehicle speeds to 15 mph on unpaved roads; Tier 3 for 50% of equipment >250 hp.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	130.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	10.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	55.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	10.00
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	10
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	10
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	10
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	220.00	131.00
tblConstructionPhase	NumDays	3,100.00	305.00
tblConstructionPhase	NumDays	310.00	65.00
tblConstructionPhase	NumDays	220.00	87.00
tblConstructionPhase	NumDays	120.00	23.00
tblConstructionPhase	PhaseEndDate	7/3/2017	12/31/2016
tblConstructionPhase	PhaseEndDate	12/30/2016	12/31/2016
tblConstructionPhase	PhaseEndDate	10/30/2015	10/31/2015

tblConstructionPhase	PhaseEndDate	5/2/2017	12/31/2016
tblConstructionPhase	PhaseStartDate	1/1/2017	7/1/2016
tblConstructionPhase	PhaseStartDate	1/1/2017	9/1/2016
tblGrading	MaterialExported	0.00	108,450.00
tblLandUse	LotAcreage	1.98	12.00
tblLandUse	LotAcreage	9.32	12.65
tblLandUse	LotAcreage	28.63	74.90
tblLandUse	LotAcreage	45.13	24.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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					
2015	22.5910	271.6496	187.9875	0.3498	16.3641	12.0097	28.3738	6.6450	11.1170	17.7621	0.0000	36,066.1267	36,066.1267	6.0285	0.0000	36,192.7261
2016	68.9881	157.4153	183.1605	0.3354	13.5929	8.5690	22.1618	3.6369	8.0999	11.7369	0.0000	30,926.6214	30,926.6214	3.7749	0.0000	31,005.8944
Total	**91.5791**	**429.0649**	**371.1480**	**0.6852**	**29.9570**	**20.5786**	**50.5356**	**10.2820**	**19.2170**	**29.4989**	**0.0000**	**66 992.7481**	**66 992.7481**	**9.8035**	**0.0000**	**67 198.6205**

	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	N20	CO2e
Percent Reduction	**4.45**	**9.19**	**5.08**	**0.00**	**38.42**	**8.82**	**29.04**	**45.30**	**8.40**	**25.84**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2015	7/31/2015	5	23	
2	Grading	Grading	8/1/2015	10/31/2015	5	65	
3	Building Construction	Building Construction	11/1/2015	12/31/2016	5	305	
4	Architectural Coating	Architectural Coating	7/1/2016	12/31/2016	5	131	
5	Paving	Paving	9/1/2016	12/31/2016	5	87	

Acres of Grading (Grading Phase): 390

Residential Indoor: 1 434 105 Residential Outdoor: 478 035 Non-Residential Indoor: 1 713 247 Non-Residential Outdoor: 571 082

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	4	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	4	8.00	162	0.38
Grading	Graders	4	8.00	174	0.41
Grading	Other Material Handling Equipment	4	8.00	167	0.40
Grading	Rubber Tired Dozers	4	8.00	255	0.40
Grading	Scrapers	4	8.00	361	0.48
Grading	Sweepers/Scrubbers	4	8.00	64	0.46
Grading	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Aerial Lifts	4		62	0.31
Building Construction	Cranes	4	7.00	226	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	4	8.00	84	0.74
Building Construction	Other Construction Equipment	4		171	0.42
Building Construction	Other General Industrial Equipment	4		87	0.34
Building Construction	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Building Construction	Welders	4	8.00	46	0.45
Architectural Coating	Air Compressors	4	6.00	78	0.48
Paving	Cement and Mortar Mixers	8		9	0.56
Paving	Pavers	4	8.00	125	0.42
Paving	Paving Equipment	4	8.00	130	0.36
Paving	Rollers	4	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	28	70.00	0.00	13,556.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	32	854.00	251.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	4	171.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	20	50.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2015

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					9.3945	0.0000	9.3945	5.1640	0.0000	5.1640			0.0000			0.0000
Off-Road	4.4195	50.8499	41.0100	0.0480		2.7337	2.7337		2.5403	2.5403	0.0000	5,045.6756	5,045.6756	1.5063		5,077.3089
Total	**4.4195**	**50.8499**	**41.0100**	**0.0480**	**9.3945**	**2.7337**	**12.1281**	**5.1640**	**2.5403**	**7.7042**	**0.0000**	**5 045.6756**	**5 045.6756**	**1.5063**		**5 077.3089**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0962	0.1168	1.5321	2.8100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6000e-003	0.0609		242.2506	242.2506	0.0127		242.5173
Total	**0.0962**	**0.1168**	**1.5321**	**2.8100e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6000e-003**	**0.0609**		**242.2506**	**242.2506**	**0.0127**		**242.5173**

3.3 Grading - 2015

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					11.9496	0.0000	11.9496	5.4431	0.0000	5.4431			0.0000			0.0000
Off-Road	18.1583	206.0614	138.4217	0.1869		10.8881	10.8881		10.0854	10.0854	0.0000	19,632.0763	19,632.0763	5.8610		19,755.1572
Total	**18.1583**	**206.0614**	**138.4217**	**0.1869**	**11.9496**	**10.8881**	**22.8377**	**5.4431**	**10.0854**	**15.5285**	**0.0000**	**19 632.0763**	**19 632.0763**	**5.8610**		**19 755.1572**

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	4.0959	65.1796	44.2033	0.1531	3.6321	1.1154	4.7475	0.9945	1.0260	2.0205		15,586.1733	15,586.1733	0.1231		15,588.7585
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3368	0.4086	5.3625	9.8400e-003	0.7824	6.1100e-003	0.7886	0.2075	5.6000e-003	0.2131		847.8772	847.8772	0.0444		848.8105
Total	**4.4327**	**65.5882**	**49.5658**	**0.1629**	**4.4145**	**1.1215**	**5.5361**	**1.2020**	**1.0316**	**2.2336**		**16 434.0505**	**16 434.0505**	**0.1675**		**16 437.5689**

3.4 Building Construction - 2015

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					
Off-Road	10.1837	79.5165	47.7935	0.0733		5.1939	5.1939		4.9503	4.9503	0.0000	7,182.9611	7,182.9611	1.6319		7,217.2306
Total	**10.1837**	**79.5165**	**47.7935**	**0.0733**		**5.1939**	**5.1939**		**4.9503**	**4.9503**	**0.0000**	**7 182.9611**	**7 182.9611**	**1.6319**		**7 217.2306**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.4248	24.8364	27.1521	0.0547	1.5768	0.4360	2.0128	0.4502	0.4009	0.8511		5,536.0258	5,536.0258	0.0437		5,536.9425
Worker	4.1091	4.9853	65.4225	0.1201	9.5457	0.0746	9.6203	2.5316	0.0683	2.5999		10,344.1015	10,344.1015	0.5422		10,355.4879
Total	**6.5339**	**29.8217**	**92.5746**	**0.1747**	**11.1226**	**0.5106**	**11.6331**	**2.9818**	**0.4692**	**3.4509**		**15 880.1273**	**15 880.1273**	**0.5859**		**15 892.4304**

3.4 Building Construction - 2016

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					
Off-Road	9.4254	75.6135	47.0341	0.0733		4.8086	4.8086		4.5777	4.5777	0.0000	7,141.6291	7,141.6291	1.5817		7,174.8444
Total	**9.4254**	**75.6135**	**47.0341**	**0.0733**		**4.8086**	**4.8086**		**4.5777**	**4.5777**	**0.0000**	**7 141.6291**	**7 141.6291**	**1.5817**		**7 174.8444**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.1273	21.9211	24.9049	0.0546	1.5769	0.3628	1.9398	0.4502	0.3337	0.7839		5,472.8360	5,472.8360	0.0394		5,473.6635
Worker	3.6736	4.4645	58.8271	0.1201	9.5457	0.0708	9.6166	2.5316	0.0651	2.5967		9,972.8218	9,972.8218	0.4955		9,983.2268
Total	**5.8009**	**26.3857**	**83.7320**	**0.1746**	**11.1226**	**0.4337**	**11.5563**	**2.9818**	**0.3988**	**3.3806**		**15 445.6579**	**15 445.6579**	**0.5349**		**15 456.8903**

3.5 Architectural Coating - 2016

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					
Archit. Coating	46.7060					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	1.4739	9.4889	7.5357	0.0119		0.7865	0.7865		0.7865	0.7865	0.0000	1,125.7922	1,125.7922	0.1327		1,128.5794
Total	**48.1798**	**9.4889**	**7.5357**	**0.0119**		**0.7865**	**0.7865**		**0.7865**	**0.7865**	**0.0000**	**1 125.7922**	**1 125.7922**	**0.1327**		**1 128.5794**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.7356	0.8940	11.7792	0.0240	1.9114	0.0142	1.9256	0.5069	0.0130	0.5199		1,996.8999	1,996.8999	0.0992		1,998.9833
Total	**0.7356**	**0.8940**	**11.7792**	**0.0240**	**1.9114**	**0.0142**	**1.9256**	**0.5069**	**0.0130**	**0.5199**		**1 996.8999**	**1 996.8999**	**0.0992**		**1 998.9833**

3.6 Paving - 2016

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					
Off-Road	4.1795	44.7718	29.6353	0.0446		2.5219	2.5219		2.3202	2.3202	0.0000	4,632.7535	4,632.7535	1.3974		4,662.0989
Paving	0.4517					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**4.6313**	**44.7718**	**29.6353**	**0.0446**		**2.5219**	**2.5219**		**2.3202**	**2.3202**	**0.0000**	**4 632.7535**	**4 632.7535**	**1.3974**		**4 662.0989**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2151	0.2614	3.4442	7.0300e-003	0.5589	4.1500e-003	0.5630	0.1482	3.8100e-003	0.1520		583.8889	583.8889	0.0290		584.4981
Total	**0.2151**	**0.2614**	**3.4442**	**7.0300e-003**	**0.5589**	**4.1500e-003**	**0.5630**	**0.1482**	**3.8100e-003**	**0.1520**		**583.8889**	**583.8889**	**0.0290**		**584.4981**

Fontana Westgate SP - Phase 1 Construction (Mitigated)

San Bernardino-South Coast County Winter

1.0 Pro ect Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	1,030.00	Student	12.00	86,111.47	0
Unrefrigerated Warehouse-No Rail	406.00	1000sqft	12.65	406,000.00	0
City Park	13.72	Acre	13.72	597,643.20	0
Condo/Townhouse	458.00	Dwelling Unit	74.90	458,000.00	1310
Single Family Housing	139.00	Dwelling Unit	24.00	250,200.00	398
Strip Mall	52.41	1000sqft	1.20	52,410.00	0
Other Asphalt Surfaces	15.00	Acre	15.00	653,400.00	0

1.2 Other Pro ect Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate one	10			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - [Draft EIR Section 2.0, Project Description]. Conservative assumption that up to approximately one-third of the Phase 1 land uses would be under construction at any given time.

Construction Phase - Site Preparation, Grading, Building Construction/Architectural Coating/Paving.

Off-road Equipment - 4 Air Compressors.

Off-road Equipment - 4 Cranes, 4 Forklifts, 4 Tractors/Loaders/Backhoes, 4 Welders, 4 Aerial Lifts, 4 Other Construction Equipment, 4 Other General Industrial Equipment.
Off-road Equipment - 4 Excavators, 4 Graders, 4 Rubber Tired Dozers, 4 Scrapers, 4 Tractors/Loaders Backhoes, 4 Other Material Handling Equipment, 4 Sweepers/Scrubbers.
Off-road Equipment - 4 Pavers, 4 Paving Equipment, 4 Rollers, 8 Cement and Mortar Mixers.

Off-road Equipment - 4 Rubber Tired Dozers, 4 Tractors/Loaders/Backhoes.

Grading -

Architectural Coating - Architectural coatings that meet the SCAQMD “super-compliant” VOC standard of <10 g/L (assumes all coating meet standard for interior and 50% of coatings meet standard for exterior).
Construction Off-road Equipment Mitigation - Use Water/Soil Stabilizers on exposed areas and unpaved roads three times daily; Limit vehicle speeds to 15 mph on unpaved roads; Tier 3 for 50% of equipment >250 hp.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	130.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	10.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	55.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	10.00
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	10
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	10
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	10
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	220.00	131.00
tblConstructionPhase	NumDays	3,100.00	305.00
tblConstructionPhase	NumDays	310.00	65.00
tblConstructionPhase	NumDays	220.00	87.00
tblConstructionPhase	NumDays	120.00	23.00
tblConstructionPhase	PhaseEndDate	7/3/2017	12/31/2016
tblConstructionPhase	PhaseEndDate	12/30/2016	12/31/2016
tblConstructionPhase	PhaseEndDate	10/30/2015	10/31/2015

tblConstructionPhase	PhaseEndDate	5/2/2017	12/31/2016
tblConstructionPhase	PhaseStartDate	1/1/2017	7/1/2016
tblConstructionPhase	PhaseStartDate	1/1/2017	9/1/2016
tblGrading	MaterialExported	0.00	108,450.00
tblLandUse	LotAcreage	1.98	12.00
tblLandUse	LotAcreage	9.32	12.65
tblLandUse	LotAcreage	28.63	74.90
tblLandUse	LotAcreage	45.13	24.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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					
2015	22.7315	274.2659	191.4564	0.3486	16.3641	12.0135	28.3776	6.6450	11.1206	17.7656	0.0000	35,953.5398	35,953.5398	6.0301	0.0000	36,080.1717
2016	68.8432	158.3917	176.1351	0.3214	13.5929	8.5726	22.1655	3.6369	8.1033	11.7402	0.0000	29,762.2978	29,762.2978	3.7761	0.0000	29,841.5954
Total	**91.5747**	**432.6576**	**367.5915**	**0.6700**	**29.9570**	**20.5861**	**50.5431**	**10.2820**	**19.2239**	**29.5058**	**0.0000**	**65 715.8376**	**65 715.8376**	**9.8062**	**0.0000**	**65 921.7670**

	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	N20	CO2e
Percent Reduction	**4.45**	**9.12**	**5.13**	**0.00**	**38.42**	**8.82**	**29.04**	**45.30**	**8.40**	**25.83**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2015	7/31/2015	5	23	
2	Grading	Grading	8/1/2015	10/31/2015	5	65	
3	Building Construction	Building Construction	11/1/2015	12/31/2016	5	305	
4	Architectural Coating	Architectural Coating	7/1/2016	12/31/2016	5	131	
5	Paving	Paving	9/1/2016	12/31/2016	5	87	

Acres of Grading (Grading Phase): 390

Residential Indoor: 1 434 105 Residential Outdoor: 478 035 Non-Residential Indoor: 1 713 247 Non-Residential Outdoor: 571 082

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	4	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	4	8.00	162	0.38
Grading	Graders	4	8.00	174	0.41
Grading	Other Material Handling Equipment	4	8.00	167	0.40
Grading	Rubber Tired Dozers	4	8.00	255	0.40
Grading	Scrapers	4	8.00	361	0.48
Grading	Sweepers/Scrubbers	4	8.00	64	0.46
Grading	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Aerial Lifts	4		62	0.31
Building Construction	Cranes	4	7.00	226	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	4	8.00	84	0.74
Building Construction	Other Construction Equipment	4		171	0.42
Building Construction	Other General Industrial Equipment	4		87	0.34
Building Construction	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Building Construction	Welders	4	8.00	46	0.45
Architectural Coating	Air Compressors	4	6.00	78	0.48
Paving	Cement and Mortar Mixers	8		9	0.56
Paving	Pavers	4	8.00	125	0.42
Paving	Paving Equipment	4	8.00	130	0.36
Paving	Rollers	4	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	28	70.00	0.00	13,556.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	32	854.00	251.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	4	171.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	20	50.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2015

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					9.3945	0.0000	9.3945	5.1640	0.0000	5.1640			0.0000			0.0000
Off-Road	4.4195	50.8499	41.0100	0.0480		2.7337	2.7337		2.5403	2.5403	0.0000	5,045.6756	5,045.6756	1.5063		5,077.3089
Total	**4.4195**	**50.8499**	**41.0100**	**0.0480**	**9.3945**	**2.7337**	**12.1281**	**5.1640**	**2.5403**	**7.7042**	**0.0000**	**5 045.6756**	**5 045.6756**	**1.5063**		**5 077.3089**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0907	0.1248	1.3139	2.5600e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6000e-003	0.0609		220.6996	220.6996	0.0127		220.9663
Total	**0.0907**	**0.1248**	**1.3139**	**2.5600e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6000e-003**	**0.0609**		**220.6996**	**220.6996**	**0.0127**		**220.9663**

3.3 Grading - 2015

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					11.9496	0.0000	11.9496	5.4431	0.0000	5.4431			0.0000			0.0000
Off-Road	18.1583	206.0614	138.4217	0.1869		10.8881	10.8881		10.0854	10.0854	0.0000	19,632.0763	19,632.0763	5.8610		19,755.1572
Total	**18.1583**	**206.0614**	**138.4217**	**0.1869**	**11.9496**	**10.8881**	**22.8377**	**5.4431**	**10.0854**	**15.5285**	**0.0000**	**19 632.0763**	**19 632.0763**	**5.8610**		**19 755.1572**

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	4.2559	67.7675	48.4358	0.1528	3.6321	1.1193	4.7514	0.9945	1.0295	2.0240		15,549.0149	15,549.0149	0.1247		15,551.6325
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3173	0.4370	4.5988	8.9600e-003	0.7824	6.1100e-003	0.7886	0.2075	5.6000e-003	0.2131		772.4487	772.4487	0.0444		773.3820
Total	**4.5732**	**68.2045**	**53.0346**	**0.1618**	**4.4145**	**1.1254**	**5.5399**	**1.2020**	**1.0351**	**2.2371**		**16 321.4635**	**16 321.4635**	**0.1691**		**16 325.0145**

3.4 Building Construction - 2015

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					
Off-Road	10.1837	79.5165	47.7935	0.0733		5.1939	5.1939		4.9503	4.9503	0.0000	7,182.9611	7,182.9611	1.6319		7,217.2306
Total	**10.1837**	**79.5165**	**47.7935**	**0.0733**		**5.1939**	**5.1939**		**4.9503**	**4.9503**	**0.0000**	**7 182.9611**	**7 182.9611**	**1.6319**		**7 217.2306**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.5805	25.5283	30.7754	0.0543	1.5768	0.4412	2.0180	0.4502	0.4057	0.8559		5,489.8332	5,489.8332	0.0449		5,490.7756
Worker	3.8706	5.3308	56.1051	0.1093	9.5457	0.0746	9.6203	2.5316	0.0683	2.5999		9,423.8737	9,423.8737	0.5422		9,435.2601
Total	**6.4511**	**30.8591**	**86.8805**	**0.1635**	**11.1226**	**0.5158**	**11.6383**	**2.9818**	**0.4740**	**3.4557**		**14 913.7069**	**14 913.7069**	**0.5871**		**14 926.0356**

3.4 Building Construction - 2016

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					
Off-Road	9.4254	75.6135	47.0341	0.0733		4.8086	4.8086		4.5777	4.5777	0.0000	7,141.6291	7,141.6291	1.5817		7,174.8444
Total	**9.4254**	**75.6135**	**47.0341**	**0.0733**		**4.8086**	**4.8086**		**4.5777**	**4.5777**	**0.0000**	**7 141.6291**	**7 141.6291**	**1.5817**		**7 174.8444**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.2632	22.5127	28.5989	0.0542	1.5769	0.3665	1.9434	0.4502	0.3370	0.7873		5,426.9406	5,426.9406	0.0406		5,427.7925
Worker	3.4506	4.7702	50.3114	0.1092	9.5457	0.0708	9.6166	2.5316	0.0651	2.5967		9,084.3218	9,084.3218	0.4955		9,094.7267
Total	**5.7138**	**27.2829**	**78.9103**	**0.1634**	**11.1226**	**0.4373**	**11.5600**	**2.9818**	**0.4021**	**3.3839**		**14 511.2623**	**14 511.2623**	**0.5360**		**14 522.5192**

3.5 Architectural Coating - 2016

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					
Archit. Coating	46.7060					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	1.4739	9.4889	7.5357	0.0119		0.7865	0.7865		0.7865	0.7865	0.0000	1,125.7922	1,125.7922	0.1327		1,128.5794
Total	**48.1798**	**9.4889**	**7.5357**	**0.0119**		**0.7865**	**0.7865**		**0.7865**	**0.7865**	**0.0000**	**1 125.7922**	**1 125.7922**	**0.1327**		**1 128.5794**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6909	0.9552	10.0741	0.0219	1.9114	0.0142	1.9256	0.5069	0.0130	0.5199		1,818.9918	1,818.9918	0.0992		1,821.0753
Total	**0.6909**	**0.9552**	**10.0741**	**0.0219**	**1.9114**	**0.0142**	**1.9256**	**0.5069**	**0.0130**	**0.5199**		**1 818.9918**	**1 818.9918**	**0.0992**		**1 821.0753**

3.6 Paving - 2016

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					
Off-Road	4.1795	44.7718	29.6353	0.0446		2.5219	2.5219		2.3202	2.3202	0.0000	4,632.7535	4,632.7535	1.3974		4,662.0989
Paving	0.4517					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**4.6313**	**44.7718**	**29.6353**	**0.0446**		**2.5219**	**2.5219**		**2.3202**	**2.3202**	**0.0000**	**4 632.7535**	**4 632.7535**	**1.3974**		**4 662.0989**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2020	0.2793	2.9456	6.3900e-003	0.5589	4.1500e-003	0.5630	0.1482	3.8100e-003	0.1520		531.8690	531.8690	0.0290		532.4781
Total	**0.2020**	**0.2793**	**2.9456**	**6.3900e-003**	**0.5589**	**4.1500e-003**	**0.5630**	**0.1482**	**3.8100e-003**	**0.1520**		**531.8690**	**531.8690**	**0.0290**		**532.4781**

Fontana Westgate SP - Phase 1 Construction (Mitigated)

San Bernardino-South Coast County Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.16	0.14	0.09	0.00	0.14	0.14	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.32	0.29	0.23	0.00	0.27	0.27	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Aerial Lifts	Diesel	No Change	0	4	No Change	0.00
Air Compressors	Diesel	No Change	0	4	No Change	0.00
Cement and Mortar Mixers	Diesel	No Change	0	8	No Change	0.00
Cranes	Diesel	No Change	0	4	No Change	0.00
Excavators	Diesel	No Change	0	4	No Change	0.00
Forklifts	Diesel	No Change	0	4	No Change	0.00
Generator Sets	Diesel	No Change	0	4	No Change	0.00
Graders	Diesel	No Change	0	4	No Change	0.00
Other Construction Equipment	Diesel	No Change	0	4	No Change	0.00
Other General Industrial Equipment	Diesel	No Change	0	4	No Change	0.00
Other Material Handling Equipment	Diesel	No Change	0	4	No Change	0.00
Pavers	Diesel	No Change	0	4	No Change	0.00

Paving Equipment	Diesel	No Change	0	4	No Change	0.00
Rollers	Diesel	No Change	0	4	No Change	0.00
Rubber Tired Dozers	Diesel	Tier 3	4	8	No Change	0.00
Scrapers	Diesel	Tier 3	2	4	No Change	0.00
Sweepers/Scrubbers	Diesel	No Change	0	4	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	12	No Change	0.00
Welders	Diesel	No Change	0	4	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Aerial Lifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Air Compressors	9.65400E-002	6.21520E-001	4.93590E-001	7.80000E-004	5.15100E-002	5.15100E-002	0.00000E+000	6.68953E+001	6.68953E+001	7.89000E-003	0.00000E+000	6.70609E+001
Cement and Mortar Mixers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	3.86030E-001	4.57515E+000	1.59949E+000	3.01000E-003	2.07790E-001	1.91170E-001	0.00000E+000	2.84288E+002	2.84288E+002	8.56200E-002	0.00000E+000	2.86086E+002
Excavators	5.41500E-002	6.32430E-001	4.47090E-001	6.90000E-004	3.12200E-002	2.87200E-002	0.00000E+000	6.55188E+001	6.55188E+001	1.95600E-002	0.00000E+000	6.59296E+001
Forklifts	1.39690E-001	1.20198E+000	7.71550E-001	9.30000E-004	1.00580E-001	9.25300E-002	0.00000E+000	8.79653E+001	8.79653E+001	2.64900E-002	0.00000E+000	8.85217E+001
Generator Sets	3.96440E-001	2.98383E+000	2.32279E+000	4.01000E-003	2.10310E-001	2.10310E-001	0.00000E+000	3.44777E+002	3.44777E+002	3.20700E-002	0.00000E+000	3.45450E+002
Graders	1.38040E-001	1.41281E+000	6.47490E-001	8.10000E-004	7.94400E-002	7.30800E-002	0.00000E+000	7.74905E+001	7.74905E+001	2.31300E-002	0.00000E+000	7.79763E+001
Other Construction Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Other General Industrial	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Other Material Handling	8.04200E-002	8.64510E-001	5.25800E-001	7.50000E-004	4.68600E-002	4.31200E-002	0.00000E+000	7.10797E+001	7.10797E+001	2.12200E-002	0.00000E+000	7.15253E+001
Pavers	6.98000E-002	7.85260E-001	4.96270E-001	7.90000E-004	3.90200E-002	3.59000E-002	0.00000E+000	7.40359E+001	7.40359E+001	2.23300E-002	0.00000E+000	7.45049E+001
Paving Equipment	5.34000E-002	6.20690E-001	4.42520E-001	7.00000E-004	3.08000E-002	2.83400E-002	0.00000E+000	6.57736E+001	6.57736E+001	1.98400E-002	0.00000E+000	6.61903E+001
Rollers	5.86100E-002	5.41620E-001	3.50350E-001	4.60000E-004	3.98800E-002	3.66900E-002	0.00000E+000	4.30107E+001	4.30107E+001	1.29700E-002	0.00000E+000	4.32831E+001
Rubber Tired Dozers	2.24070E-001	2.53212E+000	1.93185E+000	1.56000E-003	1.18140E-001	1.08690E-001	0.00000E+000	1.49116E+002	1.49116E+002	4.45200E-002	0.00000E+000	1.50051E+002
Scrapers	1.87610E-001	2.41786E+000	1.50496E+000	1.94000E-003	9.76500E-002	8.98400E-002	0.00000E+000	1.84517E+002	1.84517E+002	5.50900E-002	0.00000E+000	1.85674E+002
Sweepers/Scrubbers	5.62600E-002	4.64830E-001	2.76540E-001	3.30000E-004	4.11900E-002	3.79000E-002	0.00000E+000	3.14520E+001	3.14520E+001	9.39000E-003	0.00000E+000	3.16491E+001
Tractors/Loaders/Backhoes	2.46730E-001	2.35508E+000	1.71564E+000	2.21000E-003	1.82440E-001	1.67840E-001	0.00000E+000	2.09282E+002	2.09282E+002	6.28900E-002	0.00000E+000	2.10603E+002
Welders	3.48580E-001	1.10494E+000	1.20684E+000	1.56000E-003	8.79500E-002	8.79500E-002	0.00000E+000	1.14815E+002	1.14815E+002	2.83500E-002	0.00000E+000	1.15410E+002

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Aerial Lifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Air Compressors	9.65400E-002	6.21520E-001	4.93590E-001	7.80000E-004	5.15100E-002	5.15100E-002	0.00000E+000	6.68952E+001	6.68952E+001	7.89000E-003	0.00000E+000	6.70608E+001
Cement and Mortar Mixers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	3.86030E-001	4.57514E+000	1.59949E+000	3.01000E-003	2.07790E-001	1.91170E-001	0.00000E+000	2.84288E+002	2.84288E+002	8.56200E-002	0.00000E+000	2.86086E+002
Excavators	5.41500E-002	6.32430E-001	4.47090E-001	6.90000E-004	3.12200E-002	2.87200E-002	0.00000E+000	6.55188E+001	6.55188E+001	1.95600E-002	0.00000E+000	6.59295E+001
Forklifts	1.39690E-001	1.20198E+000	7.71550E-001	9.30000E-004	1.00580E-001	9.25300E-002	0.00000E+000	8.79652E+001	8.79652E+001	2.64900E-002	0.00000E+000	8.85216E+001
Generator Sets	3.96440E-001	2.98383E+000	2.32279E+000	4.01000E-003	2.10310E-001	2.10310E-001	0.00000E+000	3.44776E+002	3.44776E+002	3.20700E-002	0.00000E+000	3.45450E+002
Graders	1.38040E-001	1.41281E+000	6.47490E-001	8.10000E-004	7.94400E-002	7.30800E-002	0.00000E+000	7.74904E+001	7.74904E+001	2.31300E-002	0.00000E+000	7.79762E+001
Other Construction Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Other General Industrial Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Other Material Handling Equipment	8.04200E-002	8.64510E-001	5.25800E-001	7.50000E-004	4.68600E-002	4.31200E-002	0.00000E+000	7.10796E+001	7.10796E+001	2.12200E-002	0.00000E+000	7.15253E+001
Pavers	6.98000E-002	7.85260E-001	4.96270E-001	7.90000E-004	3.90200E-002	3.59000E-002	0.00000E+000	7.40358E+001	7.40358E+001	2.23300E-002	0.00000E+000	7.45048E+001
Paving Equipment	5.34000E-002	6.20690E-001	4.42520E-001	7.00000E-004	3.08000E-002	2.83400E-002	0.00000E+000	6.57735E+001	6.57735E+001	1.98400E-002	0.00000E+000	6.61902E+001
Rollers	5.86100E-002	5.41620E-001	3.50350E-001	4.60000E-004	3.98800E-002	3.66900E-002	0.00000E+000	4.30106E+001	4.30106E+001	1.29700E-002	0.00000E+000	4.32831E+001
Rubber Tired Dozers	1.31030E-001	1.63334E+000	1.37753E+000	1.56000E-003	7.30000E-002	6.82800E-002	0.00000E+000	1.49116E+002	1.49116E+002	4.45200E-002	0.00000E+000	1.50050E+002
Scrapers	1.17640E-001	1.66979E+000	1.26897E+000	1.94000E-003	6.63100E-002	6.24000E-002	0.00000E+000	1.84517E+002	1.84517E+002	5.50900E-002	0.00000E+000	1.85674E+002
Sweepers/Scrubbers	5.62600E-002	4.64830E-001	2.76540E-001	3.30000E-004	4.11900E-002	3.79000E-002	0.00000E+000	3.14519E+001	3.14519E+001	9.39000E-003	0.00000E+000	3.16491E+001
Tractors/Loaders/Backhoes	2.46730E-001	2.35508E+000	1.71564E+000	2.21000E-003	1.82440E-001	1.67840E-001	0.00000E+000	2.09282E+002	2.09282E+002	6.28900E-002	0.00000E+000	2.10603E+002
Welders	3.48580E-001	1.10494E+000	1.20684E+000	1.56000E-003	8.79500E-002	8.79500E-002	0.00000E+000	1.14814E+002	1.14814E+002	2.83500E-002	0.00000E+000	1.15410E+002

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Aerial Lifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.19590E-006	1.19590E-006	0.00000E+000	0.00000E+000	1.19295E-006
Cement and Mortar Mixers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	0.00000E+000	2.18572E-006	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.19597E-006	1.19597E-006	0.00000E+000	0.00000E+000	1.18845E-006
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.22102E-006	1.22102E-006	0.00000E+000	0.00000E+000	1.21342E-006
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.13681E-006	1.13681E-006	0.00000E+000	0.00000E+000	1.24263E-006
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.18918E-006	1.18918E-006	0.00000E+000	0.00000E+000	1.18686E-006
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.16143E-006	1.16143E-006	0.00000E+000	0.00000E+000	1.15420E-006
Other Construction Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Other General Industrial Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Other Material Handling Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.26618E-006	1.26618E-006	0.00000E+000	0.00000E+000	1.11848E-006
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.21563E-006	1.21563E-006	0.00000E+000	0.00000E+000	1.20797E-006
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.21629E-006	1.21629E-006	0.00000E+000	0.00000E+000	1.20864E-006
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.16250E-006	1.16250E-006	0.00000E+000	0.00000E+000	1.15518E-006
Rubber Tired Dozers	4.15227E-001	3.54952E-001	2.86937E-001	0.00000E+000	3.82089E-001	3.71791E-001	0.00000E+000	1.20712E-006	1.20712E-006	0.00000E+000	0.00000E+000	1.19960E-006
Scrapers	3.72955E-001	3.09393E-001	1.56808E-001	0.00000E+000	3.20942E-001	3.05432E-001	0.00000E+000	1.19230E-006	1.19230E-006	0.00000E+000	0.00000E+000	1.18487E-006
Sweepers/Scrubbers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	9.53836E-007	9.53836E-007	0.00000E+000	0.00000E+000	1.26386E-006
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.19456E-006	1.19456E-006	0.00000E+000	0.00000E+000	1.18707E-006
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.13226E-006	1.13226E-006	0.00000E+000	0.00000E+000	1.12642E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
Yes	Soil Stabilizer for unpaved Roads	PM10 Reduction	61.00	PM2.5 Reduction	61.00		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Water Exposed Area	PM10 Reduction	61.00	PM2.5 Reduction	61.00	Frequency (per day)	3.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	15.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.12	0.03	0.12	0.03	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	1.66	0.45	1.66	0.45	0.00	0.00
Grading	Fugitive Dust	1.00	0.45	0.39	0.18	0.61	0.61
Grading	Roads	0.14	0.04	0.14	0.04	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.02	0.01	0.02	0.01	0.00	0.00
Site Preparation	Fugitive Dust	0.28	0.15	0.11	0.06	0.61	0.61
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Plannin Area 12 - Construction (LST analysis)

San Bernardino-South Coast County Summer

1.0 Pro ect Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	72.14	1000sqft	2.60	72,135.00	0
General Light Industry	8.02	1000sqft	1.00	8,015.00	0
Other Asphalt Surfaces	1.00	Acre	1.00	43,560.00	0

1.2 Other Pro ect Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate one	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Planning Area 12; 4.6 acres.

Construction Phase - Site Prep (1/15/19-1/31/19), Grading (2/1/19-3/31/19), Building Construction (4/1/19-2/29/20), Paving (1/1/20-1/31/20), Architectural Coating (12/1/19-2/29/20).
Grading -

Construction Off-road Equipment Mitigation - Use of Water/Soil Stabilizers on unpaved roads and exposed areas; Limit vehicle speeds to 15 mph on unpaved roads.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	18.00	65.00

tblConstructionPhase	NumDays	230.00	240.00
tblConstructionPhase	NumDays	8.00	41.00
tblConstructionPhase	NumDays	18.00	23.00
tblConstructionPhase	NumDays	5.00	13.00
tblConstructionPhase	PhaseEndDate	5/29/2020	2/28/2020
tblConstructionPhase	PhaseEndDate	2/28/2020	2/29/2020
tblConstructionPhase	PhaseEndDate	3/29/2019	3/31/2019
tblConstructionPhase	PhaseEndDate	4/1/2020	1/31/2020
tblConstructionPhase	PhaseStartDate	3/1/2020	12/1/2019
tblConstructionPhase	PhaseStartDate	2/29/2020	1/1/2020
tblLandUse	LotAcreage	1.66	2.60
tblLandUse	LotAcreage	0.18	1.00
tblProjectCharacteristics	OperationalYear	2014	2020

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					
2019	47.0306	42.5740	35.7219	0.0416	18.2675	2.1518	20.4193	9.9840	1.9797	11.9637	0.0000	4,062.8745	4,062.8745	1.2347	0.0000	4,088.8033
2020	48.0871	33.8401	35.9000	0.0631	0.9528	1.8938	2.8466	0.2552	1.7756	2.0308	0.0000	5,738.6953	5,738.6953	1.2341	0.0000	5,764.6123
Total	**95.1177**	**76.4141**	**71.6219**	**0.1047**	**19.2202**	**4.0457**	**23.2659**	**10.2393**	**3.7553**	**13.9946**	**0.0000**	**9 801.5698**	**9 801.5698**	**2.4689**	**0.0000**	**9 853.4155**

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					
2019	47.0306	42.5740	35.7219	0.0416	7.2470	2.1518	9.3989	3.9263	1.9797	5.9060	0.0000	4,062.8745	4,062.8745	1.2347	0.0000	4,088.8033
2020	48.0871	33.8401	35.9000	0.0631	0.9528	1.8938	2.8466	0.2552	1.7756	2.0308	0.0000	5,738.6953	5,738.6953	1.2341	0.0000	5,764.6122
Total	**95.1177**	**76.4141**	**71.6219**	**0.1047**	**8.1998**	**4.0457**	**12.2455**	**4.1815**	**3.7553**	**7.9369**	**0.0000**	**9 801.5698**	**9 801.5698**	**2.4689**	**0.0000**	**9 853.4155**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**57.34**	**0.00**	**47.37**	**59.16**	**0.00**	**43.29**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/15/2019	1/31/2019	5	13	
2	Grading	Grading	2/1/2019	3/31/2019	5	41	
3	Building Construction	Building Construction	4/1/2019	2/29/2020	5	240	
4	Architectural Coating	Architectural Coating	12/1/2019	2/28/2020	5	65	
5	Paving	Paving	1/1/2020	1/31/2020	5	23	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 20.5

Residential Indoor: 0 Residential Outdoor: 0 Non-Residential Indoor: 185 565 Non-Residential Outdoor: 61 855 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56

Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	45.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2019

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0188	42.5046	34.8088	0.0391		2.1505	2.1505		1.9784	1.9784		3,876.7233	3,876.7233	1.2266		3,902.4810
Total	**4.0188**	**42.5046**	**34.8088**	**0.0391**	**18.0663**	**2.1505**	**20.2167**	**9.9307**	**1.9784**	**11.9091**		**3 876.7233**	**3 876.7233**	**1.2266**		**3 902.4810**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0559	0.0694	0.9131	2.5200e-003	0.2012	1.3700e-003	0.2026	0.0534	1.2700e-003	0.0546		186.1512	186.1512	8.1500e-003		186.3223
Total	**0.0559**	**0.0694**	**0.9131**	**2.5200e-003**	**0.2012**	**1.3700e-003**	**0.2026**	**0.0534**	**1.2700e-003**	**0.0546**		**186.1512**	**186.1512**	**8.1500e-003**		**186.3223**

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					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	4.0188	42.5046	34.8088	0.0391		2.1505	2.1505		1.9784	1.9784	0.0000	3,876.7233	3,876.7233	1.2266		3,902.4810
Total	**4.0188**	**42.5046**	**34.8088**	**0.0391**	**7.0458**	**2.1505**	**9.1963**	**3.8730**	**1.9784**	**5.8514**	**0.0000**	**3 876.7233**	**3 876.7233**	**1.2266**		**3 902.4810**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0559	0.0694	0.9131	2.5200e-003	0.2012	1.3700e-003	0.2026	0.0534	1.2700e-003	0.0546		186.1512	186.1512	8.1500e-003		186.3223
Total	**0.0559**	**0.0694**	**0.9131**	**2.5200e-003**	**0.2012**	**1.3700e-003**	**0.2026**	**0.0534**	**1.2700e-003**	**0.0546**		**186.1512**	**186.1512**	**8.1500e-003**		**186.3223**

3.3 Grading - 2019

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.7610	28.3800	23.3864	0.0297		1.5329	1.5329		1.4103	1.4103		2,944.1998	2,944.1998	0.9315		2,963.7615
Total	**2.7610**	**28.3800**	**23.3864**	**0.0297**	**6.5523**	**1.5329**	**8.0852**	**3.3675**	**1.4103**	**4.7778**		**2 944.1998**	**2 944.1998**	**0.9315**		**2 963.7615**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0466	0.0578	0.7609	2.1000e-003	0.1677	1.1400e-003	0.1688	0.0445	1.0600e-003	0.0455		155.1260	155.1260	6.7900e-003		155.2686
Total	**0.0466**	**0.0578**	**0.7609**	**2.1000e-003**	**0.1677**	**1.1400e-003**	**0.1688**	**0.0445**	**1.0600e-003**	**0.0455**		**155.1260**	**155.1260**	**6.7900e-003**		**155.2686**

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					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	2.7610	28.3800	23.3864	0.0297		1.5329	1.5329		1.4103	1.4103	0.0000	2,944.1998	2,944.1998	0.9315		2,963.7615
Total	**2.7610**	**28.3800**	**23.3864**	**0.0297**	**2.5554**	**1.5329**	**4.0883**	**1.3133**	**1.4103**	**2.7236**	**0.0000**	**2 944.1998**	**2 944.1998**	**0.9315**		**2 963.7615**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0466	0.0578	0.7609	2.1000e-003	0.1677	1.1400e-003	0.1688	0.0445	1.0600e-003	0.0455		155.1260	155.1260	6.7900e-003		155.2686
Total	**0.0466**	**0.0578**	**0.7609**	**2.1000e-003**	**0.1677**	**1.1400e-003**	**0.1688**	**0.0445**	**1.0600e-003**	**0.0455**		**155.1260**	**155.1260**	**6.7900e-003**		**155.2686**

3.4 Building Construction - 2019

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					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**		**2 580.7618**	**2 580.7618**	**0.6279**		**2 593.9479**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1374	1.3374	1.7236	4.3000e-003	0.1256	0.0233	0.1489	0.0359	0.0214	0.0573		411.9275	411.9275	2.9100e-003		411.9886
Worker	0.1398	0.1735	2.2828	6.2900e-003	0.5030	3.4300e-003	0.5064	0.1334	3.1800e-003	0.1366		465.3779	465.3779	0.0204		465.8058
Total	**0.2772**	**1.5109**	**4.0063**	**0.0106**	**0.6286**	**0.0267**	**0.6553**	**0.1693**	**0.0246**	**0.1938**		**877.3054**	**877.3054**	**0.0233**		**877.7945**

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					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**	**0.0000**	**2 580.7618**	**2 580.7618**	**0.6279**		**2 593.9479**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1374	1.3374	1.7236	4.3000e-003	0.1256	0.0233	0.1489	0.0359	0.0214	0.0573		411.9275	411.9275	2.9100e-003		411.9886
Worker	0.1398	0.1735	2.2828	6.2900e-003	0.5030	3.4300e-003	0.5064	0.1334	3.1800e-003	0.1366		465.3779	465.3779	0.0204		465.8058
Total	**0.2772**	**1.5109**	**4.0063**	**0.0106**	**0.6286**	**0.0267**	**0.6553**	**0.1693**	**0.0246**	**0.1938**		**877.3054**	**877.3054**	**0.0233**		**877.7945**

3.4 Building Construction - 2020

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					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465		2,542.4799	2,542.4799	0.6194		2,555.4880
Total	**2.1113**	**19.0839**	**16.8084**	**0.0268**		**1.1128**	**1.1128**		**1.0465**	**1.0465**		**2 542.4799**	**2 542.4799**	**0.6194**		**2 555.4880**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1298	1.1642	1.6624	4.3000e-003	0.1256	0.0213	0.1469	0.0359	0.0196	0.0554		402.4978	402.4978	2.8500e-003		402.5576
Worker	0.1299	0.1602	2.1189	6.2900e-003	0.5030	3.4100e-003	0.5064	0.1334	3.1700e-003	0.1366		446.3754	446.3754	0.0192		446.7788
Total	**0.2597**	**1.3244**	**3.7814**	**0.0106**	**0.6286**	**0.0247**	**0.6533**	**0.1693**	**0.0227**	**0.1920**		**848.8732**	**848.8732**	**0.0221**		**849.3364**

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					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465	0.0000	2,542.4799	2,542.4799	0.6194		2,555.4880
Total	**2.1113**	**19.0839**	**16.8084**	**0.0268**		**1.1128**	**1.1128**		**1.0465**	**1.0465**	**0.0000**	**2 542.4799**	**2 542.4799**	**0.6194**		**2 555.4880**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1298	1.1642	1.6624	4.3000e-003	0.1256	0.0213	0.1469	0.0359	0.0196	0.0554		402.4978	402.4978	2.8500e-003		402.5576
Worker	0.1299	0.1602	2.1189	6.2900e-003	0.5030	3.4100e-003	0.5064	0.1334	3.1700e-003	0.1366		446.3754	446.3754	0.0192		446.7788
Total	**0.2597**	**1.3244**	**3.7814**	**0.0106**	**0.6286**	**0.0247**	**0.6533**	**0.1693**	**0.0227**	**0.1920**		**848.8732**	**848.8732**	**0.0221**		**849.3364**

3.5 Architectural Coating - 2019

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					
Archit. Coating	44.1074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	**44.3738**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**281.9473**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0280	0.0347	0.4566	1.2600e-003	0.1006	6.9000e-004	0.1013	0.0267	6.4000e-004	0.0273		93.0756	93.0756	4.0800e-003		93.1612
Total	**0.0280**	**0.0347**	**0.4566**	**1.2600e-003**	**0.1006**	**6.9000e-004**	**0.1013**	**0.0267**	**6.4000e-004**	**0.0273**		**93.0756**	**93.0756**	**4.0800e-003**		**93.1612**

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					
Archit. Coating	44.1074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473
Total	**44.3738**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**281.9473**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0280	0.0347	0.4566	1.2600e-003	0.1006	6.9000e-004	0.1013	0.0267	6.4000e-004	0.0273		93.0756	93.0756	4.0800e-003		93.1612
Total	**0.0280**	**0.0347**	**0.4566**	**1.2600e-003**	**0.1006**	**6.9000e-004**	**0.1013**	**0.0267**	**6.4000e-004**	**0.0273**		**93.0756**	**93.0756**	**4.0800e-003**		**93.1612**

3.5 Architectural Coating - 2020

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					
Archit. Coating	44.1074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9057
Total	**44.3496**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9057**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0260	0.0320	0.4238	1.2600e-003	0.1006	6.8000e-004	0.1013	0.0267	6.3000e-004	0.0273		89.2751	89.2751	3.8400e-003		89.3558
Total	**0.0260**	**0.0320**	**0.4238**	**1.2600e-003**	**0.1006**	**6.8000e-004**	**0.1013**	**0.0267**	**6.3000e-004**	**0.0273**		**89.2751**	**89.2751**	**3.8400e-003**		**89.3558**

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					
Archit. Coating	44.1074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9057
Total	**44.3496**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9057**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0260	0.0320	0.4238	1.2600e-003	0.1006	6.8000e-004	0.1013	0.0267	6.3000e-004	0.0273		89.2751	89.2751	3.8400e-003		89.3558
Total	**0.0260**	**0.0320**	**0.4238**	**1.2600e-003**	**0.1006**	**6.8000e-004**	**0.1013**	**0.0267**	**6.3000e-004**	**0.0273**		**89.2751**	**89.2751**	**3.8400e-003**		**89.3558**

3.6 Paving - 2020

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					
Off-Road	1.1689	11.6447	12.1132	0.0187		0.6432	0.6432		0.5935	0.5935		1,778.2300	1,778.2300	0.5585		1,789.9580
Paving	0.1139					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2828**	**11.6447**	**12.1132**	**0.0187**		**0.6432**	**0.6432**		**0.5935**	**0.5935**		**1 778.2300**	**1 778.2300**	**0.5585**		**1 789.9580**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0578	0.0712	0.9418	2.7900e-003	0.2236	1.5200e-003	0.2251	0.0593	1.4100e-003	0.0607		198.3891	198.3891	8.5400e-003		198.5684
Total	**0.0578**	**0.0712**	**0.9418**	**2.7900e-003**	**0.2236**	**1.5200e-003**	**0.2251**	**0.0593**	**1.4100e-003**	**0.0607**		**198.3891**	**198.3891**	**8.5400e-003**		**198.5684**

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					
Off-Road	1.1689	11.6447	12.1132	0.0187		0.6432	0.6432		0.5935	0.5935	0.0000	1,778.2300	1,778.2300	0.5585		1,789.9580
Paving	0.1139					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2828**	**11.6447**	**12.1132**	**0.0187**		**0.6432**	**0.6432**		**0.5935**	**0.5935**	**0.0000**	**1 778.2300**	**1 778.2300**	**0.5585**		**1 789.9580**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0578	0.0712	0.9418	2.7900e-003	0.2236	1.5200e-003	0.2251	0.0593	1.4100e-003	0.0607		198.3891	198.3891	8.5400e-003		198.5684
Total	**0.0578**	**0.0712**	**0.9418**	**2.7900e-003**	**0.2236**	**1.5200e-003**	**0.2251**	**0.0593**	**1.4100e-003**	**0.0607**		**198.3891**	**198.3891**	**8.5400e-003**		**198.5684**

Plannin Area 12 - Construction (LST analysis)

San Bernardino-South Coast County Winter

1.0 Pro ect Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	72.14	1000sqft	2.60	72,135.00	0
General Light Industry	8.02	1000sqft	1.00	8,015.00	0
Other Asphalt Surfaces	1.00	Acre	1.00	43,560.00	0

1.2 Other Pro ect Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate one	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Planning Area 12; 4.6 acres.

Construction Phase - Site Prep (1/15/19-1/31/19), Grading (2/1/19-3/31/19), Building Construction (4/1/19-2/29/20), Paving (1/1/20-1/31/20), Architectural Coating (12/1/19-2/29/20).
Grading -

Construction Off-road Equipment Mitigation - Use of Water/Soil Stabilizers on unpaved roads and exposed areas; Limit vehicle speeds to 15 mph on unpaved roads.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	18.00	65.00

tblConstructionPhase	NumDays	230.00	240.00
tblConstructionPhase	NumDays	8.00	41.00
tblConstructionPhase	NumDays	18.00	23.00
tblConstructionPhase	NumDays	5.00	13.00
tblConstructionPhase	PhaseEndDate	5/29/2020	2/28/2020
tblConstructionPhase	PhaseEndDate	2/28/2020	2/29/2020
tblConstructionPhase	PhaseEndDate	3/29/2019	3/31/2019
tblConstructionPhase	PhaseEndDate	4/1/2020	1/31/2020
tblConstructionPhase	PhaseStartDate	3/1/2020	12/1/2019
tblConstructionPhase	PhaseStartDate	2/29/2020	1/1/2020
tblLandUse	LotAcreage	1.66	2.60
tblLandUse	LotAcreage	0.18	1.00
tblProjectCharacteristics	OperationalYear	2014	2020

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					
2019	47.0277	42.5786	35.5836	0.0414	18.2675	2.1518	20.4193	9.9840	1.9797	11.9637	0.0000	4,046.2448	4,046.2448	1.2347	0.0000	4,072.1736
2020	48.0807	33.8851	35.6592	0.0621	0.9528	1.8940	2.8468	0.2552	1.7758	2.0310	0.0000	5,669.6099	5,669.6099	1.2342	0.0000	5,695.5290
Total	**95.1083**	**76.4637**	**71.2428**	**0.1035**	**19.2202**	**4.0459**	**23.2661**	**10.2393**	**3.7555**	**13.9947**	**0.0000**	**9 715.8547**	**9 715.8547**	**2.4690**	**0.0000**	**9 767.7025**

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					
2019	47.0277	42.5786	35.5836	0.0414	7.2470	2.1518	9.3989	3.9263	1.9797	5.9060	0.0000	4,046.2448	4,046.2448	1.2347	0.0000	4,072.1736
2020	48.0807	33.8851	35.6592	0.0621	0.9528	1.8940	2.8468	0.2552	1.7758	2.0310	0.0000	5,669.6099	5,669.6099	1.2342	0.0000	5,695.5290
Total	**95.1083**	**76.4637**	**71.2428**	**0.1035**	**8.1998**	**4.0459**	**12.2456**	**4.1815**	**3.7555**	**7.9370**	**0.0000**	**9 715.8546**	**9 715.8546**	**2.4690**	**0.0000**	**9 767.7025**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**57.34**	**0.00**	**47.37**	**59.16**	**0.00**	**43.29**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/15/2019	1/31/2019	5	13	
2	Grading	Grading	2/1/2019	3/31/2019	5	41	
3	Building Construction	Building Construction	4/1/2019	2/29/2020	5	240	
4	Architectural Coating	Architectural Coating	12/1/2019	2/28/2020	5	65	
5	Paving	Paving	1/1/2020	1/31/2020	5	23	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 20.5

Residential Indoor: 0 Residential Outdoor: 0 Non-Residential Indoor: 185 565 Non-Residential Outdoor: 61 855 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56

Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	45.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2019

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0188	42.5046	34.8088	0.0391		2.1505	2.1505		1.9784	1.9784		3,876.7233	3,876.7233	1.2266		3,902.4810
Total	**4.0188**	**42.5046**	**34.8088**	**0.0391**	**18.0663**	**2.1505**	**20.2167**	**9.9307**	**1.9784**	**11.9091**		**3 876.7233**	**3 876.7233**	**1.2266**		**3 902.4810**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0740	0.7748	2.2900e-003	0.2012	1.3700e-003	0.2026	0.0534	1.2700e-003	0.0546		169.5214	169.5214	8.1500e-003		169.6926
Total	**0.0521**	**0.0740**	**0.7748**	**2.2900e-003**	**0.2012**	**1.3700e-003**	**0.2026**	**0.0534**	**1.2700e-003**	**0.0546**		**169.5214**	**169.5214**	**8.1500e-003**		**169.6926**

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					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	4.0188	42.5046	34.8088	0.0391		2.1505	2.1505		1.9784	1.9784	0.0000	3,876.7233	3,876.7233	1.2266		3,902.4810
Total	**4.0188**	**42.5046**	**34.8088**	**0.0391**	**7.0458**	**2.1505**	**9.1963**	**3.8730**	**1.9784**	**5.8514**	**0.0000**	**3 876.7233**	**3 876.7233**	**1.2266**		**3 902.4810**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0740	0.7748	2.2900e-003	0.2012	1.3700e-003	0.2026	0.0534	1.2700e-003	0.0546		169.5214	169.5214	8.1500e-003		169.6926
Total	**0.0521**	**0.0740**	**0.7748**	**2.2900e-003**	**0.2012**	**1.3700e-003**	**0.2026**	**0.0534**	**1.2700e-003**	**0.0546**		**169.5214**	**169.5214**	**8.1500e-003**		**169.6926**

3.3 Grading - 2019

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.7610	28.3800	23.3864	0.0297		1.5329	1.5329		1.4103	1.4103		2,944.1998	2,944.1998	0.9315		2,963.7615
Total	**2.7610**	**28.3800**	**23.3864**	**0.0297**	**6.5523**	**1.5329**	**8.0852**	**3.3675**	**1.4103**	**4.7778**		**2 944.1998**	**2 944.1998**	**0.9315**		**2 963.7615**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0434	0.0617	0.6457	1.9100e-003	0.1677	1.1400e-003	0.1688	0.0445	1.0600e-003	0.0455		141.2679	141.2679	6.7900e-003		141.4105
Total	**0.0434**	**0.0617**	**0.6457**	**1.9100e-003**	**0.1677**	**1.1400e-003**	**0.1688**	**0.0445**	**1.0600e-003**	**0.0455**		**141.2679**	**141.2679**	**6.7900e-003**		**141.4105**

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					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	2.7610	28.3800	23.3864	0.0297		1.5329	1.5329		1.4103	1.4103	0.0000	2,944.1998	2,944.1998	0.9315		2,963.7615
Total	**2.7610**	**28.3800**	**23.3864**	**0.0297**	**2.5554**	**1.5329**	**4.0883**	**1.3133**	**1.4103**	**2.7236**	**0.0000**	**2 944.1998**	**2 944.1998**	**0.9315**		**2 963.7615**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0434	0.0617	0.6457	1.9100e-003	0.1677	1.1400e-003	0.1688	0.0445	1.0600e-003	0.0455		141.2679	141.2679	6.7900e-003		141.4105
Total	**0.0434**	**0.0617**	**0.6457**	**1.9100e-003**	**0.1677**	**1.1400e-003**	**0.1688**	**0.0445**	**1.0600e-003**	**0.0455**		**141.2679**	**141.2679**	**6.7900e-003**		**141.4105**

3.4 Building Construction - 2019

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					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**		**2 580.7618**	**2 580.7618**	**0.6279**		**2 593.9479**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1459	1.3708	2.0164	4.2700e-003	0.1256	0.0235	0.1491	0.0359	0.0216	0.0575		408.4270	408.4270	3.0100e-003		408.4903
Worker	0.1303	0.1850	1.9370	5.7200e-003	0.5030	3.4300e-003	0.5064	0.1334	3.1800e-003	0.1366		423.8036	423.8036	0.0204		424.2316
Total	**0.2762**	**1.5557**	**3.9534**	**9.9900e-003**	**0.6286**	**0.0269**	**0.6555**	**0.1693**	**0.0248**	**0.1940**		**832.2306**	**832.2306**	**0.0234**		**832.7218**

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					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**	**0.0000**	**2 580.7618**	**2 580.7618**	**0.6279**		**2 593.9479**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1459	1.3708	2.0164	4.2700e-003	0.1256	0.0235	0.1491	0.0359	0.0216	0.0575		408.4270	408.4270	3.0100e-003		408.4903
Worker	0.1303	0.1850	1.9370	5.7200e-003	0.5030	3.4300e-003	0.5064	0.1334	3.1800e-003	0.1366		423.8036	423.8036	0.0204		424.2316
Total	**0.2762**	**1.5557**	**3.9534**	**9.9900e-003**	**0.6286**	**0.0269**	**0.6555**	**0.1693**	**0.0248**	**0.1940**		**832.2306**	**832.2306**	**0.0234**		**832.7218**

3.4 Building Construction - 2020

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					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465		2,542.4799	2,542.4799	0.6194		2,555.4880
Total	**2.1113**	**19.0839**	**16.8084**	**0.0268**		**1.1128**	**1.1128**		**1.0465**	**1.0465**		**2 542.4799**	**2 542.4799**	**0.6194**		**2 555.4880**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1378	1.1921	1.9555	4.2600e-003	0.1256	0.0214	0.1471	0.0359	0.0197	0.0556		399.0667	399.0667	2.9500e-003		399.1286
Worker	0.1212	0.1706	1.7943	5.7200e-003	0.5030	3.4100e-003	0.5064	0.1334	3.1700e-003	0.1366		406.4505	406.4505	0.0192		406.8539
Total	**0.2590**	**1.3627**	**3.7498**	**9.9800e-003**	**0.6286**	**0.0249**	**0.6535**	**0.1693**	**0.0229**	**0.1921**		**805.5172**	**805.5172**	**0.0222**		**805.9825**

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					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465	0.0000	2,542.4799	2,542.4799	0.6194		2,555.4880
Total	**2.1113**	**19.0839**	**16.8084**	**0.0268**		**1.1128**	**1.1128**		**1.0465**	**1.0465**	**0.0000**	**2 542.4799**	**2 542.4799**	**0.6194**		**2 555.4880**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1378	1.1921	1.9555	4.2600e-003	0.1256	0.0214	0.1471	0.0359	0.0197	0.0556		399.0667	399.0667	2.9500e-003		399.1286
Worker	0.1212	0.1706	1.7943	5.7200e-003	0.5030	3.4100e-003	0.5064	0.1334	3.1700e-003	0.1366		406.4505	406.4505	0.0192		406.8539
Total	**0.2590**	**1.3627**	**3.7498**	**9.9800e-003**	**0.6286**	**0.0249**	**0.6535**	**0.1693**	**0.0229**	**0.1921**		**805.5172**	**805.5172**	**0.0222**		**805.9825**

3.5 Architectural Coating - 2019

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					
Archit. Coating	44.1074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	**44.3738**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**281.9473**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0261	0.0370	0.3874	1.1400e-003	0.1006	6.9000e-004	0.1013	0.0267	6.4000e-004	0.0273		84.7607	84.7607	4.0800e-003		84.8463
Total	**0.0261**	**0.0370**	**0.3874**	**1.1400e-003**	**0.1006**	**6.9000e-004**	**0.1013**	**0.0267**	**6.4000e-004**	**0.0273**		**84.7607**	**84.7607**	**4.0800e-003**		**84.8463**

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					
Archit. Coating	44.1074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473
Total	**44.3738**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**281.9473**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0261	0.0370	0.3874	1.1400e-003	0.1006	6.9000e-004	0.1013	0.0267	6.4000e-004	0.0273		84.7607	84.7607	4.0800e-003		84.8463
Total	**0.0261**	**0.0370**	**0.3874**	**1.1400e-003**	**0.1006**	**6.9000e-004**	**0.1013**	**0.0267**	**6.4000e-004**	**0.0273**		**84.7607**	**84.7607**	**4.0800e-003**		**84.8463**

3.5 Architectural Coating - 2020

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					
Archit. Coating	44.1074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9057
Total	**44.3496**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9057**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0242	0.0341	0.3589	1.1400e-003	0.1006	6.8000e-004	0.1013	0.0267	6.3000e-004	0.0273		81.2901	81.2901	3.8400e-003		81.3708
Total	**0.0242**	**0.0341**	**0.3589**	**1.1400e-003**	**0.1006**	**6.8000e-004**	**0.1013**	**0.0267**	**6.3000e-004**	**0.0273**		**81.2901**	**81.2901**	**3.8400e-003**		**81.3708**

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					
Archit. Coating	44.1074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9057
Total	**44.3496**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9057**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0242	0.0341	0.3589	1.1400e-003	0.1006	6.8000e-004	0.1013	0.0267	6.3000e-004	0.0273		81.2901	81.2901	3.8400e-003		81.3708
Total	**0.0242**	**0.0341**	**0.3589**	**1.1400e-003**	**0.1006**	**6.8000e-004**	**0.1013**	**0.0267**	**6.3000e-004**	**0.0273**		**81.2901**	**81.2901**	**3.8400e-003**		**81.3708**

3.6 Paving - 2020

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					
Off-Road	1.1689	11.6447	12.1132	0.0187		0.6432	0.6432		0.5935	0.5935		1,778.2300	1,778.2300	0.5585		1,789.9580
Paving	0.1139					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2828**	**11.6447**	**12.1132**	**0.0187**		**0.6432**	**0.6432**		**0.5935**	**0.5935**		**1 778.2300**	**1 778.2300**	**0.5585**		**1 789.9580**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0538	0.0758	0.7975	2.5400e-003	0.2236	1.5200e-003	0.2251	0.0593	1.4100e-003	0.0607		180.6447	180.6447	8.5400e-003		180.8240
Total	**0.0538**	**0.0758**	**0.7975**	**2.5400e-003**	**0.2236**	**1.5200e-003**	**0.2251**	**0.0593**	**1.4100e-003**	**0.0607**		**180.6447**	**180.6447**	**8.5400e-003**		**180.8240**

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					
Off-Road	1.1689	11.6447	12.1132	0.0187		0.6432	0.6432		0.5935	0.5935	0.0000	1,778.2300	1,778.2300	0.5585		1,789.9580
Paving	0.1139					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2828**	**11.6447**	**12.1132**	**0.0187**		**0.6432**	**0.6432**		**0.5935**	**0.5935**	**0.0000**	**1 778.2300**	**1 778.2300**	**0.5585**		**1 789.9580**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0538	0.0758	0.7975	2.5400e-003	0.2236	1.5200e-003	0.2251	0.0593	1.4100e-003	0.0607		180.6447	180.6447	8.5400e-003		180.8240
Total	**0.0538**	**0.0758**	**0.7975**	**2.5400e-003**	**0.2236**	**1.5200e-003**	**0.2251**	**0.0593**	**1.4100e-003**	**0.0607**		**180.6447**	**180.6447**	**8.5400e-003**		**180.8240**

Planning Area 13 - Construction (LST analysis)

San Bernardino-South Coast County Summer

1.0 Pro ect Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	34.50	1000sqft	1.20	34,500.00	0
General Light Industry	3.83	1000sqft	0.50	3,833.00	0
Other Asphalt Surfaces	0.50	Acre	0.50	21,780.00	0

1.2 Other Pro ect Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate one	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Planning Area 13; 2.2 acres.

Construction Phase - Site Preparation (1/1/19-1/15/19); Grading (1/16/19-2/26/19); Building Construction (2/27/19-12/31/19); Paving (11/16/19-11/29/19); Architectural Coating (11/1/19-12/31/19).

Grading -

Construction Off-road Equipment Mitigation - Use of Water/Soil Stabilizers on unpaved roads and exposed areas; Limit vehicle speeds to 15 mph on unpaved roads.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	43.00

tblConstructionPhase	NumDays	6.00	30.00
tblConstructionPhase	NumDays	3.00	11.00
tblConstructionPhase	PhaseEndDate	2/28/2020	12/31/2019
tblConstructionPhase	PhaseEndDate	1/14/2020	11/29/2019
tblConstructionPhase	PhaseStartDate	1/1/2020	11/1/2019
tblConstructionPhase	PhaseStartDate	1/1/2020	11/16/2019
tblLandUse	LotAcreage	0.79	1.20
tblLandUse	LotAcreage	0.09	0.50
tblProjectCharacteristics	OperationalYear	2014	2020

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					
2019	36.7701	33.8565	31.6887	0.0533	6.6641	1.9506	7.8701	3.3971	1.8480	4.5067	0.0000	4,933.4328	4,933.4328	1.0550	0.0000	4,955.5887
Total	**36.7701**	**33.8565**	**31.6887**	**0.0533**	**6.6641**	**1.9506**	**7.8701**	**3.3971**	**1.8480**	**4.5067**	**0.0000**	**4 933.4328**	**4 933.4328**	**1.0550**	**0.0000**	**4 955.5887**

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					
2019	36.7701	33.8565	31.6887	0.0533	2.6672	1.9506	3.8732	1.3430	1.8480	2.4525	0.0000	4,933.4328	4,933.4328	1.0550	0.0000	4,955.5887
Total	**36.7701**	**33.8565**	**31.6887**	**0.0533**	**2.6672**	**1.9506**	**3.8732**	**1.3430**	**1.8480**	**2.4525**	**0.0000**	**4 933.4328**	**4 933.4328**	**1.0550**	**0.0000**	**4 955.5887**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**59.98**	**0.00**	**50.79**	**60.47**	**0.00**	**45.58**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2019	1/15/2019	5	11	
2	Grading	Grading	1/16/2019	2/26/2019	5	30	
3	Building Construction	Building Construction	2/27/2019	12/31/2019	5	220	
4	Architectural Coating	Architectural Coating	11/1/2019	12/31/2019	5	43	
5	Paving	Paving	11/16/2019	11/29/2019	5	10	

Acres of Grading (Site Preparation Phase): 16.5

Acres of Grading (Grading Phase): 15

Residential Indoor: 0 Residential Outdoor: 0 Non-Residential Indoor: 90 170 Non-Residential Outdoor: 30 057 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Site Preparation	Graders	1	8.00	174	0.41
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	1	8.00	130	0.36
Site Preparation	Scrapers	1	8.00	361	0.48
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	22.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2019

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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	2.0176	22.3143	14.5444	0.0238		1.0577	1.0577		0.9731	0.9731		2,359.7169	2,359.7169	0.7466		2,375.3953
Total	**2.0176**	**22.3143**	**14.5444**	**0.0238**	**1.5908**	**1.0577**	**2.6484**	**0.1718**	**0.9731**	**1.1448**		**2 359.7169**	**2 359.7169**	**0.7466**		**2 375.3953**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0249	0.0309	0.4058	1.1200e-003	0.0894	6.1000e-004	0.0900	0.0237	5.6000e-004	0.0243		82.7339	82.7339	3.6200e-003		82.8099
Total	**0.0249**	**0.0309**	**0.4058**	**1.1200e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.6000e-004**	**0.0243**		**82.7339**	**82.7339**	**3.6200e-003**		**82.8099**

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					0.6204	0.0000	0.6204	0.0670	0.0000	0.0670			0.0000			0.0000
Off-Road	2.0176	22.3143	14.5444	0.0238		1.0577	1.0577		0.9731	0.9731	0.0000	2,359.7169	2,359.7169	0.7466		2,375.3953
Total	**2.0176**	**22.3143**	**14.5444**	**0.0238**	**0.6204**	**1.0577**	**1.6781**	**0.0670**	**0.9731**	**1.0400**	**0.0000**	**2 359.7169**	**2 359.7169**	**0.7466**		**2 375.3953**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0249	0.0309	0.4058	1.1200e-003	0.0894	6.1000e-004	0.0900	0.0237	5.6000e-004	0.0243		82.7339	82.7339	3.6200e-003		82.8099
Total	**0.0249**	**0.0309**	**0.4058**	**1.1200e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.6000e-004**	**0.0243**		**82.7339**	**82.7339**	**3.6200e-003**		**82.8099**

3.3 Grading - 2019

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.2026	22.7085	17.1623	0.0205		1.2052	1.2052		1.1088	1.1088		2,035.7070	2,035.7070	0.6441		2,049.2326
Total	**2.2026**	**22.7085**	**17.1623**	**0.0205**	**6.5523**	**1.2052**	**7.7576**	**3.3675**	**1.1088**	**4.4763**		**2 035.7070**	**2 035.7070**	**0.6441**		**2 049.2326**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0311	0.0386	0.5073	1.4000e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		103.4173	103.4173	4.5300e-003		103.5124
Total	**0.0311**	**0.0386**	**0.5073**	**1.4000e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**103.4173**	**103.4173**	**4.5300e-003**		**103.5124**

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					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	2.2026	22.7085	17.1623	0.0205		1.2052	1.2052		1.1088	1.1088	0.0000	2,035.7070	2,035.7070	0.6441		2,049.2326
Total	**2.2026**	**22.7085**	**17.1623**	**0.0205**	**2.5554**	**1.2052**	**3.7607**	**1.3133**	**1.1088**	**2.4221**	**0.0000**	**2 035.7070**	**2 035.7070**	**0.6441**		**2 049.2326**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0311	0.0386	0.5073	1.4000e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		103.4173	103.4173	4.5300e-003		103.5124
Total	**0.0311**	**0.0386**	**0.5073**	**1.4000e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**103.4173**	**103.4173**	**4.5300e-003**		**103.5124**

3.4 Building Construction - 2019

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					
Off-Road	2.5471	18.7802	15.2049	0.0249		1.0846	1.0846		1.0399	1.0399		2,299.7816	2,299.7816	0.4771		2,309.8005
Total	**2.5471**	**18.7802**	**15.2049**	**0.0249**		**1.0846**	**1.0846**		**1.0399**	**1.0399**		**2 299.7816**	**2 299.7816**	**0.4771**		**2 309.8005**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0687	0.6687	0.8618	2.1500e-003	0.0628	0.0116	0.0745	0.0179	0.0107	0.0286		205.9637	205.9637	1.4600e-003		205.9943
Worker	0.0684	0.0848	1.1160	3.0700e-003	0.2459	1.6700e-003	0.2476	0.0652	1.5500e-003	0.0668		227.5181	227.5181	9.9600e-003		227.7273
Total	**0.1370**	**0.7535**	**1.9778**	**5.2200e-003**	**0.3087**	**0.0133**	**0.3220**	**0.0832**	**0.0123**	**0.0954**		**433.4818**	**433.4818**	**0.0114**		**433.7216**

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					
Off-Road	2.5471	18.7802	15.2049	0.0249		1.0846	1.0846		1.0399	1.0399	0.0000	2,299.7816	2,299.7816	0.4771		2,309.8005
Total	**2.5471**	**18.7802**	**15.2049**	**0.0249**		**1.0846**	**1.0846**		**1.0399**	**1.0399**	**0.0000**	**2 299.7816**	**2 299.7816**	**0.4771**		**2 309.8005**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0687	0.6687	0.8618	2.1500e-003	0.0628	0.0116	0.0745	0.0179	0.0107	0.0286		205.9637	205.9637	1.4600e-003		205.9943
Worker	0.0684	0.0848	1.1160	3.0700e-003	0.2459	1.6700e-003	0.2476	0.0652	1.5500e-003	0.0668		227.5181	227.5181	9.9600e-003		227.7273
Total	**0.1370**	**0.7535**	**1.9778**	**5.2200e-003**	**0.3087**	**0.0133**	**0.3220**	**0.0832**	**0.0123**	**0.0954**		**433.4818**	**433.4818**	**0.0114**		**433.7216**

3.5 Architectural Coating - 2019

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					
Archit. Coating	32.3984					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	**32.6648**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**281.9473**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0124	0.0154	0.2029	5.6000e-004	0.0447	3.0000e-004	0.0450	0.0119	2.8000e-004	0.0121		41.3669	41.3669	1.8100e-003		41.4050
Total	**0.0124**	**0.0154**	**0.2029**	**5.6000e-004**	**0.0447**	**3.0000e-004**	**0.0450**	**0.0119**	**2.8000e-004**	**0.0121**		**41.3669**	**41.3669**	**1.8100e-003**		**41.4050**

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					
Archit. Coating	32.3984					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473
Total	**32.6648**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**281.9473**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0124	0.0154	0.2029	5.6000e-004	0.0447	3.0000e-004	0.0450	0.0119	2.8000e-004	0.0121		41.3669	41.3669	1.8100e-003		41.4050
Total	**0.0124**	**0.0154**	**0.2029**	**5.6000e-004**	**0.0447**	**3.0000e-004**	**0.0450**	**0.0119**	**2.8000e-004**	**0.0121**		**41.3669**	**41.3669**	**1.8100e-003**		**41.4050**

3.6 Paving - 2019

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					
Off-Road	1.2310	12.4141	11.7009	0.0176		0.7225	0.7225		0.6658	0.6658		1,722.2285	1,722.2285	0.5342		1,733.4458
Paving	0.1310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3620**	**12.4141**	**11.7009**	**0.0176**		**0.7225**	**0.7225**		**0.6658**	**0.6658**		**1 722.2285**	**1 722.2285**	**0.5342**		**1 733.4458**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0466	0.0578	0.7609	2.1000e-003	0.1677	1.1400e-003	0.1688	0.0445	1.0600e-003	0.0455		155.1260	155.1260	6.7900e-003		155.2686
Total	**0.0466**	**0.0578**	**0.7609**	**2.1000e-003**	**0.1677**	**1.1400e-003**	**0.1688**	**0.0445**	**1.0600e-003**	**0.0455**		**155.1260**	**155.1260**	**6.7900e-003**		**155.2686**

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					
Off-Road	1.2310	12.4141	11.7009	0.0176		0.7225	0.7225		0.6658	0.6658	0.0000	1,722.2285	1,722.2285	0.5342		1,733.4458
Paving	0.1310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3620**	**12.4141**	**11.7009**	**0.0176**		**0.7225**	**0.7225**		**0.6658**	**0.6658**	**0.0000**	**1 722.2285**	**1 722.2285**	**0.5342**		**1 733.4458**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0466	0.0578	0.7609	2.1000e-003	0.1677	1.1400e-003	0.1688	0.0445	1.0600e-003	0.0455		155.1260	155.1260	6.7900e-003		155.2686
Total	**0.0466**	**0.0578**	**0.7609**	**2.1000e-003**	**0.1677**	**1.1400e-003**	**0.1688**	**0.0445**	**1.0600e-003**	**0.0455**		**155.1260**	**155.1260**	**6.7900e-003**		**155.2686**

Planning Area 13 - Construction (LST analysis)

San Bernardino-South Coast County Winter

1.0 Pro ect Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	34.50	1000sqft	1.20	34,500.00	0
General Light Industry	3.83	1000sqft	0.50	3,833.00	0
Other Asphalt Surfaces	0.50	Acre	0.50	21,780.00	0

1.2 Other Pro ect Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate one	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Planning Area 13; 2.2 acres.

Construction Phase - Site Preparation (1/1/19-1/15/19); Grading (1/16/19-2/26/19); Building Construction (2/27/19-12/31/19); Paving (11/16/19-11/29/19); Architectural Coating (11/1/19-12/31/19).

Grading -

Construction Off-road Equipment Mitigation - Use of Water/Soil Stabilizers on unpaved roads and exposed areas; Limit vehicle speeds to 15 mph on unpaved roads.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	43.00

tblConstructionPhase	NumDays	6.00	30.00
tblConstructionPhase	NumDays	3.00	11.00
tblConstructionPhase	PhaseEndDate	2/28/2020	12/31/2019
tblConstructionPhase	PhaseEndDate	1/14/2020	11/29/2019
tblConstructionPhase	PhaseStartDate	1/1/2020	11/1/2019
tblConstructionPhase	PhaseStartDate	1/1/2020	11/16/2019
tblLandUse	LotAcreage	0.79	1.20
tblLandUse	LotAcreage	0.09	0.50
tblProjectCharacteristics	OperationalYear	2014	2020

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					
2019	36.7656	33.8836	31.5201	0.0528	6.6641	1.9507	7.8701	3.3971	1.8481	4.5067	0.0000	4,893.8038	4,893.8038	1.0551	0.0000	4,915.9607
Total	**36.7656**	**33.8836**	**31.5201**	**0.0528**	**6.6641**	**1.9507**	**7.8701**	**3.3971**	**1.8481**	**4.5067**	**0.0000**	**4 893.8038**	**4 893.8038**	**1.0551**	**0.0000**	**4 915.9607**

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					
2019	36.7656	33.8836	31.5201	0.0528	2.6672	1.9507	3.8732	1.3430	1.8481	2.4525	0.0000	4,893.8038	4,893.8038	1.0551	0.0000	4,915.9607
Total	**36.7656**	**33.8836**	**31.5201**	**0.0528**	**2.6672**	**1.9507**	**3.8732**	**1.3430**	**1.8481**	**2.4525**	**0.0000**	**4 893.8038**	**4 893.8038**	**1.0551**	**0.0000**	**4 915.9607**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**59.98**	**0.00**	**50.79**	**60.47**	**0.00**	**45.58**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2019	1/15/2019	5	11	
2	Grading	Grading	1/16/2019	2/26/2019	5	30	
3	Building Construction	Building Construction	2/27/2019	12/31/2019	5	220	
4	Architectural Coating	Architectural Coating	11/1/2019	12/31/2019	5	43	
5	Paving	Paving	11/16/2019	11/29/2019	5	10	

Acres of Grading (Site Preparation Phase): 16.5

Acres of Grading (Grading Phase): 15

Residential Indoor: 0 Residential Outdoor: 0 Non-Residential Indoor: 90 170 Non-Residential Outdoor: 30 057 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Site Preparation	Graders	1	8.00	174	0.41
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	1	8.00	130	0.36
Site Preparation	Scrapers	1	8.00	361	0.48
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	22.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2019

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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	2.0176	22.3143	14.5444	0.0238		1.0577	1.0577		0.9731	0.9731		2,359.7169	2,359.7169	0.7466		2,375.3953
Total	**2.0176**	**22.3143**	**14.5444**	**0.0238**	**1.5908**	**1.0577**	**2.6484**	**0.1718**	**0.9731**	**1.1448**		**2 359.7169**	**2 359.7169**	**0.7466**		**2 375.3953**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0232	0.0329	0.3444	1.0200e-003	0.0894	6.1000e-004	0.0900	0.0237	5.6000e-004	0.0243		75.3429	75.3429	3.6200e-003		75.4189
Total	**0.0232**	**0.0329**	**0.3444**	**1.0200e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.6000e-004**	**0.0243**		**75.3429**	**75.3429**	**3.6200e-003**		**75.4189**

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					0.6204	0.0000	0.6204	0.0670	0.0000	0.0670			0.0000			0.0000
Off-Road	2.0176	22.3143	14.5444	0.0238		1.0577	1.0577		0.9731	0.9731	0.0000	2,359.7169	2,359.7169	0.7466		2,375.3953
Total	**2.0176**	**22.3143**	**14.5444**	**0.0238**	**0.6204**	**1.0577**	**1.6781**	**0.0670**	**0.9731**	**1.0400**	**0.0000**	**2 359.7169**	**2 359.7169**	**0.7466**		**2 375.3953**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0232	0.0329	0.3444	1.0200e-003	0.0894	6.1000e-004	0.0900	0.0237	5.6000e-004	0.0243		75.3429	75.3429	3.6200e-003		75.4189
Total	**0.0232**	**0.0329**	**0.3444**	**1.0200e-003**	**0.0894**	**6.1000e-004**	**0.0900**	**0.0237**	**5.6000e-004**	**0.0243**		**75.3429**	**75.3429**	**3.6200e-003**		**75.4189**

3.3 Grading - 2019

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.2026	22.7085	17.1623	0.0205		1.2052	1.2052		1.1088	1.1088		2,035.7070	2,035.7070	0.6441		2,049.2326
Total	**2.2026**	**22.7085**	**17.1623**	**0.0205**	**6.5523**	**1.2052**	**7.7576**	**3.3675**	**1.1088**	**4.4763**		**2 035.7070**	**2 035.7070**	**0.6441**		**2 049.2326**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0290	0.0411	0.4304	1.2700e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		94.1786	94.1786	4.5300e-003		94.2737
Total	**0.0290**	**0.0411**	**0.4304**	**1.2700e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**94.1786**	**94.1786**	**4.5300e-003**		**94.2737**

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					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	2.2026	22.7085	17.1623	0.0205		1.2052	1.2052		1.1088	1.1088	0.0000	2,035.7070	2,035.7070	0.6441		2,049.2326
Total	**2.2026**	**22.7085**	**17.1623**	**0.0205**	**2.5554**	**1.2052**	**3.7607**	**1.3133**	**1.1088**	**2.4221**	**0.0000**	**2 035.7070**	**2 035.7070**	**0.6441**		**2 049.2326**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0290	0.0411	0.4304	1.2700e-003	0.1118	7.6000e-004	0.1125	0.0296	7.1000e-004	0.0304		94.1786	94.1786	4.5300e-003		94.2737
Total	**0.0290**	**0.0411**	**0.4304**	**1.2700e-003**	**0.1118**	**7.6000e-004**	**0.1125**	**0.0296**	**7.1000e-004**	**0.0304**		**94.1786**	**94.1786**	**4.5300e-003**		**94.2737**

3.4 Building Construction - 2019

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					
Off-Road	2.5471	18.7802	15.2049	0.0249		1.0846	1.0846		1.0399	1.0399		2,299.7816	2,299.7816	0.4771		2,309.8005
Total	**2.5471**	**18.7802**	**15.2049**	**0.0249**		**1.0846**	**1.0846**		**1.0399**	**1.0399**		**2 299.7816**	**2 299.7816**	**0.4771**		**2 309.8005**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0729	0.6854	1.0082	2.1400e-003	0.0628	0.0117	0.0746	0.0179	0.0108	0.0287		204.2135	204.2135	1.5100e-003		204.2451
Worker	0.0637	0.0904	0.9470	2.8000e-003	0.2459	1.6700e-003	0.2476	0.0652	1.5500e-003	0.0668		207.1929	207.1929	9.9600e-003		207.4021
Total	**0.1366**	**0.7758**	**1.9552**	**4.9400e-003**	**0.3087**	**0.0134**	**0.3221**	**0.0832**	**0.0124**	**0.0955**		**411.4064**	**411.4064**	**0.0115**		**411.6472**

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					
Off-Road	2.5471	18.7802	15.2049	0.0249		1.0846	1.0846		1.0399	1.0399	0.0000	2,299.7816	2,299.7816	0.4771		2,309.8005
Total	**2.5471**	**18.7802**	**15.2049**	**0.0249**		**1.0846**	**1.0846**		**1.0399**	**1.0399**	**0.0000**	**2 299.7816**	**2 299.7816**	**0.4771**		**2 309.8005**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0729	0.6854	1.0082	2.1400e-003	0.0628	0.0117	0.0746	0.0179	0.0108	0.0287		204.2135	204.2135	1.5100e-003		204.2451
Worker	0.0637	0.0904	0.9470	2.8000e-003	0.2459	1.6700e-003	0.2476	0.0652	1.5500e-003	0.0668		207.1929	207.1929	9.9600e-003		207.4021
Total	**0.1366**	**0.7758**	**1.9552**	**4.9400e-003**	**0.3087**	**0.0134**	**0.3221**	**0.0832**	**0.0124**	**0.0955**		**411.4064**	**411.4064**	**0.0115**		**411.6472**

3.5 Architectural Coating - 2019

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					
Archit. Coating	32.3984					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	**32.6648**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**281.9473**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0116	0.0164	0.1722	5.1000e-004	0.0447	3.0000e-004	0.0450	0.0119	2.8000e-004	0.0121		37.6714	37.6714	1.8100e-003		37.7095
Total	**0.0116**	**0.0164**	**0.1722**	**5.1000e-004**	**0.0447**	**3.0000e-004**	**0.0450**	**0.0119**	**2.8000e-004**	**0.0121**		**37.6714**	**37.6714**	**1.8100e-003**		**37.7095**

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					
Archit. Coating	32.3984					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473
Total	**32.6648**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**281.9473**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0116	0.0164	0.1722	5.1000e-004	0.0447	3.0000e-004	0.0450	0.0119	2.8000e-004	0.0121		37.6714	37.6714	1.8100e-003		37.7095
Total	**0.0116**	**0.0164**	**0.1722**	**5.1000e-004**	**0.0447**	**3.0000e-004**	**0.0450**	**0.0119**	**2.8000e-004**	**0.0121**		**37.6714**	**37.6714**	**1.8100e-003**		**37.7095**

3.6 Paving - 2019

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					
Off-Road	1.2310	12.4141	11.7009	0.0176		0.7225	0.7225		0.6658	0.6658		1,722.2285	1,722.2285	0.5342		1,733.4458
Paving	0.1310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3620**	**12.4141**	**11.7009**	**0.0176**		**0.7225**	**0.7225**		**0.6658**	**0.6658**		**1 722.2285**	**1 722.2285**	**0.5342**		**1 733.4458**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0434	0.0617	0.6457	1.9100e-003	0.1677	1.1400e-003	0.1688	0.0445	1.0600e-003	0.0455		141.2679	141.2679	6.7900e-003		141.4105
Total	**0.0434**	**0.0617**	**0.6457**	**1.9100e-003**	**0.1677**	**1.1400e-003**	**0.1688**	**0.0445**	**1.0600e-003**	**0.0455**		**141.2679**	**141.2679**	**6.7900e-003**		**141.4105**

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					
Off-Road	1.2310	12.4141	11.7009	0.0176		0.7225	0.7225		0.6658	0.6658	0.0000	1,722.2285	1,722.2285	0.5342		1,733.4458
Paving	0.1310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3620**	**12.4141**	**11.7009**	**0.0176**		**0.7225**	**0.7225**		**0.6658**	**0.6658**	**0.0000**	**1 722.2285**	**1 722.2285**	**0.5342**		**1 733.4458**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0434	0.0617	0.6457	1.9100e-003	0.1677	1.1400e-003	0.1688	0.0445	1.0600e-003	0.0455		141.2679	141.2679	6.7900e-003		141.4105
Total	**0.0434**	**0.0617**	**0.6457**	**1.9100e-003**	**0.1677**	**1.1400e-003**	**0.1688**	**0.0445**	**1.0600e-003**	**0.0455**		**141.2679**	**141.2679**	**6.7900e-003**		**141.4105**

Planning Area 34 - Construction (LST analysis)

San Bernardino-South Coast County Summer

1.0 Pro ect Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	81.89	1000sqft	3.70	81,893.00	0
Other Asphalt Surfaces	1.00	Acre	1.00	43,560.00	0

1.2 Other Pro ect Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate one	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Planning Area 34; 4.7 acres

Construction Phase - Construction Phase - Site Prep (1/15/19-1/31/19), Grading (2/1/19-3/31/19), Building Construction (4/1/19-2/29/20), Paving (1/1/20-1/31/20), Architectural Coating (12/1/19-2/29/20).
Grading -

Construction Off-road Equipment Mitigation - Use of Water/Soil Stabilizers on unpaved roads and exposed areas; Limit vehicle speeds to 15 mph on unpaved roads.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	18.00	65.00
tblConstructionPhase	NumDays	230.00	240.00

tblConstructionPhase	NumDays	8.00	41.00
tblConstructionPhase	NumDays	18.00	23.00
tblConstructionPhase	NumDays	5.00	13.00
tblConstructionPhase	PhaseEndDate	5/29/2020	2/29/2020
tblConstructionPhase	PhaseEndDate	2/28/2020	2/29/2020
tblConstructionPhase	PhaseEndDate	3/29/2019	3/31/2019
tblConstructionPhase	PhaseEndDate	4/1/2020	1/31/2020
tblConstructionPhase	PhaseStartDate	3/1/2020	12/1/2019
tblConstructionPhase	PhaseStartDate	3/1/2020	1/1/2020
tblLandUse	LotAcreage	1.88	3.70
tblProjectCharacteristics	OperationalYear	2014	2020

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					
2019	47.6902	42.5740	35.7219	0.0432	18.2675	2.1518	20.4193	9.9840	1.9797	11.9637	0.0000	4,062.8745	4,062.8745	1.2347	0.0000	4,088.8033
2020	48.7441	33.9339	36.4540	0.0647	1.0708	1.8957	2.9665	0.2867	1.7773	2.0640	0.0000	5,858.0147	5,858.0147	1.2386	0.0000	5,884.0243
Total	**96.4342**	**76.5079**	**72.1759**	**0.1079**	**19.3383**	**4.0475**	**23.3858**	**10.2707**	**3.7570**	**14.0277**	**0.0000**	**9 920.8892**	**9 920.8892**	**2.4733**	**0.0000**	**9 972.8276**

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					
2019	47.6902	42.5740	35.7219	0.0432	7.2470	2.1518	9.3989	3.9263	1.9797	5.9060	0.0000	4,062.8745	4,062.8745	1.2347	0.0000	4,088.8033
2020	48.7441	33.9339	36.4540	0.0647	1.0708	1.8957	2.9665	0.2867	1.7773	2.0640	0.0000	5,858.0147	5,858.0147	1.2386	0.0000	5,884.0243
Total	**96.4342**	**76.5079**	**72.1759**	**0.1079**	**8.3179**	**4.0475**	**12.3653**	**4.2130**	**3.7570**	**7.9700**	**0.0000**	**9 920.8892**	**9 920.8892**	**2.4733**	**0.0000**	**9 972.8276**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**56.99**	**0.00**	**47.12**	**58.98**	**0.00**	**43.18**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/15/2019	1/31/2019	5	13	
2	Grading	Grading	2/1/2019	3/31/2019	5	41	
3	Building Construction	Building Construction	4/1/2019	2/29/2020	5	240	
4	Architectural Coating	Architectural Coating	12/1/2019	2/29/2020	5	65	
5	Paving	Paving	1/1/2020	1/31/2020	5	23	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 20.5

Acres of Paving: 0

Residential Indoor: 0 Residential Outdoor: 0 Non-Residential Indoor: 188 180 Non-Residential Outdoor: 62 727 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	53.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2019

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0188	42.5046	34.8088	0.0391		2.1505	2.1505		1.9784	1.9784		3,876.7233	3,876.7233	1.2266		3,902.4810
Total	**4.0188**	**42.5046**	**34.8088**	**0.0391**	**18.0663**	**2.1505**	**20.2167**	**9.9307**	**1.9784**	**11.9091**		**3 876.7233**	**3 876.7233**	**1.2266**		**3 902.4810**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0559	0.0694	0.9131	2.5200e-003	0.2012	1.3700e-003	0.2026	0.0534	1.2700e-003	0.0546		186.1512	186.1512	8.1500e-003		186.3223
Total	**0.0559**	**0.0694**	**0.9131**	**2.5200e-003**	**0.2012**	**1.3700e-003**	**0.2026**	**0.0534**	**1.2700e-003**	**0.0546**		**186.1512**	**186.1512**	**8.1500e-003**		**186.3223**

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					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	4.0188	42.5046	34.8088	0.0391		2.1505	2.1505		1.9784	1.9784	0.0000	3,876.7233	3,876.7233	1.2266		3,902.4810
Total	**4.0188**	**42.5046**	**34.8088**	**0.0391**	**7.0458**	**2.1505**	**9.1963**	**3.8730**	**1.9784**	**5.8514**	**0.0000**	**3 876.7233**	**3 876.7233**	**1.2266**		**3 902.4810**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0559	0.0694	0.9131	2.5200e-003	0.2012	1.3700e-003	0.2026	0.0534	1.2700e-003	0.0546		186.1512	186.1512	8.1500e-003		186.3223
Total	**0.0559**	**0.0694**	**0.9131**	**2.5200e-003**	**0.2012**	**1.3700e-003**	**0.2026**	**0.0534**	**1.2700e-003**	**0.0546**		**186.1512**	**186.1512**	**8.1500e-003**		**186.3223**

3.3 Grading - 2019

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.7610	28.3800	23.3864	0.0297		1.5329	1.5329		1.4103	1.4103		2,944.1998	2,944.1998	0.9315		2,963.7615
Total	**2.7610**	**28.3800**	**23.3864**	**0.0297**	**6.5523**	**1.5329**	**8.0852**	**3.3675**	**1.4103**	**4.7778**		**2 944.1998**	**2 944.1998**	**0.9315**		**2 963.7615**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0466	0.0578	0.7609	2.1000e-003	0.1677	1.1400e-003	0.1688	0.0445	1.0600e-003	0.0455		155.1260	155.1260	6.7900e-003		155.2686
Total	**0.0466**	**0.0578**	**0.7609**	**2.1000e-003**	**0.1677**	**1.1400e-003**	**0.1688**	**0.0445**	**1.0600e-003**	**0.0455**		**155.1260**	**155.1260**	**6.7900e-003**		**155.2686**

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					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	2.7610	28.3800	23.3864	0.0297		1.5329	1.5329		1.4103	1.4103	0.0000	2,944.1998	2,944.1998	0.9315		2,963.7615
Total	**2.7610**	**28.3800**	**23.3864**	**0.0297**	**2.5554**	**1.5329**	**4.0883**	**1.3133**	**1.4103**	**2.7236**	**0.0000**	**2 944.1998**	**2 944.1998**	**0.9315**		**2 963.7615**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0466	0.0578	0.7609	2.1000e-003	0.1677	1.1400e-003	0.1688	0.0445	1.0600e-003	0.0455		155.1260	155.1260	6.7900e-003		155.2686
Total	**0.0466**	**0.0578**	**0.7609**	**2.1000e-003**	**0.1677**	**1.1400e-003**	**0.1688**	**0.0445**	**1.0600e-003**	**0.0455**		**155.1260**	**155.1260**	**6.7900e-003**		**155.2686**

3.4 Building Construction - 2019

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					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**		**2 580.7618**	**2 580.7618**	**0.6279**		**2 593.9479**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1442	1.4043	1.8097	4.5200e-003	0.1319	0.0244	0.1563	0.0377	0.0225	0.0601		432.5239	432.5239	3.0600e-003		432.5881
Worker	0.1647	0.2044	2.6886	7.4100e-003	0.5924	4.0300e-003	0.5965	0.1571	3.7400e-003	0.1609		548.1118	548.1118	0.0240		548.6158
Total	**0.3089**	**1.6086**	**4.4983**	**0.0119**	**0.7243**	**0.0285**	**0.7528**	**0.1948**	**0.0262**	**0.2210**		**980.6356**	**980.6356**	**0.0271**		**981.2038**

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					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**	**0.0000**	**2 580.7618**	**2 580.7618**	**0.6279**		**2 593.9479**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1442	1.4043	1.8097	4.5200e-003	0.1319	0.0244	0.1563	0.0377	0.0225	0.0601		432.5239	432.5239	3.0600e-003		432.5881
Worker	0.1647	0.2044	2.6886	7.4100e-003	0.5924	4.0300e-003	0.5965	0.1571	3.7400e-003	0.1609		548.1118	548.1118	0.0240		548.6158
Total	**0.3089**	**1.6086**	**4.4983**	**0.0119**	**0.7243**	**0.0285**	**0.7528**	**0.1948**	**0.0262**	**0.2210**		**980.6356**	**980.6356**	**0.0271**		**981.2038**

3.4 Building Construction - 2020

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					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465		2,542.4799	2,542.4799	0.6194		2,555.4880
Total	**2.1113**	**19.0839**	**16.8084**	**0.0268**		**1.1128**	**1.1128**		**1.0465**	**1.0465**		**2 542.4799**	**2 542.4799**	**0.6194**		**2 555.4880**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1363	1.2224	1.7456	4.5100e-003	0.1319	0.0223	0.1542	0.0377	0.0206	0.0582		422.6227	422.6227	2.9900e-003		422.6855
Worker	0.1530	0.1887	2.4956	7.4100e-003	0.5924	4.0200e-003	0.5964	0.1571	3.7300e-003	0.1608		525.7310	525.7310	0.0226		526.2062
Total	**0.2893**	**1.4110**	**4.2412**	**0.0119**	**0.7243**	**0.0264**	**0.7507**	**0.1948**	**0.0243**	**0.2190**		**948.3537**	**948.3537**	**0.0256**		**948.8917**

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					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465	0.0000	2,542.4799	2,542.4799	0.6194		2,555.4880
Total	**2.1113**	**19.0839**	**16.8084**	**0.0268**		**1.1128**	**1.1128**		**1.0465**	**1.0465**	**0.0000**	**2 542.4799**	**2 542.4799**	**0.6194**		**2 555.4880**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1363	1.2224	1.7456	4.5100e-003	0.1319	0.0223	0.1542	0.0377	0.0206	0.0582		422.6227	422.6227	2.9900e-003		422.6855
Worker	0.1530	0.1887	2.4956	7.4100e-003	0.5924	4.0200e-003	0.5964	0.1571	3.7300e-003	0.1608		525.7310	525.7310	0.0226		526.2062
Total	**0.2893**	**1.4110**	**4.2412**	**0.0119**	**0.7243**	**0.0264**	**0.7507**	**0.1948**	**0.0243**	**0.2190**		**948.3537**	**948.3537**	**0.0256**		**948.8917**

3.5 Architectural Coating - 2019

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					
Archit. Coating	44.7290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	**44.9954**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**281.9473**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0342	0.0424	0.5580	1.5400e-003	0.1230	8.4000e-004	0.1238	0.0326	7.8000e-004	0.0334		113.7590	113.7590	4.9800e-003		113.8637
Total	**0.0342**	**0.0424**	**0.5580**	**1.5400e-003**	**0.1230**	**8.4000e-004**	**0.1238**	**0.0326**	**7.8000e-004**	**0.0334**		**113.7590**	**113.7590**	**4.9800e-003**		**113.8637**

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					
Archit. Coating	44.7290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473
Total	**44.9954**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**281.9473**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0342	0.0424	0.5580	1.5400e-003	0.1230	8.4000e-004	0.1238	0.0326	7.8000e-004	0.0334		113.7590	113.7590	4.9800e-003		113.8637
Total	**0.0342**	**0.0424**	**0.5580**	**1.5400e-003**	**0.1230**	**8.4000e-004**	**0.1238**	**0.0326**	**7.8000e-004**	**0.0334**		**113.7590**	**113.7590**	**4.9800e-003**		**113.8637**

3.5 Architectural Coating - 2020

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					
Archit. Coating	44.7290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9057
Total	**44.9712**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9057**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0318	0.0392	0.5180	1.5400e-003	0.1230	8.3000e-004	0.1238	0.0326	7.7000e-004	0.0334		109.1140	109.1140	4.7000e-003		109.2126
Total	**0.0318**	**0.0392**	**0.5180**	**1.5400e-003**	**0.1230**	**8.3000e-004**	**0.1238**	**0.0326**	**7.7000e-004**	**0.0334**		**109.1140**	**109.1140**	**4.7000e-003**		**109.2126**

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					
Archit. Coating	44.7290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9057
Total	**44.9712**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9057**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0318	0.0392	0.5180	1.5400e-003	0.1230	8.3000e-004	0.1238	0.0326	7.7000e-004	0.0334		109.1140	109.1140	4.7000e-003		109.2126
Total	**0.0318**	**0.0392**	**0.5180**	**1.5400e-003**	**0.1230**	**8.3000e-004**	**0.1238**	**0.0326**	**7.7000e-004**	**0.0334**		**109.1140**	**109.1140**	**4.7000e-003**		**109.2126**

3.6 Paving - 2020

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					
Off-Road	1.1689	11.6447	12.1132	0.0187		0.6432	0.6432		0.5935	0.5935		1,778.2300	1,778.2300	0.5585		1,789.9580
Paving	0.1139					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2828**	**11.6447**	**12.1132**	**0.0187**		**0.6432**	**0.6432**		**0.5935**	**0.5935**		**1 778.2300**	**1 778.2300**	**0.5585**		**1 789.9580**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0578	0.0712	0.9418	2.7900e-003	0.2236	1.5200e-003	0.2251	0.0593	1.4100e-003	0.0607		198.3891	198.3891	8.5400e-003		198.5684
Total	**0.0578**	**0.0712**	**0.9418**	**2.7900e-003**	**0.2236**	**1.5200e-003**	**0.2251**	**0.0593**	**1.4100e-003**	**0.0607**		**198.3891**	**198.3891**	**8.5400e-003**		**198.5684**

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					
Off-Road	1.1689	11.6447	12.1132	0.0187		0.6432	0.6432		0.5935	0.5935	0.0000	1,778.2300	1,778.2300	0.5585		1,789.9580
Paving	0.1139					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2828**	**11.6447**	**12.1132**	**0.0187**		**0.6432**	**0.6432**		**0.5935**	**0.5935**	**0.0000**	**1 778.2300**	**1 778.2300**	**0.5585**		**1 789.9580**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0578	0.0712	0.9418	2.7900e-003	0.2236	1.5200e-003	0.2251	0.0593	1.4100e-003	0.0607		198.3891	198.3891	8.5400e-003		198.5684
Total	**0.0578**	**0.0712**	**0.9418**	**2.7900e-003**	**0.2236**	**1.5200e-003**	**0.2251**	**0.0593**	**1.4100e-003**	**0.0607**		**198.3891**	**198.3891**	**8.5400e-003**		**198.5684**

Planning Area 34 - Construction (LST analysis)

San Bernardino-South Coast County Winter

1.0 Pro ect Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	81.89	1000sqft	3.70	81,893.00	0
Other Asphalt Surfaces	1.00	Acre	1.00	43,560.00	0

1.2 Other Pro ect Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate one	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Planning Area 34; 4.7 acres

Construction Phase - Construction Phase - Site Prep (1/15/19-1/31/19), Grading (2/1/19-3/31/19), Building Construction (4/1/19-2/29/20), Paving (1/1/20-1/31/20), Architectural Coating (12/1/19-2/29/20).
Grading -

Construction Off-road Equipment Mitigation - Use of Water/Soil Stabilizers on unpaved roads and exposed areas; Limit vehicle speeds to 15 mph on unpaved roads.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	18.00	65.00
tblConstructionPhase	NumDays	230.00	240.00

tblConstructionPhase	NumDays	8.00	41.00
tblConstructionPhase	NumDays	18.00	23.00
tblConstructionPhase	NumDays	5.00	13.00
tblConstructionPhase	PhaseEndDate	5/29/2020	2/29/2020
tblConstructionPhase	PhaseEndDate	2/28/2020	2/29/2020
tblConstructionPhase	PhaseEndDate	3/29/2019	3/31/2019
tblConstructionPhase	PhaseEndDate	4/1/2020	1/31/2020
tblConstructionPhase	PhaseStartDate	3/1/2020	12/1/2019
tblConstructionPhase	PhaseStartDate	3/1/2020	1/1/2020
tblLandUse	LotAcreage	1.88	3.70
tblProjectCharacteristics	OperationalYear	2014	2020

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					
2019	47.6855	42.5786	35.5836	0.0424	18.2675	2.1518	20.4193	9.9840	1.9797	11.9637	0.0000	4,046.2448	4,046.2448	1.2347	0.0000	4,072.1736
2020	48.7361	33.9827	36.1558	0.0636	1.0708	1.8959	2.9667	0.2867	1.7775	2.0641	0.0000	5,779.8856	5,779.8856	1.2387	0.0000	5,805.8974
Total	**96.4216**	**76.5613**	**71.7393**	**0.1060**	**19.3383**	**4.0477**	**23.3859**	**10.2707**	**3.7572**	**14.0279**	**0.0000**	**9 826.1303**	**9 826.1303**	**2.4734**	**0.0000**	**9 878.0710**

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					
2019	47.6855	42.5786	35.5836	0.0424	7.2470	2.1518	9.3989	3.9263	1.9797	5.9060	0.0000	4,046.2448	4,046.2448	1.2347	0.0000	4,072.1736
2020	48.7361	33.9827	36.1558	0.0636	1.0708	1.8959	2.9667	0.2867	1.7775	2.0641	0.0000	5,779.8856	5,779.8856	1.2387	0.0000	5,805.8974
Total	**96.4216**	**76.5613**	**71.7393**	**0.1060**	**8.3179**	**4.0477**	**12.3655**	**4.2130**	**3.7572**	**7.9701**	**0.0000**	**9 826.1303**	**9 826.1303**	**2.4734**	**0.0000**	**9 878.0709**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**56.99**	**0.00**	**47.12**	**58.98**	**0.00**	**43.18**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/15/2019	1/31/2019	5	13	
2	Grading	Grading	2/1/2019	3/31/2019	5	41	
3	Building Construction	Building Construction	4/1/2019	2/29/2020	5	240	
4	Architectural Coating	Architectural Coating	12/1/2019	2/29/2020	5	65	
5	Paving	Paving	1/1/2020	1/31/2020	5	23	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 20.5

Residential Indoor: 0 Residential Outdoor: 0 Non-Residential Indoor: 188 180 Non-Residential Outdoor: 62 727 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	53.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2019

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0188	42.5046	34.8088	0.0391		2.1505	2.1505		1.9784	1.9784		3,876.7233	3,876.7233	1.2266		3,902.4810
Total	**4.0188**	**42.5046**	**34.8088**	**0.0391**	**18.0663**	**2.1505**	**20.2167**	**9.9307**	**1.9784**	**11.9091**		**3 876.7233**	**3 876.7233**	**1.2266**		**3 902.4810**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0740	0.7748	2.2900e-003	0.2012	1.3700e-003	0.2026	0.0534	1.2700e-003	0.0546		169.5214	169.5214	8.1500e-003		169.6926
Total	**0.0521**	**0.0740**	**0.7748**	**2.2900e-003**	**0.2012**	**1.3700e-003**	**0.2026**	**0.0534**	**1.2700e-003**	**0.0546**		**169.5214**	**169.5214**	**8.1500e-003**		**169.6926**

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					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	4.0188	42.5046	34.8088	0.0391		2.1505	2.1505		1.9784	1.9784	0.0000	3,876.7233	3,876.7233	1.2266		3,902.4810
Total	**4.0188**	**42.5046**	**34.8088**	**0.0391**	**7.0458**	**2.1505**	**9.1963**	**3.8730**	**1.9784**	**5.8514**	**0.0000**	**3 876.7233**	**3 876.7233**	**1.2266**		**3 902.4810**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0740	0.7748	2.2900e-003	0.2012	1.3700e-003	0.2026	0.0534	1.2700e-003	0.0546		169.5214	169.5214	8.1500e-003		169.6926
Total	**0.0521**	**0.0740**	**0.7748**	**2.2900e-003**	**0.2012**	**1.3700e-003**	**0.2026**	**0.0534**	**1.2700e-003**	**0.0546**		**169.5214**	**169.5214**	**8.1500e-003**		**169.6926**

3.3 Grading - 2019

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.7610	28.3800	23.3864	0.0297		1.5329	1.5329		1.4103	1.4103		2,944.1998	2,944.1998	0.9315		2,963.7615
Total	**2.7610**	**28.3800**	**23.3864**	**0.0297**	**6.5523**	**1.5329**	**8.0852**	**3.3675**	**1.4103**	**4.7778**		**2 944.1998**	**2 944.1998**	**0.9315**		**2 963.7615**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0434	0.0617	0.6457	1.9100e-003	0.1677	1.1400e-003	0.1688	0.0445	1.0600e-003	0.0455		141.2679	141.2679	6.7900e-003		141.4105
Total	**0.0434**	**0.0617**	**0.6457**	**1.9100e-003**	**0.1677**	**1.1400e-003**	**0.1688**	**0.0445**	**1.0600e-003**	**0.0455**		**141.2679**	**141.2679**	**6.7900e-003**		**141.4105**

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					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	2.7610	28.3800	23.3864	0.0297		1.5329	1.5329		1.4103	1.4103	0.0000	2,944.1998	2,944.1998	0.9315		2,963.7615
Total	**2.7610**	**28.3800**	**23.3864**	**0.0297**	**2.5554**	**1.5329**	**4.0883**	**1.3133**	**1.4103**	**2.7236**	**0.0000**	**2 944.1998**	**2 944.1998**	**0.9315**		**2 963.7615**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0434	0.0617	0.6457	1.9100e-003	0.1677	1.1400e-003	0.1688	0.0445	1.0600e-003	0.0455		141.2679	141.2679	6.7900e-003		141.4105
Total	**0.0434**	**0.0617**	**0.6457**	**1.9100e-003**	**0.1677**	**1.1400e-003**	**0.1688**	**0.0445**	**1.0600e-003**	**0.0455**		**141.2679**	**141.2679**	**6.7900e-003**		**141.4105**

3.4 Building Construction - 2019

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					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**		**2 580.7618**	**2 580.7618**	**0.6279**		**2 593.9479**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1532	1.4393	2.1172	4.4800e-003	0.1319	0.0247	0.1566	0.0377	0.0227	0.0603		428.8484	428.8484	3.1600e-003		428.9148
Worker	0.1535	0.2178	2.2814	6.7400e-003	0.5924	4.0300e-003	0.5965	0.1571	3.7400e-003	0.1609		499.1465	499.1465	0.0240		499.6505
Total	**0.3066**	**1.6572**	**4.3985**	**0.0112**	**0.7243**	**0.0287**	**0.7530**	**0.1948**	**0.0264**	**0.2212**		**927.9949**	**927.9949**	**0.0272**		**928.5653**

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					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**	**0.0000**	**2 580.7618**	**2 580.7618**	**0.6279**		**2 593.9479**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1532	1.4393	2.1172	4.4800e-003	0.1319	0.0247	0.1566	0.0377	0.0227	0.0603		428.8484	428.8484	3.1600e-003		428.9148
Worker	0.1535	0.2178	2.2814	6.7400e-003	0.5924	4.0300e-003	0.5965	0.1571	3.7400e-003	0.1609		499.1465	499.1465	0.0240		499.6505
Total	**0.3066**	**1.6572**	**4.3985**	**0.0112**	**0.7243**	**0.0287**	**0.7530**	**0.1948**	**0.0264**	**0.2212**		**927.9949**	**927.9949**	**0.0272**		**928.5653**

3.4 Building Construction - 2020

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					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465		2,542.4799	2,542.4799	0.6194		2,555.4880
Total	**2.1113**	**19.0839**	**16.8084**	**0.0268**		**1.1128**	**1.1128**		**1.0465**	**1.0465**		**2 542.4799**	**2 542.4799**	**0.6194**		**2 555.4880**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1447	1.2517	2.0533	4.4800e-003	0.1319	0.0225	0.1544	0.0377	0.0207	0.0584		419.0200	419.0200	3.1000e-003		419.0850
Worker	0.1427	0.2010	2.1133	6.7400e-003	0.5924	4.0200e-003	0.5964	0.1571	3.7300e-003	0.1608		478.7084	478.7084	0.0226		479.1835
Total	**0.2874**	**1.4527**	**4.1666**	**0.0112**	**0.7243**	**0.0265**	**0.7509**	**0.1948**	**0.0244**	**0.2192**		**897.7284**	**897.7284**	**0.0257**		**898.2686**

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					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465	0.0000	2,542.4799	2,542.4799	0.6194		2,555.4880
Total	**2.1113**	**19.0839**	**16.8084**	**0.0268**		**1.1128**	**1.1128**		**1.0465**	**1.0465**	**0.0000**	**2 542.4799**	**2 542.4799**	**0.6194**		**2 555.4880**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1447	1.2517	2.0533	4.4800e-003	0.1319	0.0225	0.1544	0.0377	0.0207	0.0584		419.0200	419.0200	3.1000e-003		419.0850
Worker	0.1427	0.2010	2.1133	6.7400e-003	0.5924	4.0200e-003	0.5964	0.1571	3.7300e-003	0.1608		478.7084	478.7084	0.0226		479.1835
Total	**0.2874**	**1.4527**	**4.1666**	**0.0112**	**0.7243**	**0.0265**	**0.7509**	**0.1948**	**0.0244**	**0.2192**		**897.7284**	**897.7284**	**0.0257**		**898.2686**

3.5 Architectural Coating - 2019

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					
Archit. Coating	44.7290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	**44.9954**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**281.9473**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0319	0.0452	0.4735	1.4000e-003	0.1230	8.4000e-004	0.1238	0.0326	7.8000e-004	0.0334		103.5964	103.5964	4.9800e-003		103.7011
Total	**0.0319**	**0.0452**	**0.4735**	**1.4000e-003**	**0.1230**	**8.4000e-004**	**0.1238**	**0.0326**	**7.8000e-004**	**0.0334**		**103.5964**	**103.5964**	**4.9800e-003**		**103.7011**

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					
Archit. Coating	44.7290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473
Total	**44.9954**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**281.9473**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0319	0.0452	0.4735	1.4000e-003	0.1230	8.4000e-004	0.1238	0.0326	7.8000e-004	0.0334		103.5964	103.5964	4.9800e-003		103.7011
Total	**0.0319**	**0.0452**	**0.4735**	**1.4000e-003**	**0.1230**	**8.4000e-004**	**0.1238**	**0.0326**	**7.8000e-004**	**0.0334**		**103.5964**	**103.5964**	**4.9800e-003**		**103.7011**

3.5 Architectural Coating - 2020

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					
Archit. Coating	44.7290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9057
Total	**44.9712**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9057**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0296	0.0417	0.4386	1.4000e-003	0.1230	8.3000e-004	0.1238	0.0326	7.7000e-004	0.0334		99.3546	99.3546	4.7000e-003		99.4532
Total	**0.0296**	**0.0417**	**0.4386**	**1.4000e-003**	**0.1230**	**8.3000e-004**	**0.1238**	**0.0326**	**7.7000e-004**	**0.0334**		**99.3546**	**99.3546**	**4.7000e-003**		**99.4532**

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					
Archit. Coating	44.7290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9057
Total	**44.9712**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9057**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0296	0.0417	0.4386	1.4000e-003	0.1230	8.3000e-004	0.1238	0.0326	7.7000e-004	0.0334		99.3546	99.3546	4.7000e-003		99.4532
Total	**0.0296**	**0.0417**	**0.4386**	**1.4000e-003**	**0.1230**	**8.3000e-004**	**0.1238**	**0.0326**	**7.7000e-004**	**0.0334**		**99.3546**	**99.3546**	**4.7000e-003**		**99.4532**

3.6 Paving - 2020

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					
Off-Road	1.1689	11.6447	12.1132	0.0187		0.6432	0.6432		0.5935	0.5935		1,778.2300	1,778.2300	0.5585		1,789.9580
Paving	0.1139					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2828**	**11.6447**	**12.1132**	**0.0187**		**0.6432**	**0.6432**		**0.5935**	**0.5935**		**1 778.2300**	**1 778.2300**	**0.5585**		**1 789.9580**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0538	0.0758	0.7975	2.5400e-003	0.2236	1.5200e-003	0.2251	0.0593	1.4100e-003	0.0607		180.6447	180.6447	8.5400e-003		180.8240
Total	**0.0538**	**0.0758**	**0.7975**	**2.5400e-003**	**0.2236**	**1.5200e-003**	**0.2251**	**0.0593**	**1.4100e-003**	**0.0607**		**180.6447**	**180.6447**	**8.5400e-003**		**180.8240**

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					
Off-Road	1.1689	11.6447	12.1132	0.0187		0.6432	0.6432		0.5935	0.5935	0.0000	1,778.2300	1,778.2300	0.5585		1,789.9580
Paving	0.1139					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2828**	**11.6447**	**12.1132**	**0.0187**		**0.6432**	**0.6432**		**0.5935**	**0.5935**	**0.0000**	**1 778.2300**	**1 778.2300**	**0.5585**		**1 789.9580**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0538	0.0758	0.7975	2.5400e-003	0.2236	1.5200e-003	0.2251	0.0593	1.4100e-003	0.0607		180.6447	180.6447	8.5400e-003		180.8240
Total	**0.0538**	**0.0758**	**0.7975**	**2.5400e-003**	**0.2236**	**1.5200e-003**	**0.2251**	**0.0593**	**1.4100e-003**	**0.0607**		**180.6447**	**180.6447**	**8.5400e-003**		**180.8240**

Title V - SIP Approved Rules
SIP-Approved Rules That Are Not The Most Current SCAQMD Rules
This information is intended for use by any facility applying for a Title V permit or in possession of a Title V permit that contains references to two different version of the same SCAQMD rule. http://www.aqmd.gov/titlev/siprules.html

(Adopted May 7, 1976)(Amended November 6, 1992)
(Amended July 9, 1993)(Amended February 14, 1997)
(Amended December 11, 1998)

RULE 403. FUGITIVE DUST

(a) Purpose

The purpose of this rule is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.

(b) Applicability

The provisions of this rule shall apply to any activity or man-made condition capable of generating fugitive dust.

(c) Definitions

(1) ACTIVE OPERATIONS shall mean any activity capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, or heavy- and light-duty vehicular movement.

(2) ANEMOMETERS are devices used to measure wind speed and direction in accordance with the performance standards, and maintenance and calibration criteria as contained in the most recent Rule 403 Implementation Handbook, now or hereafter adopted by the Governing Board.

(3) BEST AVAILABLE CONTROL MEASURES represent fugitive dust control actions which are required to be implemented within the boundaries of the South Coast Air Basin. A detailed listing of best available control measures for each fugitive dust source type shall be as contained in the most recent Rule 403 Implementation Handbook, now or hereafter adopted by the Governing Board.

(4) BULK MATERIAL is sand, gravel, soil, aggregate material less than two inches in length or diameter, and other organic or inorganic particulate matter.

(5) CHEMICAL STABILIZERS mean any non-toxic chemical dust suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the U.S. Environmental Protection Agency (U.S. EPA), or any applicable law,

rule or regulation; and should meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic chemical stabilizer shall be of sufficient concentration and application frequency to maintain a stabilized surface.

(6) CONSTRUCTION/DEMOLITION ACTIVITIES are any on-site mechanical activities preparatory to or related to the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities; grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.

(7) CONTINGENCY NOTIFICATION means that the U.S. EPA has determined and notified the District in writing that PM_{10} contingency requirements must be implemented based on a finding that: (1) PM_{10} and PM_{10} precursor emissions reductions were less than required at any three-year milestone reporting interval, or (2) the region failed to attain the PM_{10} standards within the time frames allotted under the Federal Clean Air Act, or (3) if as part of an Attainment/Maintenance Plan, the region is no longer in attainment of the PM_{10} standards.

(8) CONTRACTOR means any person who has a contractual arrangement to conduct an active operation for another person.

(9) DISTURBED SURFACE AREA means a portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of fugitive dust. This definition excludes those areas which have:

(A) been restored to a natural state, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby natural conditions;

(B) been paved or otherwise covered by a permanent structure; or

(C) sustained a vegetative ground cover over at least 95 percent of an area for a period of at least 6 months.

(10) DUST SUPPRESSANTS are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive dust emissions.

(11) EARTH-MOVING ACTIVITIES shall include, but not be limited to, grading, earth cutting and filling operations, loading or unloading of dirt

or bulk materials, adding to or removing from open storage piles of bulk materials, landfill operations, or soil mulching.

(12) FUGITIVE DUST means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of man.

(13) INACTIVE DISTURBED SURFACE AREA means any disturbed surface area upon which active operations have not occurred or are not expected to occur for a period of ten consecutive days.

(14) LARGE OPERATIONS means any active operations on property which contains in excess of 100 acres of disturbed surface area; or any earth-moving operation which exceeds a daily earth-moving or throughput volume of 7,700 cubic meters (10,000 cubic yards) three times during the most recent 365-day period.

(15) MEDIUM OPERATIONS means any active operations on property which contains between 50 and 100 acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of between 3,850 cubic meters (5,000 cubic yards) and 7,700 cubic meters (10,000 cubic yards) three times during the most recent 365-day period.

(16) NON-ROUTINE means any non-periodic active operation which occurs no more than three times per year, lasts less than 30 cumulative days per year, and is scheduled less than 30 days in advance.

(17) OPEN STORAGE PILE is any accumulation of bulk material with 5 percent or greater silt content which is not fully enclosed, covered or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 or more square feet. Silt content level is assumed to be 5 percent or greater unless a person can show, by sampling and analysis in accordance with ASTM Method C-136 or other equivalent method approved in writing by the Executive Officer, the California Air Resources Board, and the U. S. EPA, that the silt content is less than 5 percent. The results of ASTM Method C-136 or equivalent method are valid for 60 days from the date the sample was taken.

(18) PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

(19) PAVED ROAD means an improved street, highway, alley, public way, or easement that is covered by typical roadway materials excluding access

roadways that connect a facility with a public paved roadway and are not open to through traffic. Public paved roads are those open to public access and that are owned by any federal, state, county, municipal or any other governmental or quasi-governmental agencies. Private paved roads are any paved roads not defined as public.

(20) PM_{10} is particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable State and Federal reference test methods.

(21) PROPERTY LINE means the boundaries of an area in which either a person causing the emission or a person allowing the emission has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the property line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.

(22) REASONABLY AVAILABLE CONTROL MEASURES are appropriate techniques and procedures used to prevent or reduce the emission and airborne transport of fugitive dust, outside the boundaries of the South Coast Air Basin. These include, but are not limited to, application of dust suppressants, use of coverings or enclosures, paving, enshrouding, planting, reduction of vehicle speeds, and other measures as specified by the Executive Officer. A detailed listing of reasonably available control measures for each fugitive dust source type shall be as contained in the most recent Rule 403 Implementation Handbook, now or hereafter adopted by the Governing Board.

(23) SILT means any aggregate material with a particle size less than 74 micrometers in diameter which passes through a No. 200 Sieve.

(24) SIMULTANEOUS SAMPLING means the operation of two PM_{10} samplers in such a manner that one sampler is started within five minutes of the other, and each sampler is operated for a consecutive period which must be not less than 290 minutes and not more than 310 minutes.

(25) SOUTH COAST AIR BASIN means the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange County as defined in California Code of Regulations, Title 17, Section 60104. The area is bounded on the west by the Pacific Ocean, on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains, and on the south by the San Diego county line.

(26) STABILIZED SURFACE means:

(A) any disturbed surface area or open storage pile which is resistant to wind-driven fugitive dust;

(B) any unpaved road surface in which any fugitive dust plume emanating from vehicular traffic does not exceed 20 percent opacity.

(27) UNPAVED ROADS are any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by one of the following: concrete, asphaltic concrete, recycled asphalt, asphalt or other materials with equivalent performance as determined by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Public unpaved roads are any unpaved roadway owned by Federal, State, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public.

(28) VISIBLE ROADWAY DUST means any sand, soil, dirt, or other solid particulate matter which is visible upon paved road surfaces and which can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(29) WIND-DRIVEN FUGITIVE DUST means visible emissions from any disturbed surface area which is generated by wind action alone.

(30) WIND GUST is the maximum instantaneous wind speed as measured by an anemometer.

(d) Requirements

(1) A person shall not cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that the presence of such dust remains visible in the atmosphere beyond the property line of the emission source.

(2) A person conducting active operations within the boundaries of the South Coast Air Basin shall utilize one or more of the applicable best available control measures to minimize fugitive dust emissions from each fugitive dust source type which is part of the active operation.

(3) A person conducting active operations outside the boundaries of the South Coast Air Basin may utilize reasonably available control measures in lieu of best available control measures to minimize fugitive dust emissions from each fugitive dust source type which is part of the active operation.

(4) A person shall not cause or allow PM_{10} levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent method for PM_{10} monitoring. If sampling is conducted, samplers shall be:

(A) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent method(s) for PM_{10}.

(B) Reasonably placed upwind and downwind of key activity areas and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized.

(5) Any person in the South Coast Air Basin shall:

(A) prevent or remove within one hour the track-out of bulk material onto public paved roadways as a result of their operations; or

(B) take at least one of the actions listed in Table 3 and:

(i) prevent the track-out of bulk material onto public paved roadways as a result of their operations and remove such material at anytime track-out extends for a cumulative distance of greater than 50 feet on to any paved public road during active operations; and

(ii) remove all visible roadway dust tracked-out upon public paved roadways as a result of active operations at the conclusion of each work day when active operations cease.

(e) Contingency Requirements

When a contingency notification has occurred, the requirements of this subdivision shall become effective in the county subject to the notification 60 days after the first publication date in newspapers of general circulation in that county. Such publication shall specify that a contingency notification has occurred, and that any person who conducts or authorizes the conducting of a medium operation shall be required to comply with the provisions of subdivision (f), in addition to the requirements of subdivision (d).

(f) Special Requirements for Large Operations, and Medium Operations Under a Contingency Notification

(1) Any person who conducts or authorizes the conducting of either a large operation which is subject to the requirements of this rule, or a medium operation under a contingency notification as set forth in subdivision (e), shall either:

(A) take the actions specified in Tables 1 and 2 for each applicable source of fugitive dust within the property lines and shall:

(i) notify the Executive Officer not more than 7 days after qualifying as a large operation or as a medium operation under a contingency notification;

(ii) include, as part of the notification, the items specified in subparagraphs (f)(3)(A) and (f) (3)(B);

(iii) maintain daily records to document the specific actions taken;

(iv) maintain such records for a period of not less than 6 months; and

(v) make such records available to the Executive Officer upon request; or

(B) obtain an approved fugitive dust emissions control plan (plan).

(2) Any person subject to paragraph (f)(1) who elects to obtain an approved fugitive dust emission control plan must submit the plan to the Executive Officer no later than 30 days after the activity becomes a large operation.

(3) Any plan prepared pursuant to subparagraph (f)(1)(B) shall include:

(A) The name(s), address(es), and phone number(s) of the person(s) responsible for the preparation, submittal, and implementation of the plan;

(B) A description of the operation(s), including a map depicting the location of the site;

(C) A listing of all sources of fugitive dust emissions within the property lines;

(D) A description of the required control measures as applied to each of the sources identified in subparagraph (f)(3)(C). The description must be sufficiently detailed to demonstrate that the applicable best available control measures or reasonably available

control measures will be utilized and/or installed during all periods of active operations.

(4) In the event that there are special technical (e.g., non-economic) circumstances, including safety, which prevent the use of at least one of the required control measure for any of the sources identified in subparagraph (f)(3)(C), a justification statement must be provided in lieu of the description required in subparagraph (f)(3)(D). The justification statement must explain the reason(s) why the required control measures cannot be implemented.

(5) Within 30 calendar days of the receipt of a plan submitted pursuant to subparagraph (f)(1)(B), the Executive Officer will either approve, conditionally approve, or disapprove the plan , in writing. For a plan to be approved or conditionally approved, three conditions must be satisfied:

(A) All sources of fugitive dust emissions must be identified (e.g., earth-moving, storage piles, vehicular traffic on unpaved roads, etc.).

(B) For each source identified, at least one of the required control measures must be implemented, or an acceptable justification statement pursuant to paragraph (f)(4) must be provided; and

(C) If, after implementation of the required control measures, visible dust emissions are crossing the property line(s), then high wind measures (e.g., increased watering) must be specified for immediate implementation.

(6) Conditional approval will be made if conditions are met, but the stated measures do not satisfactorily conform to the guidance contained in the applicable Rule 403 Implementation Handbook. If a plan is conditionally approved, the conditions necessary to modify the plan will be provided in writing to the person(s) identified in subparagraph (f)(3)(A). Such modifications must be incorporated into the plan within 30 days of the receipt of the notice of conditional approval, or the plan shall be disapproved. A letter to the Executive Officer stating that such modifications will be incorporated into the plan shall be deemed sufficient to result in approval of the plan.

(7) If a plan is disapproved by the Executive Officer:

(A) The reasons for disapproval shall be given to the applicant in writing.

(B) Within 7 days of the receipt of a notice of a disapproved plan, the applicant shall comply with the actions specified in Tables 1 and 2 for each applicable source of fugitive dust within the property lines.

(C) The applicant may resubmit a plan at any time after receiving a disapproval notification, but will not be relieved of complying with subparagraph (f)(7)(B) until such time as the plan has been approved.

(8) Failure to comply with any of the provisions in an approved or conditionally approved plan shall be a violation of subdivision (f).

(9) Any approved plan shall be valid for a period of one year from the date of approval or conditional approval of the plan. Plans must be resubmitted annually, at least 60 days prior to the expiration date, or the plan shall become disapproved as of the expiration date. If all fugitive dust sources and corresponding control measures or special circumstances remain identical to those identified in the previously approved plan, the resubmittal may contain a simple statement of no-change. Otherwise, a resubmittal must contain all the items specified in subparagraphs (f)(3)(A through D).

(10) Any person subject to the requirements of paragraph (f)(1) who no longer exceeds, and does not expect to exceed for a period of at least one year, the criteria for a large operation or a medium operation under a contingency notification may request a reclassification as a non-large operation not subject to subparagraph (f). To obtain this reclassification, a person must submit a request in writing to the Executive Officer specifying the conditions which have taken place to reduce the disturbed surface area and/or the earth-moving or throughput conditions to levels below the criteria for large operations. A person must further indicate that the criteria for large operations are not expected to be exceeded during the subsequent 12-month period. The Executive Officer shall either approve or disapprove the reclassification within 60 days from receipt of the reclassification request. The Executive Officer will disapprove the request if the indicated changes can not be verified to be below the criteria for large operations or a medium operation under a contingency notification. If approved, the person shall be relieved of all requirements under subdivision (f). Any person so reclassified would again be subject to the

requirements of subdivision (f) if at any time subsequent to the reclassification the criteria for large operations or a medium operation under a contingency notification are met.

(11) A person responsible for more than one operation subject to subparagraph (f) at non-contiguous sites may submit one plan covering multiple sites provided that:

(A) the contents of the plan apply similarly to all sites; and

(B) specific information is provided for each site, including, map of site location, address, description of operations, and a listing of all sources of fugitive dust emissions within the property lines.

(g) Compliance Schedule

All the newly amended provisions of this rule shall become effective upon adoption of this Rule Amendment. Pursuant to subdivision (f), any fugitive dust emission control plan which has been approved or conditionally approved prior to the date of adoption of these amendments shall remain in effect and the plan approval date and annual resubmittal date shall remain unchanged. If any changes to such plans are necessary as a result of these amendments, such changes shall not be required until the annual resubmittal date, pursuant to paragraph (f)(9).

(h) Exemptions

(1) The provisions of this rule shall not apply to:

(A) Agricultural operations outside the boundaries of the South Coast Air Basin, agricultural operations directly related to the raising of fowls or animals, and agricultural operations conducted within the boundaries of the South Coast Air Basin provided that the combined disturbed surface area within one continuous property line and not separated by a paved public road is 10 acres or less.

(B) Agricultural operations within the South Coast Air Basin, until June 30, 1999, whose combined disturbed surface area includes more than 10 acres. All provisions of this Rule shall become applicable to agricultural operations exceeding 10 acres beginning July 1, 1999, excluding those listed in (h)(1)(A), unless the person responsible for such operations voluntarily implements the conservation practices contained in the most recent Rule 403

Agricultural Handbook, now or hereafter adopted by the Governing Board. The person responsible for such operations must complete and maintain the self-monitoring form documenting sufficient conservation practices, as described in the Rule 403 Agricultural Handbook, and must make it available to the Executive Officer upon request.

(C) Any disturbed surface area less than one-half (1/2) acre on property zoned for residential uses.

(D) Active operations conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency.

(E) Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions.

(F) Any contractor subsequent to the time the contract ends, provided that such contractor implemented the required control measures during the contractual period.

(G) Any grading contractor, for a phase of active operations, subsequent to the contractual completion of that phase of earth-moving activities, provided that the required control measures have been implemented during the entire phase of earth-moving activities, through and including five days after the final grading inspection.

(H) Weed abatement operations ordered by a county agricultural commissioner or any state, county, or municipal fire department, provided that:

(i) mowing, cutting or other similar process is used which maintains weed stubble at least three inches above the soil; or

(ii) any discing or similar operation which cuts into and disturbs the soil is used and meets the following conditions:

[a] A determination is made by the issuing agency of the weed abatement order that, due to fire hazard conditions, rocks, or other physical obstructions, it is not practical to meet the conditions specified in clause (h)(1)(H)(i); and

[b] Such determination is made in writing and provided to the person conducting the weed abatement operation prior to beginning such activity; and

[c] Such written determination is provided to the Executive Officer upon request from the person conducting the weed abatement operation.

(Note: The provisions of clause (h)(1)(H)(ii) do not exempt the owner of any property from controlling fugitive dust emissions emanating from disturbed surface areas which have been created as a result of the weed abatement actions.)

(I) sandblasting operations.

(2) The provisions of paragraphs (d)(1) and (d)(4) shall not apply:

(A) When wind gusts exceed 25 miles per hour, provided that:

(i) The required control measures for high wind conditions are implemented for each applicable fugitive dust source type, as specified in Table 1, and;

(ii) Records are maintained in accordance with clauses (f)(1)(A)(iii), (f)(1)(A)(iv) and (f)(1)(A)(v); and

(iii) In the event there are technical (e.g., non-economic) reasons, including safety, why any of the required control measures in Table 1 cannot be implemented for one or more fugitive dust source categories, a person submits a "High Wind Fugitive Dust Control Plan" (HW-Plan). The HW-Plan must further provide an alternative measure of fugitive dust control, if technically feasible. Such plan will be subject to the same approval conditions as specified in subparagraphs (f)(5) and (f)(6).

(B) To unpaved roads, provided such roads:

(i) are used solely for the maintenance of wind-generating equipment; or

(ii) are unpaved public alleys as defined in Rule 1186; or

(iii) meet all of the following criteria:

(a) are less than 50 feet in width at all points along the road;

(b) are within 25 feet of the property line; and

(c) have a traffic volume less than 20 vehicle-trips per day.

(C) To any active operation, open storage pile, or disturbed surface area for which necessary fugitive dust preventive or mitigative actions are in conflict with the federal Endangered Species Act.

(D) To non-routine or emergency maintenance of flood control channels and water spreading basins.

(3) The provisions of paragraphs (d)(1), (d)(2), and (d)(4) shall not apply to:

(A) Blasting operations which have been permitted by the California Division of Industrial Safety; and

(B) Motion picture, television, and video production activities when dust emissions are required for visual effects. In order to obtain this exemption, the Executive Officer must receive notification in writing at least 72 hours in advance of any such activity and no nuisance results from such activity.

(4) The provisions of paragraph (d)(4) shall not apply if the dust control actions, as specified in Table 2, are implemented on a routine basis for each applicable fugitive dust source type. To qualify for this exemption, a person must:

(A) maintain records to document the dates of active operations, all applicable fugitive dust source types, and the actions taken consistent with Table 2;

(B) retain such records for a period of at least six months; and

(C) make such records available to the Executive Officer upon request.

(5) The provisions of paragraph (d)(5) shall not apply to earth coverings of public paved roadways where such coverings are approved by a local government agency for the protection of the roadway, and where such coverings are used as roadway crossings for haul vehicles.

(6) The provisions of subdivision (f) shall not apply to:

(A) officially-designated public parks and recreational areas, including national parks, national monuments, national forests, state parks, state recreational areas, and county regional parks;

(B) any construction and/or earth-moving activity in which the completion date is expected to be less than 60 days after the beginning date. To qualify for this exemption, a person must:

(i) notify the Executive Officer not more than 7 days after qualifying as a large operation or a medium operation under a contingency notification;

(ii) include, as part of the notification, the items specified in subparagraphs (f)(3)(A) and (f)(3)(B); and

(iii) take the actions specified in Tables 1 and 2 at such time as the construction and/or earth-moving activities extend more than 60 days after qualifying as a large operation or a medium operation under a contingency notification.

(C) any large operation or a medium operation under a contingency notification which is required to submit a dust control plan to any city or county government which has adopted a District-approved dust control ordinance. To qualify for this exemption, a person must submit a copy of the city- or county-approved dust control plan to the Executive Officer within 30 days of the effective date of this rule or within 30 days of receiving approval from the city or county government, whichever is later.

(D) any large operation or a medium operation under a contingency notification subject to Rule 1158, which has an approved dust control plan pursuant to Rule 1158, provided that all sources of fugitive dust are included in the Rule 1158 plan.

(i) Fees

(1) Any person subject to a plan submittal pursuant to subparagraph (f)(1)(B) or clause (h)(2)(A)(iii) or subparagraph (h)(1)(B) shall be assessed applicable filing and evaluation fees pursuant to Rule 306. Any person who simultaneously submits a plan pursuant to subparagraph (f)(1)(B) and clause (h)(2)(A)(iii) shall, for the purpose of this rule, be deemed to submit one plan.

(2) The submittal of an annual statement of no-change, pursuant to paragraph (f)(9), shall not be considered as an annual review, and therefore shall not be subject to annual review fees, pursuant to Rule 306.

(3) The owner/operator of any facility for which the Executive Officer conducts upwind/downwind monitoring for PM_{10} pursuant to paragraph (d)(4) shall be assessed applicable Ambient Air Analysis Fees pursuant to Rule 304.1. Applicable fees shall be waived for any facility which is

exempted from paragraph (d)(4) or meets the requirements of paragraph (d)(4).

TABLE 1

BEST [REASONABLY]* AVAILABLE CONTROL MEASURES FOR HIGH WIND CONDITIONS

FUGITIVE DUST SOURCE CATEGORY	CONTROL MEASURES	
Earth-moving	(1A)	Cease all active operations; OR
	(2A)	Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	(0B)	On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR
	(1B)	Apply chemical stabilizers prior to wind event; OR
	(2B)	Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR
	(3B)	Take the actions specified in Table 2, Item (3c); OR
	(4B)	Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	(1C)	Apply chemical stabilizers prior to wind event; OR
	(2C)	Apply water twice [once] per hour during active operation; OR
	(3C)	Stop all vehicular traffic.
Open storage piles	(1D)	Apply water twice [once] per hour; OR
	(2D)	Install temporary coverings.
Paved road track-out	(1E)	Cover all haul vehicles; OR
	(2E)	Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	(1F)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 1 may be used.

* Measures in [brackets] are reasonably available control measures and only apply to sources not within the South Coast Air Basin.

TABLE 2
DUST CONTROL ACTIONS FOR EXEMPTION FROM PARAGRAPH (d)(3)*

FUGITIVE DUST SOURCE CATEGORY		**CONTROL ACTIONS**
Earth-moving (except construction cutting and filling areas, and mining operations)	(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR
	(1a-1)	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earth-moving: Construction fill areas:	(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.

* Measures in [brackets] are reasonably available control measures and only apply to sources not within the South Coast Air Basin.

TABLE 2 (Continued) *

FUGITIVE DUST SOURCE CATEGORY		**CONTROL ACTIONS**
Unpaved Roads	(4a)	Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR
	(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR
	(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	(5a)	Apply chemical stabilizers; OR
	(5b)	Apply water to at least 80 [70] percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR
	(5c)	Install temporary coverings; OR
	(5d)	Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile.
All Categories	(6a)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

* Measures in [brackets] are reasonably available control measures and only apply to sources not within the South Coast Air Basin.

TABLE 2 (Continued) *

FUGITIVE DUST SOURCE CATEGORY		CONTROL ACTIONS
Earth-moving: Construction cut areas and mining operations:	(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	(2a/b)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 [70] percent of the unstabilized area.
Disturbed surface areas: Completed grading areas	(2c)	Apply chemical stabilizers within five working days of grading completion; OR
	(2d)	Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive disturbed surface areas	(3a)	Apply water to at least 80 [70] percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR
	(3b)	Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR
	(3c)	Establish a vegetative ground cover within 21 [30] days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR
	(3d)	Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.

* Measures in [brackets] are reasonably available control measures and only apply to sources not within the South Coast Air Basin.

TABLE 3
TRACK-OUT CONTROL OPTIONS
PARAGRAPH (d)(5)(B)

CONTROL OPTIONS

(1)	Pave or apply chemical stabilization at sufficient concentration and frequency to maintain a stabilized surface starting from the point of intersection with the public paved surface, and extending for a centerline distance of at least 100 feet and a width of at least 20 feet.
(2)	Pave from the point of intersection with the public paved road surface, and extending for a centerline distance of at least 25 feet and a width of at least 20 feet, and install a track-out control device immediately adjacent to the paved surface such that exiting vehicles do not travel on any unpaved road surface after passing through the track-out control device.
(3)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

Appendix B.2
Operational Emissions

- Operational Emissions

Westgate Specific Plan
Draft EIR
Air Quality Assessment

Unmitigated Operational Emissions (lbs/day)

Emissions Source	VOC	NOx	CO	SO2	PM10	PM2.5
Phase I						
Area	140	2	149	<1	3	3
Natural Gas	1	9	4	<1	1	1
Mobile [a]	79	239	883	3	150	42
Total	220	250	1,036	3	154	46
Significance Threshold	55	55	550	150	150	55
Over/(Under)	165	195	486	(147)	4	(9)
Exceeds Threshold?	YES	YES	YES	NO	YES	NO
Buildout						
Area	378	6	529	<1	12	11
Natural Gas	4	34	17	<1	3	3
Mobile [a]	194	491	2,315	10	655	184
Total	576	531	2,861	10	670	198
Significance Threshold	55	55	550	150	150	55
Over/(Under)	521	476	2,311	(140)	520	143
Exceeds Threshold?	YES	YES	YES	NO	YES	YES

Notes:

a. Mobile source emissions for the unmitigated project (Phase I and Buildout) include a 12.38% reduction to

Source: PCR Services Corporation, 2014; California Emissions Estimator Model, (version 2013.2.2)

Westgate Specific Plan
Draft EIR
Air Quality Assessment

Transportation Reduction Measures[a]

Code	Reduction Measure	VMT Reduction %	Explanation (assumptions in bold/underline)
	Project Features		
LUT-2	Increase Location Efficiency	10	Suburban center: 10% reduction
SDT-1	Provide Pedestrian Network Improvements	1	Extent of pedestrian accommodations within project site only
SDT-2	Provide Traffic Calming Measures	0.50	Assuming **50%** of streets and **50%** intersections
TST-3	Expand Transit Network	0.88	Assuming **100%** coverage (according to Traffic - Transportation section)
SUBTOTAL		**12.38**	

Notes:

a. Source: California Air Pollution Control Officers Association - Quantifying Greenhouse Gas Mitigation Measures, August 2010.

Fontana Westgate SP Buildout (Phase 1)

San Bernardino-South Coast County Summer

1.0 Pro ect Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	1,030.00	Student	12.00	86,111.47	0
Unrefrigerated Warehouse-No Rail	1,218.00	1000sqft	27.96	1,218,000.00	0
City Park	41.15	Acre	41.15	1,792,494.00	0
Condo/Townhouse	1,373.00	Dwelling Unit	74.90	1,373,000.00	3927
Single Family Housing	418.00	Dwelling Unit	72.00	752,400.00	1195
Strip Mall	157.24	1000sqft	3.61	157,235.00	0

1.2 Other Pro ect Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate one	10			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Draft EIR Section 2.0, Project Description

Vehicle Trips - Kunzman Associates, Inc. ,Westgate Specific Plan Traffic Impact Analysis, (2013)

Woodstoves - No Wood Burning

Water And Wastewater - Reference- Draft EIR Section 4.O.1

Solid Waste - Reference: Draft EIR 4.O.3 Solid Waste

Energy Mitigation - CEC 2013- 25% better than 2008; Exceed Title 24: 25%

Water Mitigation - Reduction Indoor: 20%; Outdoor reclaimed water use based on projected 2035 recycled water supply as a % of total supplies (FWC, WSA, Jan 2014 update).

Waste Mitigation - Waste Mitigation - Waste Diversion Rate: 50%

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	1,167.05	1,373.00
tblFireplaces	NumberGas	355.30	418.00
tblFireplaces	NumberNoFireplace	137.30	0.00
tblFireplaces	NumberNoFireplace	41.80	0.00
tblFireplaces	NumberWood	68.65	0.00
tblFireplaces	NumberWood	20.90	0.00
tblLandUse	LandUseSquareFeet	157,240.00	157,235.00
tblLandUse	LotAcreage	1.98	12.00
tblLandUse	LotAcreage	85.81	74.90
tblLandUse	LotAcreage	135.71	72.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblSolidWaste	SolidWasteGenerationRate	3.54	3.70
tblSolidWaste	SolidWasteGenerationRate	631.58	661.40
tblSolidWaste	SolidWasteGenerationRate	187.97	196.80
tblSolidWaste	SolidWasteGenerationRate	489.95	513.30
tblSolidWaste	SolidWasteGenerationRate	165.10	172.90
tblSolidWaste	SolidWasteGenerationRate	1,144.92	1,198.97
tblVehicleTrips	ST_TR	1.59	38.15
tblVehicleTrips	ST_TR	7.16	5.71
tblVehicleTrips	ST_TR	0.00	1.29
tblVehicleTrips	ST_TR	10.08	9.52
tblVehicleTrips	ST_TR	42.04	59.00
tblVehicleTrips	ST_TR	2.59	2.20

tblVehicleTrips	SU_TR	1.59	38.15
tblVehicleTrips	SU_TR	6.07	5.71
tblVehicleTrips	SU_TR	0.00	1.29
tblVehicleTrips	SU_TR	8.77	9.52
tblVehicleTrips	SU_TR	20.43	59.00
tblVehicleTrips	SU_TR	2.59	2.20
tblVehicleTrips	WD_TR	1.59	38.15
tblVehicleTrips	WD_TR	6.59	5.71
tblVehicleTrips	WD_TR	9.57	9.52
tblVehicleTrips	WD_TR	44.32	59.00
tblVehicleTrips	WD_TR	2.59	2.20
tblWater	IndoorWaterUseRate	89,456,477.18	37,759,621.00
tblWater	IndoorWaterUseRate	2,496,967.20	1,053,975.00
tblWater	IndoorWaterUseRate	27,234,382.71	11,495,665.00
tblWater	IndoorWaterUseRate	11,647,163.28	4,916,127.00
tblWater	IndoorWaterUseRate	281,662,500.00	118,890,489.00
tblWater	OutdoorWaterUseRate	49,029,457.54	20,695,382.00
tblWater	OutdoorWaterUseRate	56,396,474.74	23,805,001.00
tblWater	OutdoorWaterUseRate	6,420,772.80	2,710,215.00
tblWater	OutdoorWaterUseRate	17,169,502.14	7,247,265.00
tblWater	OutdoorWaterUseRate	7,138,583.94	3,013,114.00
tblWoodstoves	NumberCatalytic	68.65	0.00
tblWoodstoves	NumberCatalytic	20.90	0.00
tblWoodstoves	NumberNoncatalytic	68.65	0.00
tblWoodstoves	NumberNoncatalytic	20.90	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

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	139.8110	1.7297	149.2476	7.8200e-003		3.2151	3.2151		3.1898	3.1898	0.0000	38,193.6514	38,193.6514	0.9921	0.6953	38,430.0371
Energy	1.3640	11.7161	5.4039	0.0744		0.9424	0.9424		0.9424	0.9424		14,879.4418	14,879.4418	0.2852	0.2728	14,969.9956
Mobile	90.2536	261.6393	1,007.8891	2.5672	166.7794	3.7379	170.5174	44.5432	3.4431	47.9863		212,286.1429	212,286.1429	7.2911		212,439.2566
Total	**231.4285**	**275.0851**	**1 162.5405**	**2.6495**	**166.7794**	**7.8954**	**174.6748**	**44.5432**	**7.5753**	**52.1185**	**0.0000**	**265 359.2361**	**265 359.2361**	**8.5684**	**0.9681**	**265 839.2893**

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	139.8110	1.7297	149.2476	7.8200e-003		3.2151	3.2151		3.1898	3.1898	0.0000	38,193.6514	38,193.6514	0.9921	0.6953	38,430.0371
Energy	1.0730	9.2158	4.2420	0.0585		0.7414	0.7414		0.7414	0.7414		11,705.6516	11,705.6516	0.2244	0.2146	11,776.8902
Mobile	90.2536	261.6393	1,007.8891	2.5672	166.7794	3.7379	170.5174	44.5432	3.4431	47.9863		212,286.1429	212,286.1429	7.2911		212,439.2566
Total	**231.1376**	**272.5848**	**1 161.3786**	**2.6336**	**166.7794**	**7.6944**	**174.4738**	**44.5432**	**7.3743**	**51.9175**	**0.0000**	**262 185.4459**	**262 185.4459**	**8.5076**	**0.9099**	**262 646.1839**

	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	N20	CO2e
Percent Reduction	**0.13**	**0.91**	**0.10**	**0.60**	**0.00**	**2.55**	**0.12**	**0.00**	**2.65**	**0.39**	**0.00**	**1.20**	**1.20**	**0.71**	**6.01**	**1.20**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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					
Mitigated	90.2536	261.6393	1,007.8891	2.5672	166.7794	3.7379	170.5174	44.5432	3.4431	47.9863		212,286.1429	212,286.1429	7.2911		212,439.2566
Unmitigated	90.2536	261.6393	1,007.8891	2.5672	166.7794	3.7379	170.5174	44.5432	3.4431	47.9863		212,286.1429	212,286.1429	7.2911		212,439.2566

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	1,569.87	1,569.87	1569.87	4,517,371	4,517,371
Condo/Townhouse	7,839.83	7,839.83	7839.83	26,789,890	26,789,890
Elementary School	1,328.70	1,328.70	1328.70	4,579,210	4,579,210
Single Family Housing	3,979.36	3,979.36	3979.36	13,598,078	13,598,078
Strip Mall	9,277.16	9,277.16	9277.16	17,650,680	17,650,680
Unrefrigerated Warehouse-No Rail	2,679.60	2,679.60	2679.60	11,484,007	11,484,007
Total	26,674.52	26,674.52	26,674.52	78,619,237	78,619,237

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.470490	0.065594	0.173154	0.156076	0.056237	0.009050	0.016623	0.041711	0.001119	0.001337	0.004965	0.000700	0.002944

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	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					
NaturalGas Mitigated	1.0730	9.2158	4.2420	0.0585		0.7414	0.7414		0.7414	0.7414		11,705.6516	11,705.6516	0.2244	0.2146	11,776.8902
NaturalGas Unmitigated	1.3640	11.7161	5.4039	0.0744		0.9424	0.9424		0.9424	0.9424		14,879.4418	14,879.4418	0.2852	0.2728	14,969.9956

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	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
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	2153.97	0.0232	0.2112	0.1774	1.2700e-003		0.0161	0.0161		0.0161	0.0161		253.4078	253.4078	4.8600e-003	4.6500e-003	254.9500
Single Family Housing	38670.1	0.4170	3.5637	1.5165	0.0228		0.2881	0.2881		0.2881	0.2881		4,549.4190	4,549.4190	0.0872	0.0834	4,577.1060
Strip Mall	999.412	0.0108	0.0980	0.0823	5.9000e-004		7.4500e-003	7.4500e-003		7.4500e-003	7.4500e-003		117.5778	117.5778	2.2500e-003	2.1600e-003	118.2934
Unrefrigerated Warehouse-No Rail	7141.15	0.0770	0.7001	0.5881	4.2000e-003		0.0532	0.0532		0.0532	0.0532		840.1354	840.1354	0.0161	0.0154	845.2483
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	77510.7	0.8359	7.1431	3.0396	0.0456		0.5775	0.5775		0.5775	0.5775		9,118.9018	9,118.9018	0.1748	0.1672	9,174.3979
Total		**1.3640**	**11.7161**	**5.4039**	**0.0744**		**0.9424**	**0.9424**		**0.9424**	**0.9424**		**14 879.4418**	**14 879.4418**	**0.2852**	**0.2728**	**14 969.9956**

Mitigated

	NaturalGas Use	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
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	30.7061	0.3311	2.8298	1.2042	0.0181		0.2288	0.2288		0.2288	0.2288		3,612.4800	3,612.4800	0.0692	0.0662	3,634.4649
Strip Mall	0.781867	8.4300e-003	0.0767	0.0644	4.6000e-004		5.8300e-003	5.8300e-003		5.8300e-003	5.8300e-003		91.9844	91.9844	1.7600e-003	1.6900e-003	92.5442
Unrefrigerated Warehouse-No Rail	5.38089	0.0580	0.5275	0.4431	3.1700e-003		0.0401	0.0401		0.0401	0.0401		633.0459	633.0459	0.0121	0.0116	636.8985
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	60.9082	0.6569	5.6131	2.3886	0.0358		0.4538	0.4538		0.4538	0.4538		7,165.6649	7,165.6649	0.1373	0.1314	7,209.2739
Elementary School	1.72105	0.0186	0.1687	0.1417	1.0100e-003		0.0128	0.0128		0.0128	0.0128		202.4765	202.4765	3.8800e-003	3.7100e-003	203.7087
Total		**1.0730**	**9.2158**	**4.2420**	**0.0585**		**0.7414**	**0.7414**		**0.7414**	**0.7414**		**11 705.6516**	**11 705.6516**	**0.2244**	**0.2146**	**11 776.8902**

6.0 Area Detail

6.1 Mitigation Measures Area

	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					
Mitigated	139.8110	1.7297	149.2476	7.8200e-003		3.2151	3.2151		3.1898	3.1898	0.0000	38,193.6514	38,193.6514	0.9921	0.6953	38,430.0371
Unmitigated	139.8110	1.7297	149.2476	7.8200e-003		3.2151	3.2151		3.1898	3.1898	0.0000	38,193.6514	38,193.6514	0.9921	0.6953	38,430.0371

6.2 Area by SubCategory

Unmitigated

	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
SubCategory	lb/day										lb/day					
Architectural Coating	25.2141					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	106.5090					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	3.4767	1.6000e-004	0.1896	0.0000		2.4021	2.4021		2.3768	2.3768	0.0000	37,927.0588	37,927.0588	0.7269	0.6953	38,157.8766
Landscaping	4.6113	1.7295	149.0579	7.8200e-003		0.8131	0.8131		0.8131	0.8131		266.5926	266.5926	0.2651		272.1605
Total	**139.8110**	**1.7297**	**149.2476**	**7.8200e-003**		**3.2151**	**3.2151**		**3.1898**	**3.1898**	**0.0000**	**38 193.6514**	**38 193.6514**	**0.9921**	**0.6953**	**38 430.0371**

Mitigated

	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
SubCategory	lb/day										lb/day					
Architectural Coating	25.2141					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	106.5090					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	3.4767	1.6000e-004	0.1896	0.0000		2.4021	2.4021		2.3768	2.3768	0.0000	37,927.0588	37,927.0588	0.7269	0.6953	38,157.8766
Landscaping	4.6113	1.7295	149.0579	7.8200e-003		0.8131	0.8131		0.8131	0.8131		266.5926	266.5926	0.2651		272.1605
Total	**139.8110**	**1.7297**	**149.2476**	**7.8200e-003**		**3.2151**	**3.2151**		**3.1898**	**3.1898**	**0.0000**	**38 193.6514**	**38 193.6514**	**0.9921**	**0.6953**	**38 430.0371**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Reclaimed Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Fontana Westgate SP Buildout (Phase 1)

San Bernardino-South Coast County Winter

1.0 Pro ect Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	1,030.00	Student	12.00	86,111.47	0
Unrefrigerated Warehouse-No Rail	1,218.00	1000sqft	27.96	1,218,000.00	0
City Park	41.15	Acre	41.15	1,792,494.00	0
Condo/Townhouse	1,373.00	Dwelling Unit	74.90	1,373,000.00	3927
Single Family Housing	418.00	Dwelling Unit	72.00	752,400.00	1195
Strip Mall	157.24	1000sqft	3.61	157,235.00	0

1.2 Other Pro ect Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate one	10			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Draft EIR Section 2.0, Project Description

Vehicle Trips - Kunzman Associates, Inc. ,Westgate Specific Plan Traffic Impact Analysis, (2013)

Woodstoves - No Wood Burning

Water And Wastewater - Reference- Draft EIR Section 4.O.1

Solid Waste - Reference: Draft EIR 4.O.3 Solid Waste

Energy Mitigation - CEC 2013- 25% better than 2008; Exceed Title 24: 25%

Water Mitigation - Reduction Indoor: 20%; Outdoor reclaimed water use based on projected 2035 recycled water supply as a % of total supplies (FWC, WSA, Jan 2014 update).

Waste Mitigation - Waste Mitigation - Waste Diversion Rate: 50%

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	1,167.05	1,373.00
tblFireplaces	NumberGas	355.30	418.00
tblFireplaces	NumberNoFireplace	137.30	0.00
tblFireplaces	NumberNoFireplace	41.80	0.00
tblFireplaces	NumberWood	68.65	0.00
tblFireplaces	NumberWood	20.90	0.00
tblLandUse	LandUseSquareFeet	157,240.00	157,235.00
tblLandUse	LotAcreage	1.98	12.00
tblLandUse	LotAcreage	85.81	74.90
tblLandUse	LotAcreage	135.71	72.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblSolidWaste	SolidWasteGenerationRate	3.54	3.70
tblSolidWaste	SolidWasteGenerationRate	631.58	661.40
tblSolidWaste	SolidWasteGenerationRate	187.97	196.80
tblSolidWaste	SolidWasteGenerationRate	489.95	513.30
tblSolidWaste	SolidWasteGenerationRate	165.10	172.90
tblSolidWaste	SolidWasteGenerationRate	1,144.92	1,198.97
tblVehicleTrips	ST_TR	1.59	38.15
tblVehicleTrips	ST_TR	7.16	5.71
tblVehicleTrips	ST_TR	0.00	1.29
tblVehicleTrips	ST_TR	10.08	9.52
tblVehicleTrips	ST_TR	42.04	59.00

tblVehicleTrips	ST_TR	2.59	2.20
tblVehicleTrips	SU_TR	1.59	38.15
tblVehicleTrips	SU_TR	6.07	5.71
tblVehicleTrips	SU_TR	0.00	1.29
tblVehicleTrips	SU_TR	8.77	9.52
tblVehicleTrips	SU_TR	20.43	59.00
tblVehicleTrips	SU_TR	2.59	2.20
tblVehicleTrips	WD_TR	1.59	38.15
tblVehicleTrips	WD_TR	6.59	5.71
tblVehicleTrips	WD_TR	9.57	9.52
tblVehicleTrips	WD_TR	44.32	59.00
tblVehicleTrips	WD_TR	2.59	2.20
tblWater	IndoorWaterUseRate	89,456,477.18	37,759,621.00
tblWater	IndoorWaterUseRate	2,496,967.20	1,053,975.00
tblWater	IndoorWaterUseRate	27,234,382.71	11,495,665.00
tblWater	IndoorWaterUseRate	11,647,163.28	4,916,127.00
tblWater	IndoorWaterUseRate	281,662,500.00	118,890,489.00
tblWater	OutdoorWaterUseRate	49,029,457.54	20,695,382.00
tblWater	OutdoorWaterUseRate	56,396,474.74	23,805,001.00
tblWater	OutdoorWaterUseRate	6,420,772.80	2,710,215.00
tblWater	OutdoorWaterUseRate	17,169,502.14	7,247,265.00
tblWater	OutdoorWaterUseRate	7,138,583.94	3,013,114.00
tblWoodstoves	NumberCatalytic	68.65	0.00
tblWoodstoves	NumberCatalytic	20.90	0.00
tblWoodstoves	NumberNoncatalytic	68.65	0.00
tblWoodstoves	NumberNoncatalytic	20.90	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

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	139.8110	1.7297	149.2476	7.8200e-003		3.2151	3.2151		3.1898	3.1898	0.0000	38,193.6514	38,193.6514	0.9921	0.6953	38,430.0371
Energy	1.3640	11.7161	5.4039	0.0744		0.9424	0.9424		0.9424	0.9424		14,879.4418	14,879.4418	0.2852	0.2728	14,969.9956
Mobile	87.2502	272.9438	946.6530	2.3916	166.7794	3.7540	170.5334	44.5432	3.4579	48.0011		198,612.1809	198,612.1809	7.3006		198,765.4937
Total	**228.4252**	**286.3896**	**1 101.3044**	**2.4738**	**166.7794**	**7.9115**	**174.6909**	**44.5432**	**7.5901**	**52.1333**	**0.0000**	**251 685.2741**	**251 685.2741**	**8.5779**	**0.9681**	**252 165.5264**

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	139.8110	1.7297	149.2476	7.8200e-003		3.2151	3.2151		3.1898	3.1898	0.0000	38,193.6514	38,193.6514	0.9921	0.6953	38,430.0371
Energy	1.0730	9.2158	4.2420	0.0585		0.7414	0.7414		0.7414	0.7414		11,705.6516	11,705.6516	0.2244	0.2146	11,776.8902
Mobile	87.2502	272.9438	946.6530	2.3916	166.7794	3.7540	170.5334	44.5432	3.4579	48.0011		198,612.1809	198,612.1809	7.3006		198,765.4937
Total	**228.1342**	**283.8893**	**1 100.1425**	**2.4580**	**166.7794**	**7.7105**	**174.4899**	**44.5432**	**7.3891**	**51.9323**	**0.0000**	**248 511.4839**	**248 511.4839**	**8.5170**	**0.9099**	**248 972.4210**

	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	N20	CO2e
Percent Reduction	**0.13**	**0.87**	**0.11**	**0.64**	**0.00**	**2.54**	**0.12**	**0.00**	**2.65**	**0.39**	**0.00**	**1.26**	**1.26**	**0.71**	**6.01**	**1.27**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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					
Mitigated	87.2502	272.9438	946.6530	2.3916	166.7794	3.7540	170.5334	44.5432	3.4579	48.0011		198,612.1809	198,612.1809	7.3006		198,765.4937
Unmitigated	87.2502	272.9438	946.6530	2.3916	166.7794	3.7540	170.5334	44.5432	3.4579	48.0011		198,612.1809	198,612.1809	7.3006		198,765.4937

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	1,569.87	1,569.87	1569.87	4,517,371	4,517,371
Condo/Townhouse	7,839.83	7,839.83	7839.83	26,789,890	26,789,890
Elementary School	1,328.70	1,328.70	1328.70	4,579,210	4,579,210
Single Family Housing	3,979.36	3,979.36	3979.36	13,598,078	13,598,078
Strip Mall	9,277.16	9,277.16	9277.16	17,650,680	17,650,680
Unrefrigerated Warehouse-No Rail	2,679.60	2,679.60	2679.60	11,484,007	11,484,007
Total	26,674.52	26,674.52	26,674.52	78,619,237	78,619,237

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.470490	0.065594	0.173154	0.156076	0.056237	0.009050	0.016623	0.041711	0.001119	0.001337	0.004965	0.000700	0.002944

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	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					
NaturalGas Mitigated	1.0730	9.2158	4.2420	0.0585		0.7414	0.7414		0.7414	0.7414		11,705.6516	11,705.6516	0.2244	0.2146	11,776.8902
NaturalGas Unmitigated	1.3640	11.7161	5.4039	0.0744		0.9424	0.9424		0.9424	0.9424		14,879.4418	14,879.4418	0.2852	0.2728	14,969.9956

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	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
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	2153.97	0.0232	0.2112	0.1774	1.2700e-003		0.0161	0.0161		0.0161	0.0161		253.4078	253.4078	4.8600e-003	4.6500e-003	254.9500
Single Family Housing	38670.1	0.4170	3.5637	1.5165	0.0228		0.2881	0.2881		0.2881	0.2881		4,549.4190	4,549.4190	0.0872	0.0834	4,577.1060
Strip Mall	999.412	0.0108	0.0980	0.0823	5.9000e-004		7.4500e-003	7.4500e-003		7.4500e-003	7.4500e-003		117.5778	117.5778	2.2500e-003	2.1600e-003	118.2934
Unrefrigerated Warehouse-No Rail	7141.15	0.0770	0.7001	0.5881	4.2000e-003		0.0532	0.0532		0.0532	0.0532		840.1354	840.1354	0.0161	0.0154	845.2483
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	77510.7	0.8359	7.1431	3.0396	0.0456		0.5775	0.5775		0.5775	0.5775		9,118.9018	9,118.9018	0.1748	0.1672	9,174.3979
Total		**1.3640**	**11.7161**	**5.4039**	**0.0744**		**0.9424**	**0.9424**		**0.9424**	**0.9424**		**14 879.4418**	**14 879.4418**	**0.2852**	**0.2728**	**14 969.9956**

Mitigated

	NaturalGas Use	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
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	1.72105	0.0186	0.1687	0.1417	1.0100e-003		0.0128	0.0128		0.0128	0.0128		202.4765	202.4765	3.8800e-003	3.7100e-003	203.7087
Single Family Housing	30.7061	0.3311	2.8298	1.2042	0.0181		0.2288	0.2288		0.2288	0.2288		3,612.4800	3,612.4800	0.0692	0.0662	3,634.4649
Strip Mall	0.781867	8.4300e-003	0.0767	0.0644	4.6000e-004		5.8300e-003	5.8300e-003		5.8300e-003	5.8300e-003		91.9844	91.9844	1.7600e-003	1.6900e-003	92.5442
Unrefrigerated Warehouse-No Rail	5.38089	0.0580	0.5275	0.4431	3.1700e-003		0.0401	0.0401		0.0401	0.0401		633.0459	633.0459	0.0121	0.0116	636.8985
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	60.9082	0.6569	5.6131	2.3886	0.0358		0.4538	0.4538		0.4538	0.4538		7,165.6649	7,165.6649	0.1373	0.1314	7,209.2739
Total		**1.0730**	**9.2158**	**4.2420**	**0.0585**		**0.7414**	**0.7414**		**0.7414**	**0.7414**		**11 705.6516**	**11 705.6516**	**0.2244**	**0.2146**	**11 776.8902**

6.0 Area Detail

6.1 Mitigation Measures Area

	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					
Mitigated	139.8110	1.7297	149.2476	7.8200e-003		3.2151	3.2151		3.1898	3.1898	0.0000	38,193.6514	38,193.6514	0.9921	0.6953	38,430.0371
Unmitigated	139.8110	1.7297	149.2476	7.8200e-003		3.2151	3.2151		3.1898	3.1898	0.0000	38,193.6514	38,193.6514	0.9921	0.6953	38,430.0371

6.2 Area by SubCategory

Unmitigated

	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
SubCategory	lb/day										lb/day					
Architectural Coating	25.2141					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	106.5090					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	3.4767	1.6000e-004	0.1896	0.0000		2.4021	2.4021		2.3768	2.3768	0.0000	37,927.0588	37,927.0588	0.7269	0.6953	38,157.8766
Landscaping	4.6113	1.7295	149.0579	7.8200e-003		0.8131	0.8131		0.8131	0.8131		266.5926	266.5926	0.2651		272.1605
Total	**139.8110**	**1.7297**	**149.2476**	**7.8200e-003**		**3.2151**	**3.2151**		**3.1898**	**3.1898**	**0.0000**	**38 193.6514**	**38 193.6514**	**0.9921**	**0.6953**	**38 430.0371**

Mitigated

	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
SubCategory	lb/day										lb/day					
Architectural Coating	25.2141					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	106.5090					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	3.4767	1.6000e-004	0.1896	0.0000		2.4021	2.4021		2.3768	2.3768	0.0000	37,927.0588	37,927.0588	0.7269	0.6953	38,157.8766
Landscaping	4.6113	1.7295	149.0579	7.8200e-003		0.8131	0.8131		0.8131	0.8131		266.5926	266.5926	0.2651		272.1605
Total	**139.8110**	**1.7297**	**149.2476**	**7.8200e-003**		**3.2151**	**3.2151**		**3.1898**	**3.1898**	**0.0000**	**38 193.6514**	**38 193.6514**	**0.9921**	**0.6953**	**38 430.0371**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Reclaimed Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Fontana Westgate SP Buildout

San Bernardino-South Coast County Summer

1.0 Pro ect Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	2,156.00	1000sqft	49.49	2,156,000.00	0
Elementary School	1,030.00	Student	12.00	86,111.47	0
Elementary School	1,030.00	Student	12.00	86,111.47	0
High School	2,500.00	Student	60.00	331,652.44	0
General Light Industry	303.00	1000sqft	6.96	303,000.00	0
Unrefrigerated Warehouse-No Rail	1,299.00	1000sqft	29.82	1,299,000.00	0
City Park	58.35	Acre	58.35	2,541,726.00	0
Condo/Townhouse	5,530.00	Dwelling Unit	229.70	5,530,000.00	21954
Single Family Housing	880.00	Dwelling Unit	120.00	1,584,000.00	3494
Strip Mall	602.00	1000sqft	302.40	602,000.00	0

1.2 Other Pro ect Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate one	10			**Operational Year**	2035
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Population based on 3.97 persons/DU (Multi-family: 21,954; Single-family: 3,494). Land Uses from Draft EIR Section 2.0, Project Description.

Vehicle Trips - Kunzman Associates, Inc., Westgate Specific Plan Traffic Impact Analysis, (2013).

Woodstoves - No wood burning fireplaces.

Water And Wastewater - Reference: Based on factors from Draft EIR Section 4.O.1, Water Supply.

Solid Waste - Reference: Based on factors from Draft EIR, Section 4.O.3, Solid Waste.

Energy Mitigation - CEC 2013- 25% better than 2008; Exceed Title 24: 25%

Water Mitigation - Reduction Indoor: 20%; Outdoor reclaimed water use based on projected 2035 recycled water supply as a % of total supplies (FWC, WSA, Jan 2014 update).
Waste Mitigation - Waste Diversion Rate: 50%

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	3,850.50	5,530.00
tblFireplaces	NumberGas	748.00	880.00
tblFireplaces	NumberNoFireplace	453.00	0.00
tblFireplaces	NumberNoFireplace	88.00	0.00
tblFireplaces	NumberWood	226.50	0.00
tblFireplaces	NumberWood	44.00	0.00
tblLandUse	LotAcreage	1.98	12.00
tblLandUse	LotAcreage	1.98	12.00
tblLandUse	LotAcreage	7.61	60.00
tblLandUse	LotAcreage	345.63	229.70
tblLandUse	LotAcreage	285.71	120.00
tblLandUse	LotAcreage	13.82	302.40
tblLandUse	Population	15,816.00	21,954.00
tblLandUse	Population	2,517.00	3,494.00
tblProjectCharacteristics	OperationalYear	2014	2035
tblSolidWaste	SolidWasteGenerationRate	5.02	5.25
tblSolidWaste	SolidWasteGenerationRate	2,083.80	2,663.90
tblSolidWaste	SolidWasteGenerationRate	375.95	393.69
tblSolidWaste	SolidWasteGenerationRate	419.12	393.45

tblSolidWaste	SolidWasteGenerationRate	456.25	477.80
tblSolidWaste	SolidWasteGenerationRate	2,247.81	2,099.71
tblSolidWaste	SolidWasteGenerationRate	1,031.97	1,080.69
tblSolidWaste	SolidWasteGenerationRate	632.10	661.94
tblSolidWaste	SolidWasteGenerationRate	1,221.06	1,278.70
tblVehicleTrips	ST_TR	1.59	38.37
tblVehicleTrips	ST_TR	7.16	6.08
tblVehicleTrips	ST_TR	0.00	1.29
tblVehicleTrips	ST_TR	1.32	6.91
tblVehicleTrips	ST_TR	0.61	1.89
tblVehicleTrips	ST_TR	1.64	11.43
tblVehicleTrips	ST_TR	10.08	9.52
tblVehicleTrips	ST_TR	42.04	15.40
tblVehicleTrips	ST_TR	2.59	2.22
tblVehicleTrips	SU_TR	1.59	38.37
tblVehicleTrips	SU_TR	6.07	6.08
tblVehicleTrips	SU_TR	0.00	1.29
tblVehicleTrips	SU_TR	0.68	6.91
tblVehicleTrips	SU_TR	0.25	1.89
tblVehicleTrips	SU_TR	0.76	11.43
tblVehicleTrips	SU_TR	8.77	9.52
tblVehicleTrips	SU_TR	20.43	15.40
tblVehicleTrips	SU_TR	2.59	2.22
tblVehicleTrips	WD_TR	1.59	38.37
tblVehicleTrips	WD_TR	6.59	6.08
tblVehicleTrips	WD_TR	6.97	6.91
tblVehicleTrips	WD_TR	1.71	1.89
tblVehicleTrips	WD_TR	11.42	11.43
tblVehicleTrips	WD_TR	9.57	9.52
tblVehicleTrips	WD_TR	44.32	15.40

tblVehicleTrips	WD_TR	2.59	2.22
tblWater	IndoorWaterUseRate	295,147,736.07	152,083,759.76
tblWater	IndoorWaterUseRate	4,993,934.40	2,107,945.06
tblWater	IndoorWaterUseRate	78,162,500.00	29,576,094.48
tblWater	IndoorWaterUseRate	11,012,400.00	4,648,345.84
tblWater	IndoorWaterUseRate	429,582,468.90	161,746,581.54
tblWater	IndoorWaterUseRate	57,335,542.55	24,201,393.97
tblWater	IndoorWaterUseRate	44,591,657.93	18,822,186.61
tblWater	IndoorWaterUseRate	300,393,750.00	126,796,523.86
tblWater	OutdoorWaterUseRate	69,522,936.75	29,345,706.12
tblWater	OutdoorWaterUseRate	186,071,398.82	95,878,892.05
tblWater	OutdoorWaterUseRate	12,841,545.60	5,420,430.16
tblWater	OutdoorWaterUseRate	28,317,600.00	11,952,889.31
tblWater	OutdoorWaterUseRate	263,292,480.94	99,135,001.59
tblWater	OutdoorWaterUseRate	36,146,320.30	15,257,400.54
tblWater	OutdoorWaterUseRate	27,330,370.99	11,536,178.89
tblWoodstoves	NumberCatalytic	226.50	0.00
tblWoodstoves	NumberCatalytic	44.00	0.00
tblWoodstoves	NumberNoncatalytic	226.50	0.00
tblWoodstoves	NumberNoncatalytic	44.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

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	377.7723	6.0885	528.5645	0.0280		11.5328	11.5328		11.4423	11.4423	0.0000	136,695.3617	136,695.3617	3.5132	2.4886	137,540.6018
Energy	4.9976	43.1175	21.1848	0.2726		3.4529	3.4529		3.4529	3.4529		54,519.3047	54,519.3047	1.0450	0.9995	54,851.1001
Mobile	194.1620	491.4641	2,315.0977	10.2422	641.0724	13.7948	654.8672	171.2631	12.7241	183.9871		737,130.3490	737,130.3490	17.5535		737,498.9732
Total	**576.9319**	**540.6701**	**2 864.8469**	**10.5428**	**641.0724**	**28.7805**	**669.8529**	**171.2631**	**27.6193**	**198.8824**	**0.0000**	**928 345.0153**	**928 345.0153**	**22.1117**	**3.4881**	**929 890.6751**

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	377.7723	6.0885	528.5645	0.0280		11.5328	11.5328		11.4423	11.4423	0.0000	136,695.3617	136,695.3617	3.5132	2.4886	137,540.6018
Energy	3.9540	34.1225	16.8236	0.2157		2.7319	2.7319		2.7319	2.7319		43,135.0103	43,135.0103	0.8268	0.7908	43,397.5228
Mobile	194.1620	491.4641	2,315.0977	10.2422	641.0724	13.7948	654.8672	171.2631	12.7241	183.9871		737,130.3490	737,130.3490	17.5535		737,498.9732
Total	**575.8883**	**531.6752**	**2 860.4857**	**10.4858**	**641.0724**	**28.0595**	**669.1319**	**171.2631**	**26.8983**	**198.1613**	**0.0000**	**916 960.7210**	**916 960.7210**	**21.8935**	**3.2794**	**918 437.0978**

	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	N20	CO2e
Percent Reduction	**0.18**	**1.66**	**0.15**	**0.54**	**0.00**	**2.51**	**0.11**	**0.00**	**2.61**	**0.36**	**0.00**	**1.23**	**1.23**	**0.99**	**5.98**	**1.23**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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					
Mitigated	194.1620	491.4641	2,315.0977	10.2422	641.0724	13.7948	654.8672	171.2631	12.7241	183.9871		737,130.3490	737,130.3490	17.5535		737,498.9732
Unmitigated	194.1620	491.4641	2,315.0977	10.2422	641.0724	13.7948	654.8672	171.2631	12.7241	183.9871		737,130.3490	737,130.3490	17.5535		737,498.9732

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	2,238.89	2,238.89	2238.89	6,442,494	6,442,494
Condo/Townhouse	33,622.40	33,622.40	33622.40	114,892,849	114,892,849
Elementary School	1,328.70	1,328.70	1328.70	4,579,210	4,579,210
Elementary School	1,328.70	1,328.70	1328.70	4,579,210	4,579,210
General Light Industry	2,093.73	2,093.73	2093.73	9,271,617	9,271,617
High School	4,725.00	4,725.00	4725.00	20,179,447	20,179,447
Office Park	24,643.08	24,643.08	24643.08	83,260,360	83,260,360
Single Family Housing	8,377.60	8,377.60	8377.60	28,627,532	28,627,532
Strip Mall	9,270.80	9,270.80	9270.80	17,638,580	17,638,580
Unrefrigerated Warehouse-No Rail	2,883.78	2,883.78	2883.78	12,359,065	12,359,065
Total	90,512.68	90,512.68	90,512.68	301,830,364	301,830,364

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.445160	0.068315	0.180257	0.161061	0.057208	0.009197	0.016142	0.050774	0.001074	0.001468	0.004084	0.000577	0.004683

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	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					
NaturalGas Mitigated	3.9540	34.1225	16.8236	0.2157		2.7319	2.7319		2.7319	2.7319		43,135.0103	43,135.0103	0.8268	0.7908	43,397.5228
NaturalGas Unmitigated	4.9976	43.1175	21.1848	0.2726		3.4529	3.4529		3.4529	3.4529		54,519.3047	54,519.3047	1.0450	0.9995	54,851.1001

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	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
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	2153.97	0.0465	0.4224	0.3548	2.5300e-003		0.0321	0.0321		0.0321	0.0321		506.8156	506.8156	9.7100e-003	9.2900e-003	509.9000
General Light Industry	27635.3	0.2980	2.7093	2.2758	0.0163		0.2059	0.2059		0.2059	0.2059		3,251.2071	3,251.2071	0.0623	0.0596	3,270.9934
High School	8295.85	0.0895	0.8133	0.6832	4.8800e-003		0.0618	0.0618		0.0618	0.0618		975.9829	975.9829	0.0187	0.0179	981.9225
Office Park	18134	0.1956	1.7779	1.4934	0.0107		0.1351	0.1351		0.1351	0.1351		2,133.4150	2,133.4150	0.0409	0.0391	2,146.3986
Single Family Housing	81410.7	0.8780	7.5026	3.1926	0.0479		0.6066	0.6066		0.6066	0.6066		9,577.7243	9,577.7243	0.1836	0.1756	9,636.0127
Strip Mall	3826.41	0.0413	0.3751	0.3151	2.2500e-003		0.0285	0.0285		0.0285	0.0285		450.1660	450.1660	8.6300e-003	8.2500e-003	452.9056
Unrefrigerated Warehouse-No Rail	7616.05	0.0821	0.7467	0.6272	4.4800e-003		0.0568	0.0568		0.0568	0.0568		896.0065	896.0065	0.0172	0.0164	901.4594
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	312188	3.3667	28.7703	12.2427	0.1836		2.3261	2.3261		2.3261	2.3261		36,727.9874	36,727.9874	0.7040	0.6734	36,951.5078
Total		**4.9976**	**43.1175**	**21.1847**	**0.2726**		**3.4529**	**3.4529**		**3.4529**	**3.4529**		**54 519.3047**	**54 519.3047**	**1.0449**	**0.9995**	**54 851.1001**

Mitigated

	NaturalGas Use	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
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	1.72105	0.0371	0.3375	0.2835	2.0200e-003		0.0257	0.0257		0.0257	0.0257		404.9529	404.9529	7.7600e-003	7.4200e-003	407.4174
General Light Industry	24.2815	0.2619	2.3805	1.9997	0.0143		0.1809	0.1809		0.1809	0.1809		2,856.6479	2,856.6479	0.0548	0.0524	2,874.0330
High School	6.62851	0.0715	0.6499	0.5459	3.9000e-003		0.0494	0.0494		0.0494	0.0494		779.8242	779.8242	0.0150	0.0143	784.5701
Office Park	13.6005	0.1467	1.3334	1.1200	8.0000e-003		0.1013	0.1013		0.1013	0.1013		1,600.0612	1,600.0612	0.0307	0.0293	1,609.7990
Single Family Housing	64.6444	0.6972	5.9574	2.5351	0.0380		0.4817	0.4817		0.4817	0.4817		7,605.2210	7,605.2210	0.1458	0.1394	7,651.5051
Strip Mall	2.99351	0.0323	0.2935	0.2465	1.7600e-003		0.0223	0.0223		0.0223	0.0223		352.1773	352.1773	6.7500e-003	6.4600e-003	354.3206
Unrefrigerated Warehouse-No Rail	5.73873	0.0619	0.5626	0.4726	3.3800e-003		0.0428	0.0428		0.0428	0.0428		675.1450	675.1450	0.0129	0.0124	679.2539
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	245.318	2.6456	22.6078	9.6203	0.1443		1.8279	1.8279		1.8279	1.8279		28,860.9809	28,860.9809	0.5532	0.5291	29,036.6240
Total		**3.9540**	**34.1225**	**16.8236**	**0.2157**		**2.7319**	**2.7319**		**2.7319**	**2.7319**		**43 135.0103**	**43 135.0103**	**0.8268**	**0.7908**	**43 397.5228**

6.0 Area Detail

6.1 Mitigation Measures Area

	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					
Mitigated	377.7723	6.0885	528.5645	0.0280		11.5328	11.5328		11.4423	11.4423	0.0000	136,695.3617	136,695.3617	3.5132	2.4886	137,540.6018
Unmitigated	377.7723	6.0885	528.5645	0.0280		11.5328	11.5328		11.4423	11.4423	0.0000	136,695.3617	136,695.3617	3.5132	2.4886	137,540.6018

6.2 Area by SubCategory

Unmitigated

	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
SubCategory	lb/day										lb/day					
Architectural Coating	62.0016					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	287.4881					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	12.4429	5.7000e-004	0.6787	0.0000		8.5969	8.5969		8.5065	8.5065	0.0000	135,741.1765	135,741.1765	2.6017	2.4886	136,567.2747
Landscaping	15.8397	6.0880	527.8858	0.0280		2.9359	2.9359		2.9359	2.9359		954.1852	954.1852	0.9115		973.3271
Total	**377.7723**	**6.0885**	**528.5645**	**0.0280**		**11.5328**	**11.5328**		**11.4423**	**11.4423**	**0.0000**	**136 695.3617**	**136 695.3617**	**3.5132**	**2.4886**	**137 540.6018**

Mitigated

	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
SubCategory	lb/day										lb/day					
Architectural Coating	62.0016					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	287.4881					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	12.4429	5.7000e-004	0.6787	0.0000		8.5969	8.5969		8.5065	8.5065	0.0000	135,741.1765	135,741.1765	2.6017	2.4886	136,567.2747
Landscaping	15.8397	6.0880	527.8858	0.0280		2.9359	2.9359		2.9359	2.9359		954.1852	954.1852	0.9115		973.3271
Total	**377.7723**	**6.0885**	**528.5645**	**0.0280**		**11.5328**	**11.5328**		**11.4423**	**11.4423**	**0.0000**	**136 695.3617**	**136 695.3617**	**3.5132**	**2.4886**	**137 540.6018**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Reclaimed Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Fontana Westgate SP Buildout

San Bernardino-South Coast County Winter

1.0 Pro ect Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	2,156.00	1000sqft	49.49	2,156,000.00	0
Elementary School	1,030.00	Student	12.00	86,111.47	0
Elementary School	1,030.00	Student	12.00	86,111.47	0
High School	2,500.00	Student	60.00	331,652.44	0
General Light Industry	303.00	1000sqft	6.96	303,000.00	0
Unrefrigerated Warehouse-No Rail	1,299.00	1000sqft	29.82	1,299,000.00	0
City Park	58.35	Acre	58.35	2,541,726.00	0
Condo/Townhouse	5,530.00	Dwelling Unit	229.70	5,530,000.00	21954
Single Family Housing	880.00	Dwelling Unit	120.00	1,584,000.00	3494
Strip Mall	602.00	1000sqft	302.40	602,000.00	0

1.2 Other Pro ect Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate one	10			**Operational Year**	2035
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Population based on 3.97 persons/DU (Multi-family: 21,954; Single-family: 3,494). Land Uses from Draft EIR Section 2.0, Project Description.

Vehicle Trips - Kunzman Associates, Inc., Westgate Specific Plan Traffic Impact Analysis, (2013).

Woodstoves - No wood burning fireplaces.

Water And Wastewater - Reference: Based on factors from Draft EIR Section 4.O.1, Water Supply.

Solid Waste - Reference: Based on factors from Draft EIR, Section 4.O.3, Solid Waste.

Energy Mitigation - CEC 2013- 25% better than 2008; Exceed Title 24: 25%

Water Mitigation - Reduction Indoor: 20%; Outdoor reclaimed water use based on projected 2035 recycled water supply as a % of total supplies (FWC, WSA, Jan 2014 update).
Waste Mitigation - Waste Diversion Rate: 50%

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	3,850.50	5,530.00
tblFireplaces	NumberGas	748.00	880.00
tblFireplaces	NumberNoFireplace	453.00	0.00
tblFireplaces	NumberNoFireplace	88.00	0.00
tblFireplaces	NumberWood	226.50	0.00
tblFireplaces	NumberWood	44.00	0.00
tblLandUse	LotAcreage	1.98	12.00
tblLandUse	LotAcreage	1.98	12.00
tblLandUse	LotAcreage	7.61	60.00
tblLandUse	LotAcreage	345.63	229.70
tblLandUse	LotAcreage	285.71	120.00
tblLandUse	LotAcreage	13.82	302.40
tblLandUse	Population	15,816.00	21,954.00
tblLandUse	Population	2,517.00	3,494.00
tblProjectCharacteristics	OperationalYear	2014	2035
tblSolidWaste	SolidWasteGenerationRate	5.02	5.25
tblSolidWaste	SolidWasteGenerationRate	2,083.80	2,663.90
tblSolidWaste	SolidWasteGenerationRate	375.95	393.69
tblSolidWaste	SolidWasteGenerationRate	419.12	393.45

tblSolidWaste	SolidWasteGenerationRate	456.25	477.80
tblSolidWaste	SolidWasteGenerationRate	2,247.81	2,099.71
tblSolidWaste	SolidWasteGenerationRate	1,031.97	1,080.69
tblSolidWaste	SolidWasteGenerationRate	632.10	661.94
tblSolidWaste	SolidWasteGenerationRate	1,221.06	1,278.70
tblVehicleTrips	ST_TR	1.59	38.37
tblVehicleTrips	ST_TR	7.16	6.08
tblVehicleTrips	ST_TR	0.00	1.29
tblVehicleTrips	ST_TR	1.32	6.91
tblVehicleTrips	ST_TR	0.61	1.89
tblVehicleTrips	ST_TR	1.64	11.43
tblVehicleTrips	ST_TR	10.08	9.52
tblVehicleTrips	ST_TR	42.04	15.40
tblVehicleTrips	ST_TR	2.59	2.22
tblVehicleTrips	SU_TR	1.59	38.37
tblVehicleTrips	SU_TR	6.07	6.08
tblVehicleTrips	SU_TR	0.00	1.29
tblVehicleTrips	SU_TR	0.68	6.91
tblVehicleTrips	SU_TR	0.25	1.89
tblVehicleTrips	SU_TR	0.76	11.43
tblVehicleTrips	SU_TR	8.77	9.52
tblVehicleTrips	SU_TR	20.43	15.40
tblVehicleTrips	SU_TR	2.59	2.22
tblVehicleTrips	WD_TR	1.59	38.37
tblVehicleTrips	WD_TR	6.59	6.08
tblVehicleTrips	WD_TR	6.97	6.91
tblVehicleTrips	WD_TR	1.71	1.89
tblVehicleTrips	WD_TR	11.42	11.43
tblVehicleTrips	WD_TR	9.57	9.52
tblVehicleTrips	WD_TR	44.32	15.40

tblVehicleTrips	WD_TR	2.59	2.22
tblWater	IndoorWaterUseRate	295,147,736.07	152,083,759.76
tblWater	IndoorWaterUseRate	4,993,934.40	2,107,945.06
tblWater	IndoorWaterUseRate	78,162,500.00	29,576,094.48
tblWater	IndoorWaterUseRate	11,012,400.00	4,648,345.84
tblWater	IndoorWaterUseRate	429,582,468.90	161,746,581.54
tblWater	IndoorWaterUseRate	57,335,542.55	24,201,393.97
tblWater	IndoorWaterUseRate	44,591,657.93	18,822,186.61
tblWater	IndoorWaterUseRate	300,393,750.00	126,796,523.86
tblWater	OutdoorWaterUseRate	69,522,936.75	29,345,706.12
tblWater	OutdoorWaterUseRate	186,071,398.82	95,878,892.05
tblWater	OutdoorWaterUseRate	12,841,545.60	5,420,430.16
tblWater	OutdoorWaterUseRate	28,317,600.00	11,952,889.31
tblWater	OutdoorWaterUseRate	263,292,480.94	99,135,001.59
tblWater	OutdoorWaterUseRate	36,146,320.30	15,257,400.54
tblWater	OutdoorWaterUseRate	27,330,370.99	11,536,178.89
tblWoodstoves	NumberCatalytic	226.50	0.00
tblWoodstoves	NumberCatalytic	44.00	0.00
tblWoodstoves	NumberNoncatalytic	226.50	0.00
tblWoodstoves	NumberNoncatalytic	44.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

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	377.7723	6.0885	528.5645	0.0280		11.5328	11.5328		11.4423	11.4423	0.0000	136,695.3617	136,695.3617	3.5132	2.4886	137,540.6018
Energy	4.9976	43.1175	21.1848	0.2726		3.4529	3.4529		3.4529	3.4529		54,519.3047	54,519.3047	1.0450	0.9995	54,851.1001
Mobile	188.5806	510.0964	2,191.3293	9.5537	641.0724	13.8390	654.9114	171.2631	12.7648	184.0278		692,619.3058	692,619.3058	17.5977		692,988.8576
Total	**571.3506**	**559.3024**	**2 741.0786**	**9.8543**	**641.0724**	**28.8247**	**669.8971**	**171.2631**	**27.6600**	**198.9230**	**0.0000**	**883 833.9721**	**883 833.9721**	**22.1559**	**3.4881**	**885 380.5595**

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	377.7723	6.0885	528.5645	0.0280		11.5328	11.5328		11.4423	11.4423	0.0000	136,695.3617	136,695.3617	3.5132	2.4886	137,540.6018
Energy	3.9540	34.1225	16.8236	0.2157		2.7319	2.7319		2.7319	2.7319		43,135.0103	43,135.0103	0.8268	0.7908	43,397.5228
Mobile	188.5806	510.0964	2,191.3293	9.5537	641.0724	13.8390	654.9114	171.2631	12.7648	184.0278		692,619.3058	692,619.3058	17.5977		692,988.8576
Total	**570.3070**	**550.3075**	**2 736.7174**	**9.7974**	**641.0724**	**28.1037**	**669.1761**	**171.2631**	**26.9390**	**198.2020**	**0.0000**	**872 449.6778**	**872 449.6778**	**21.9377**	**3.2794**	**873 926.9822**

	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	N20	CO2e
Percent Reduction	**0.18**	**1.61**	**0.16**	**0.58**	**0.00**	**2.50**	**0.11**	**0.00**	**2.61**	**0.36**	**0.00**	**1.29**	**1.29**	**0.98**	**5.98**	**1.29**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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					
Mitigated	188.5806	510.0964	2,191.3293	9.5537	641.0724	13.8390	654.9114	171.2631	12.7648	184.0278		692,619.3058	692,619.3058	17.5977		692,988.8576
Unmitigated	188.5806	510.0964	2,191.3293	9.5537	641.0724	13.8390	654.9114	171.2631	12.7648	184.0278		692,619.3058	692,619.3058	17.5977		692,988.8576

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	2,238.89	2,238.89	2238.89	6,442,494	6,442,494
Condo/Townhouse	33,622.40	33,622.40	33622.40	114,892,849	114,892,849
Elementary School	1,328.70	1,328.70	1328.70	4,579,210	4,579,210
Elementary School	1,328.70	1,328.70	1328.70	4,579,210	4,579,210
General Light Industry	2,093.73	2,093.73	2093.73	9,271,617	9,271,617
High School	4,725.00	4,725.00	4725.00	20,179,447	20,179,447
Office Park	24,643.08	24,643.08	24643.08	83,260,360	83,260,360
Single Family Housing	8,377.60	8,377.60	8377.60	28,627,532	28,627,532
Strip Mall	9,270.80	9,270.80	9270.80	17,638,580	17,638,580
Unrefrigerated Warehouse-No Rail	2,883.78	2,883.78	2883.78	12,359,065	12,359,065
Total	90,512.68	90,512.68	90,512.68	301,830,364	301,830,364

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.445160	0.068315	0.180257	0.161061	0.057208	0.009197	0.016142	0.050774	0.001074	0.001468	0.004084	0.000577	0.004683

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	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					
NaturalGas Mitigated	3.9540	34.1225	16.8236	0.2157		2.7319	2.7319		2.7319	2.7319		43,135.0103	43,135.0103	0.8268	0.7908	43,397.5228
NaturalGas Unmitigated	4.9976	43.1175	21.1848	0.2726		3.4529	3.4529		3.4529	3.4529		54,519.3047	54,519.3047	1.0450	0.9995	54,851.1001

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	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
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	2153.97	0.0465	0.4224	0.3548	2.5300e-003		0.0321	0.0321		0.0321	0.0321		506.8156	506.8156	9.7100e-003	9.2900e-003	509.9000
General Light Industry	27635.3	0.2980	2.7093	2.2758	0.0163		0.2059	0.2059		0.2059	0.2059		3,251.2071	3,251.2071	0.0623	0.0596	3,270.9934
High School	8295.85	0.0895	0.8133	0.6832	4.8800e-003		0.0618	0.0618		0.0618	0.0618		975.9829	975.9829	0.0187	0.0179	981.9225
Office Park	18134	0.1956	1.7779	1.4934	0.0107		0.1351	0.1351		0.1351	0.1351		2,133.4150	2,133.4150	0.0409	0.0391	2,146.3986
Single Family Housing	81410.7	0.8780	7.5026	3.1926	0.0479		0.6066	0.6066		0.6066	0.6066		9,577.7243	9,577.7243	0.1836	0.1756	9,636.0127
Strip Mall	3826.41	0.0413	0.3751	0.3151	2.2500e-003		0.0285	0.0285		0.0285	0.0285		450.1660	450.1660	8.6300e-003	8.2500e-003	452.9056
Unrefrigerated Warehouse-No Rail	7616.05	0.0821	0.7467	0.6272	4.4800e-003		0.0568	0.0568		0.0568	0.0568		896.0065	896.0065	0.0172	0.0164	901.4594
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	312188	3.3667	28.7703	12.2427	0.1836		2.3261	2.3261		2.3261	2.3261		36,727.9874	36,727.9874	0.7040	0.6734	36,951.5078
Total		**4.9976**	**43.1175**	**21.1847**	**0.2726**		**3.4529**	**3.4529**		**3.4529**	**3.4529**		**54 519.3047**	**54 519.3047**	**1.0449**	**0.9995**	**54 851.1001**

Mitigated

	NaturalGas Use	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
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	1.72105	0.0371	0.3375	0.2835	2.0200e-003		0.0257	0.0257		0.0257	0.0257		404.9529	404.9529	7.7600e-003	7.4200e-003	407.4174
General Light Industry	24.2815	0.2619	2.3805	1.9997	0.0143		0.1809	0.1809		0.1809	0.1809		2,856.6479	2,856.6479	0.0548	0.0524	2,874.0330
High School	6.62851	0.0715	0.6499	0.5459	3.9000e-003		0.0494	0.0494		0.0494	0.0494		779.8242	779.8242	0.0150	0.0143	784.5701
Office Park	13.6005	0.1467	1.3334	1.1200	8.0000e-003		0.1013	0.1013		0.1013	0.1013		1,600.0612	1,600.0612	0.0307	0.0293	1,609.7990
Single Family Housing	64.6444	0.6972	5.9574	2.5351	0.0380		0.4817	0.4817		0.4817	0.4817		7,605.2210	7,605.2210	0.1458	0.1394	7,651.5051
Strip Mall	2.99351	0.0323	0.2935	0.2465	1.7600e-003		0.0223	0.0223		0.0223	0.0223		352.1773	352.1773	6.7500e-003	6.4600e-003	354.3206
Unrefrigerated Warehouse-No Rail	5.73873	0.0619	0.5626	0.4726	3.3800e-003		0.0428	0.0428		0.0428	0.0428		675.1450	675.1450	0.0129	0.0124	679.2539
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	245.318	2.6456	22.6078	9.6203	0.1443		1.8279	1.8279		1.8279	1.8279		28,860.9809	28,860.9809	0.5532	0.5291	29,036.6240
Total		**3.9540**	**34.1225**	**16.8236**	**0.2157**		**2.7319**	**2.7319**		**2.7319**	**2.7319**		**43 135.0103**	**43 135.0103**	**0.8268**	**0.7908**	**43 397.5228**

6.0 Area Detail

6.1 Mitigation Measures Area

	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					
Mitigated	377.7723	6.0885	528.5645	0.0280		11.5328	11.5328		11.4423	11.4423	0.0000	136,695.3617	136,695.3617	3.5132	2.4886	137,540.6018
Unmitigated	377.7723	6.0885	528.5645	0.0280		11.5328	11.5328		11.4423	11.4423	0.0000	136,695.3617	136,695.3617	3.5132	2.4886	137,540.6018

6.2 Area by SubCategory

Unmitigated

	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
SubCategory	lb/day										lb/day					
Architectural Coating	62.0016					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	287.4881					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	12.4429	5.7000e-004	0.6787	0.0000		8.5969	8.5969		8.5065	8.5065	0.0000	135,741.1765	135,741.1765	2.6017	2.4886	136,567.2747
Landscaping	15.8397	6.0880	527.8858	0.0280		2.9359	2.9359		2.9359	2.9359		954.1852	954.1852	0.9115		973.3271
Total	**377.7723**	**6.0885**	**528.5645**	**0.0280**		**11.5328**	**11.5328**		**11.4423**	**11.4423**	**0.0000**	**136 695.3617**	**136 695.3617**	**3.5132**	**2.4886**	**137 540.6018**

Mitigated

	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
SubCategory	lb/day										lb/day					
Architectural Coating	62.0016					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	287.4881					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	12.4429	5.7000e-004	0.6787	0.0000		8.5969	8.5969		8.5065	8.5065	0.0000	135,741.1765	135,741.1765	2.6017	2.4886	136,567.2747
Landscaping	15.8397	6.0880	527.8858	0.0280		2.9359	2.9359		2.9359	2.9359		954.1852	954.1852	0.9115		973.3271
Total	**377.7723**	**6.0885**	**528.5645**	**0.0280**		**11.5328**	**11.5328**		**11.4423**	**11.4423**	**0.0000**	**136 695.3617**	**136 695.3617**	**3.5132**	**2.4886**	**137 540.6018**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Reclaimed Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Appendix B.3
High-Cube Warehouse Health Risk Assessment Results

- High-Cube Warehouse Health Risk Assessment Results

City of Fontana
Westgate Specific Plan Project EIR
Proposed High Cube Warehouse Distribution Center Diesel Truck Health Risk Assessment

Table WHRA-1
Project (High-Cube Warehouse Distribution Center) Trip Generation

	Morning Peak Hour			Evening Peak Hour			Daily
Truck Type	Inbound	Outbound	Total	Inbound	Outbound	Total	Total
2 Axle	3	1	4	2	3	5	71
3 Axle	5	2	7	2	5	7	95
4+ Axle	12	5	17	6	12	18	252
Total	20	8	28	10	20	30	418

Source: Kunzman Associates, Inc., Westgate Specific Plan Traffic Impact Analysis, December 2013.

Table WHRA-2
Diesel Truck Emission Factors for Running Exhaust and Idling

			Running Emission Factor (grams/mile)									Idling Emission Factor (grams/veh-hr)		
	Calendar	EMFAC2011	Speed: 15 mph			Speed: 25 mph			Speed: 45 mph					
Truck Type	Year	Veh. Class	TOG	PM10	PM2.5	TOG	PM10	PM2.5	TOG	PM10	PM2.5	TOG	PM10	PM2.5
2 Axle	2018	T6 Public	0.2613	0.0550	0.0506	0.0940	0.0338	0.0311	0.0529	0.0303	0.0279	2.1608	0.2051	0.1887
	2020	T6 Public	0.2732	0.0477	0.0439	0.0994	0.0310	0.0285	0.0566	0.0297	0.0274	2.1932	0.1331	0.1224
	2025	T6 Public	0.2939	0.0356	0.0328	0.1089	0.0261	0.0240	0.0630	0.0284	0.0262	2.4109	0.0921	0.0847
	2030	T6 Public	0.2986	0.0296	0.0273	0.1116	0.0238	0.0219	0.0652	0.0277	0.0255	2.4300	0.0910	0.0837
	2035	T6 Public	0.2995	0.0271	0.0249	0.1123	0.0228	0.0210	0.0659	0.0274	0.0252	2.4402	0.0905	0.0832
	70-Yr Weighted Average*		0.2961	0.0301	0.0277	0.1106	0.0240	0.0221	0.0646	0.0278	0.0255	2.4118	0.0970	0.0892
3 Axle	2018	T7 Public	0.4231	0.1142	0.1051	0.1501	0.0684	0.0629	0.0839	0.0539	0.0496	7.2542	0.1227	0.1129
	2020	T7 Public	0.4482	0.0993	0.0914	0.1615	0.0623	0.0573	0.0916	0.0529	0.0486	7.6679	0.1168	0.1075
	2025	T7 Public	0.5356	0.0742	0.0683	0.1965	0.0493	0.0454	0.1130	0.0468	0.0431	8.3246	0.1096	0.1008
	2030	T7 Public	0.5660	0.0593	0.0546	0.2091	0.0414	0.0381	0.1208	0.0426	0.0392	8.3613	0.1086	0.0999
	2035	T7 Public	0.5759	0.0483	0.0444	0.2144	0.0368	0.0339	0.1248	0.0415	0.0382	8.3865	0.1081	0.0994
	70-Yr Weighted Average*		0.5588	0.0564	0.0519	0.2071	0.0408	0.0375	0.1201	0.0432	0.0397	8.2966	0.1093	0.1005
4+ Axle	2018	T7 Public	0.4231	0.1142	0.1051	0.1501	0.0684	0.0629	0.0839	0.0539	0.0496	7.2542	0.1227	0.1129
	2020	T7 Public	0.4482	0.0993	0.0914	0.1615	0.0623	0.0573	0.0916	0.0529	0.0486	7.6679	0.1168	0.1075
	2025	T7 Public	0.5356	0.0742	0.0683	0.1965	0.0493	0.0454	0.1130	0.0468	0.0431	8.3246	0.1096	0.1008
	2030	T7 Public	0.5660	0.0593	0.0546	0.2091	0.0414	0.0381	0.1208	0.0426	0.0392	8.3613	0.1086	0.0999
	2035	T7 Public	0.5759	0.0483	0.0444	0.2144	0.0368	0.0339	0.1248	0.0415	0.0382	8.3865	0.1081	0.0994
	70-Yr Weighted Average*		0.5588	0.0564	0.0519	0.2071	0.0408	0.0375	0.1201	0.0432	0.0397	8.2966	0.1093	0.1005

Source: California Air Resources Board, EMFAC2011. Model parameters: South Coast Air Basin, aggregated model years, annual average emission factors.

* The 70-year weighted average is calculated by assuming the calendar year 2018 emission factors (EFs) represent years 2018-2019, 2020 EFs represent years 2020-2024, 2025 EFs represent years 2025-2029, 2030 EFs represent years 2030-2034, and 2035 EFs represent years 2035-2087.

City of Fontana
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Table WHRA-3
Transportation Refrigeration Unit (TRU) Emission Factors

Equipment Type	Year	Total Fleet Hours	Total PM (tpy)	Emission Factor (lbs/hr) [1] PM10	PM2.5	Emission Factor (lb/hr) THC [2]	TOG [3]
TRU	2018	275,120,516	0.2742	1.99E-06	1.99E-06	0.0034	0.0037
	2020	288,190,770	0.0917	6.36E-07	6.36E-07	0.0034	0.0037
	2025	326,730,416	0.1030	6.31E-07	6.31E-07	0.0034	0.0037
	70-Yr Weighted Average	–	–	6.70E-07	6.70E-07	0.0034	0.0037

Sources:

1. California Air Resources Board, 2011 Transportation Refrigeration Unit (TRU) Regulation, 2011 Emissions Inventory Database (with adopted 2011 amendments).
2. National Renewable Energy Laboratory, Emissions of Transport Refrigeration Units with CARB Diesel, Gas-to-Liquid Diesel, and Emissions Control Devices, May 2010.
   Total hydrocarbon (THC) emission factor of 1.56 grams/hour converted to pounds per hour (CARB diesel, high engine speed, diesel particulate filter).
3. U.S. Environmental Protection Agency, Conversion Factors for Hydrocarbon Emission Components, May 2003.
   TOG to THC conversion factor of 1.070 for diesel engines.

Table WHRA-4
AERMOD Model Source Descriptions

AERMOD Source ID	Source Type	Plume Height [1] (m)	Plume Width [2] (m)	Initial Vertical Dimention of Plume (m)	Release Height (m)	Description	Segment Length (meters)	Area (m^2)
I15	Line	5.1	66	2.37	–	Interstate 15	834.0	–
210_WB	Line	5.1	14	2.37	–	State Route 210, westbound travel	335.1	–
210_WBN	Line	5.1	14	2.37	–	State Route 210, westbound on-ramp	303.7	–
210_WBF	Line	5.1	14	2.37	–	State Route 210, westbound off-ramp	320.0	–
210_EB	Line	5.1	14	2.37	–	State Route 210, eastbound travel	252.0	–
210_EBN	Line	5.1	14	2.37	–	State Route 210, eastbound on-ramp	338.7	–
210_EBF	Line	5.1	14	2.37	–	State Route 210, eastbound off-ramp	399.1	–
CHERR_N1	Line	5.1	26	2.37	–	Cherry Avenue, north segment (1)	234.2	–
CHERR_N2	Line	5.1	26	2.37	–	Cherry Avenue, north segment (2)	193.7	–
CHERR_S	Line	5.1	26	2.37	–	Cherry Avenue, south segment	1,327.5	–
BASELINE	Line	5.1	31	2.37	–	Baseline Avenue	394.7	–
PAREA1	Area	–	–	2.37	4.15	On-site truck travel and idling [3]	510.0	274,536.2

Source: PCR Services Corporation, 2014.

1. Based on a vehicle height of 3 meters.
2. Based on estimated roadway widths plus area of turbulence.
3. Area source represents emissions from on-site truck travel and idling. Assumes on-site truck travel is equal to half the distance between the western-most and eastern-most boundaries of Planning Area 41 (510 meters).

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Table WHRA-5
Emissions Calculations (Running Exhaust) by AERMOD Source ID

AERMOD Source ID	Assumed Average Speed (mph)	Segment Length (miles)	Percent of Daily Truck Distribution [1]	TRU Idling Time [2] (hours/TRU)	Peak Hour Trucks [3]	Daily Trucks [4]	Peak Hour Emissions [5] (pounds/hour)		Daily Emissions [6] (pounds/day)		Maximum Annual Emissions [7] (pounds/year)		70-Year Weighted Average Annual Emissions [8] (pounds/year)	
							TOG	PM10	TOG	PM10	TOG	PM10	TOG	PM10
I15	45	0.5182	10%											
2 Axle					1	7	7.53E-05	3.47E-05	5.27E-04	2.43E-04	1.92E-01	8.85E-02	1.89E-01	8.10E-02
3 Axle					1	10	1.43E-04	6.16E-05	1.43E-03	6.16E-04	5.20E-01	2.25E-01	5.01E-01	1.80E-01
4+ Axle					2	25	2.85E-04	1.23E-04	3.56E-03	1.54E-03	1.30E+00	5.62E-01	1.25E+00	4.50E-01
TRU [9]				0.0115	1	4	9.34E-08	5.06E-11	3.74E-07	2.02E-10	1.36E-04	7.39E-08	1.36E-04	2.48E-08
Total							**5.03E-04**	**2.19E-04**	**5.52E-03**	**2.40E-03**	**2.01E+00**	**8.76E-01**	**1.94E+00**	**7.11E-01**
210_WB	25	0.2082	25%		*(Outbound)*									
2 Axle					2	18	1.03E-04	3.11E-05	9.28E-04	2.80E-04	3.39E-01	1.02E-01	3.34E-01	7.24E-02
3 Axle					3	24	2.95E-04	9.41E-05	2.36E-03	7.53E-04	8.62E-01	2.75E-01	8.33E-01	1.64E-01
4+ Axle					6	63	5.91E-04	1.88E-04	6.20E-03	1.98E-03	2.26E+00	7.22E-01	2.19E+00	4.30E-01
TRU [9]				0.0083	2	11	1.35E-07	7.32E-11	7.43E-07	4.03E-10	2.71E-04	1.47E-07	2.71E-04	4.94E-08
Total							**9.89E-04**	**3.14E-04**	**9.49E-03**	**3.01E-03**	**3.46E+00**	**1.10E+00**	**3.35E+00**	**6.66E-01**
210_WBN	25	0.1887	25%		*(Outbound)*									
2 Axle					2	18	9.35E-05	2.82E-05	8.41E-04	2.53E-04	3.07E-01	9.25E-02	3.02E-01	6.56E-02
3 Axle					3	24	2.68E-04	8.53E-05	2.14E-03	6.83E-04	7.81E-01	2.49E-01	7.55E-01	1.49E-01
4+ Axle					6	63	5.35E-04	1.71E-04	5.62E-03	1.79E-03	2.05E+00	6.54E-01	1.98E+00	3.90E-01
TRU [9]				0.0075	2	11	1.22E-07	6.63E-11	6.74E-07	3.65E-10	2.46E-04	1.33E-07	2.46E-04	4.48E-08
Total							**8.96E-04**	**2.84E-04**	**8.60E-03**	**2.73E-03**	**3.14E+00**	**9.96E-01**	**3.04E+00**	**6.04E-01**
210_WBF	25	0.1988	10%		*(Inbound)*									
2 Axle					1	7	4.92E-05	1.48E-05	3.45E-04	1.04E-04	1.26E-01	3.79E-02	1.24E-01	2.69E-02
3 Axle					1	10	9.40E-05	3.00E-05	9.40E-04	3.00E-04	3.43E-01	1.09E-01	3.31E-01	6.52E-02
4+ Axle					2	25	1.88E-04	5.99E-05	2.35E-03	7.49E-04	8.58E-01	2.73E-01	8.29E-01	1.63E-01
TRU [9]				0.0080	1	4	6.45E-08	3.49E-11	2.58E-07	1.40E-10	9.42E-05	5.10E-08	9.42E-05	1.72E-08
Total							**3.31E-04**	**1.05E-04**	**3.63E-03**	**1.15E-03**	**1.33E+00**	**4.21E-01**	**1.28E+00**	**2.55E-01**
210_EB	25	0.1566	25%		*(Inbound)*									
2 Axle					1	18	3.88E-05	1.17E-05	6.98E-04	2.10E-04	2.55E-01	7.68E-02	2.51E-01	5.44E-02
3 Axle					1	24	7.40E-05	2.36E-05	1.78E-03	5.66E-04	6.48E-01	2.07E-01	6.26E-01	1.23E-01
4+ Axle					3	63	2.22E-04	7.08E-05	4.66E-03	1.49E-03	1.70E+00	5.43E-01	1.64E+00	3.24E-01
TRU [9]				0.0063	1	11	5.08E-08	2.75E-11	5.59E-07	3.03E-10	2.04E-04	1.10E-07	2.04E-04	3.71E-08
Total							**3.35E-04**	**1.06E-04**	**7.14E-03**	**2.26E-03**	**2.61E+00**	**8.26E-01**	**2.52E+00**	**5.01E-01**

City of Fontana
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Proposed High Cube Warehouse Distribution Center Diesel Truck Health Risk Assessment

AERMOD Source ID	Assumed Average Speed (mph)	Segment Length (miles)	Percent of Daily Truck Distribution [1]	TRU Idling Time [2] (hours/TRU)	Peak Hour Trucks [3]	Daily Trucks [4]	Peak Hour Emissions [5] (pounds/hour) TOG	Peak Hour Emissions [5] (pounds/hour) PM10	Daily Emissions [6] (pounds/day) TOG	Daily Emissions [6] (pounds/day) PM10	Maximum Annual Emissions [7] (pounds/year) TOG	Maximum Annual Emissions [7] (pounds/year) PM10	70-Year Weighted Average Annual Emissions [8] (pounds/year) TOG	70-Year Weighted Average Annual Emissions [8] (pounds/year) PM10
210_EBN	25	0.2105	10%		*(Outbound)*									
2 Axle					1	7	5.21E-05	1.57E-05	3.65E-04	1.10E-04	1.33E-01	4.01E-02	1.31E-01	2.84E-02
3 Axle					1	10	9.95E-05	3.17E-05	9.95E-04	3.17E-04	3.63E-01	1.16E-01	3.51E-01	6.90E-02
4+ Axle					3	25	2.98E-04	9.52E-05	2.49E-03	7.93E-04	9.08E-01	2.89E-01	8.77E-01	1.73E-01
TRU [9]				0.0084	1	4	6.83E-08	3.70E-11	2.73E-07	1.48E-10	9.97E-05	5.40E-08	9.97E-05	1.82E-08
Total							**4.50E-04**	**1.43E-04**	**3.85E-03**	**1.22E-03**	**1.40E+00**	**4.45E-01**	**1.36E+00**	**2.70E-01**
210_EBF	25	0.2480	25%		*(Inbound)*									
2 Axle					1	18	6.14E-05	1.85E-05	1.11E-03	3.33E-04	4.04E-01	1.22E-01	3.97E-01	8.62E-02
3 Axle					1	24	1.17E-04	3.74E-05	2.81E-03	8.97E-04	1.03E+00	3.27E-01	9.92E-01	1.95E-01
4+ Axle					3	63	3.52E-04	1.12E-04	7.38E-03	2.35E-03	2.70E+00	8.59E-01	2.60E+00	5.12E-01
TRU [9]				0.0099	1	11	8.05E-08	4.36E-11	8.85E-07	4.79E-10	3.23E-04	1.75E-07	3.23E-04	5.88E-08
Total							**5.30E-04**	**1.68E-04**	**1.13E-02**	**3.58E-03**	**4.13E+00**	**1.31E+00**	**3.99E+00**	**7.94E-01**
CHERR_N1	25	0.1455	70%											
2 Axle					4	50	1.44E-04	4.34E-05	1.80E-03	5.43E-04	6.58E-01	1.98E-01	6.47E-01	1.40E-01
3 Axle					5	67	3.44E-04	1.10E-04	4.61E-03	1.47E-03	1.68E+00	5.36E-01	1.63E+00	3.20E-01
4+ Axle					13	176	8.94E-04	2.85E-04	1.21E-02	3.86E-03	4.42E+00	1.41E+00	4.27E+00	8.40E-01
TRU [9]				0.0058	3	29	1.42E-07	7.67E-11	1.37E-06	7.42E-10	5.00E-04	2.71E-07	5.00E-04	9.10E-08
Total							**1.38E-03**	**4.38E-04**	**1.85E-02**	**5.87E-03**	**6.76E+00**	**2.14E+00**	**6.54E+00**	**1.30E+00**
CHERR_N2	25	0.1204	50%											
2 Axle					3	36	8.94E-05	2.69E-05	1.07E-03	3.23E-04	3.92E-01	1.18E-01	3.86E-01	8.37E-02
3 Axle					4	48	2.28E-04	7.26E-05	2.73E-03	8.71E-04	9.97E-01	3.18E-01	9.63E-01	1.89E-01
4+ Axle					9	126	5.12E-04	1.63E-04	7.17E-03	2.29E-03	2.62E+00	8.34E-01	2.53E+00	4.97E-01
TRU [9]				0.0048	2	21	7.81E-08	4.23E-11	8.20E-07	4.44E-10	2.99E-04	1.62E-07	2.99E-04	5.45E-08
Total							**8.29E-04**	**2.63E-04**	**1.10E-02**	**3.48E-03**	**4.01E+00**	**1.27E+00**	**3.88E+00**	**7.71E-01**
CHERR_S	25	0.8249	30%											
2 Axle					2	21	4.09E-04	1.23E-04	4.29E-03	1.29E-03	1.57E+00	4.72E-01	1.54E+00	3.34E-01
3 Axle					3	29	1.17E-03	3.73E-04	1.13E-02	3.61E-03	4.13E+00	1.32E+00	3.99E+00	7.85E-01
4+ Axle					6	76	2.34E-03	7.46E-04	2.96E-02	9.45E-03	1.08E+01	3.45E+00	1.04E+01	2.06E+00
TRU [9]				0.0330	2	13	5.35E-07	2.90E-10	3.48E-06	1.88E-09	1.27E-03	6.88E-07	1.27E-03	2.31E-07
Total							**3.92E-03**	**1.24E-03**	**4.52E-02**	**1.43E-02**	**1.65E+01**	**5.24E+00**	**1.60E+01**	**3.18E+00**

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AERMOD Source ID	Assumed Average Speed (mph)	Segment Length (miles)	Percent of Daily Truck Distribution [1]	TRU Idling Time [2] (hours/TRU)	Peak Hour Trucks [3]	Daily Trucks [4]	Peak Hour Emissions [5] (pounds/hour)		Daily Emissions [6] (pounds/day)		Maximum Annual Emissions [7] (pounds/year)		70-Year Weighted Average Annual Emissions [8] (pounds/year)	
							TOG	PM10	TOG	PM10	TOG	PM10	TOG	PM10
BASELINE	25	0.2453	30%											
2 Axle					2	21	1.21E-04	3.66E-05	1.28E-03	3.84E-04	4.66E-01	1.40E-01	4.58E-01	9.94E-02
3 Axle					3	29	3.48E-04	1.11E-04	3.36E-03	1.07E-03	1.23E+00	3.91E-01	1.19E+00	2.33E-01
4+ Axle					6	76	6.96E-04	2.22E-04	8.81E-03	2.81E-03	3.22E+00	1.03E+00	3.11E+00	6.11E-01
TRU [9]				0.0098	2	13	1.59E-07	8.62E-11	1.03E-06	5.60E-10	3.78E-04	2.05E-07	3.78E-04	6.88E-08
Total							**1.17E-03**	**3.69E-04**	**1.34E-02**	**4.27E-03**	**4.91E+00**	**1.56E+00**	**4.75E+00**	**9.44E-01**
PAREA1	15	0.3169	100%											
2 Axle					5	71	1.05E-03	1.92E-04	1.49E-02	2.73E-03	5.42E+00	9.96E-01	5.36E+00	5.46E-01
3 Axle					7	95	2.82E-03	5.59E-04	3.82E-02	7.58E-03	1.40E+01	2.77E+00	1.35E+01	1.37E+00
4+ Axle					18	252	7.24E-03	1.44E-03	1.01E-01	2.01E-02	3.70E+01	7.34E+00	3.59E+01	3.63E+00
TRU [9]				0.0211	3	42	5.14E-07	2.78E-10	7.20E-06	3.90E-09	2.63E-03	1.42E-06	2.63E-03	4.78E-07
Total							**1.11E-02**	**2.19E-03**	**1.54E-01**	**3.04E-02**	**5.64E+01**	**1.11E+01**	**5.48E+01**	**5.54E+00**

Source: PCR Services Corporation, 2014; Kunzman Associates, Inc., Westgate Specific Plan Traffic Impact Analysis, December 2013.

1. Based on the Westgate Specific Plan Traffic Impact Analysis (Figure 41). Trips occuring on SR-210 were split in half to represent eastbound and westbound traffic.
2. Calculated as the Segment Length divided by the Assumed Average Speed.
3. Based on the Westgate Specific Plan Traffic Impact Analysis (Table 5) (values rounded up to nearest integer). Peak hour trips on SR-210 take into account inbound and outbound traffic volumes on the eastbound and westbound lanes.
4. Based on the Westgate Specific Plan Traffic Impact Analysis (Table 5) (values rounded to nearest integer). Trips occuring on SR-210 were split in half to represent eastbound and westbound traffic.
5. Based on the number of peak hour trucks and maximum emission factors from Table WHRA-2.
6. Based on the number of daily trucks and maximum emission factors from Table WHRA-2.
7. Based on the number of annual trucks (daily trucks multiplied by 365) and maximum emission factors from Table WHRA-2.
8. Based on the number of annual trucks (daily trucks multiplied by 365) and the 70-year weighted average emission factors from Table WHRA-2.
9. At this time only a very small percentage of TRUs, if any, are anticipated. For the purposes of this analysis, the number of TRUs is estimated at 10% of the number of trucks.

Table WHRA-6
Emissions Calculations (Idling Exhaust) by AERMOD Source ID

AERMOD Source ID	Idling Time [1] (hours/truck)	Peak Hour Trucks [2]	Daily Trucks [3]	Peak Hour Emissions [4] (pounds/hour)		Daily Emissions [5] (pounds/day)		Maximum Annual Emissions [6] (pounds/year)		70-Year Weighted Average Annual Emissions [7] (pounds/year)	
				TOG	PM10	TOG	PM10	TOG	PM10	TOG	PM10
PAREA1											
2 Axle	0.1667	5	71	4.48E-03	3.77E-04	6.37E-02	5.35E-03	2.32E+01	1.95E+00	2.30E+01	9.23E-01
3 Axle	0.1667	7	95	2.16E-02	3.16E-04	2.93E-01	4.28E-03	1.07E+02	1.56E+00	1.06E+02	1.39E+00
4+ Axle	0.1667	18	252	5.55E-02	8.11E-04	7.77E-01	1.14E-02	2.83E+02	4.15E+00	2.80E+02	3.69E+00
TRU [8]	2	3	42	2.43E-05	1.32E-08	6.81E-04	3.69E-07	2.49E-01	1.35E-04	2.49E-01	4.53E-05
Total				**8.15E-02**	**1.50E-03**	**1.13E+00**	**2.10E-02**	**4.14E+02**	**7.66E+00**	**4.09E+02**	**6.01E+00**

Source: PCR Services Corporation, 2014; Kunzman Associates, Inc., Westgate Specific Plan Traffic Impact Analysis, December 2013.

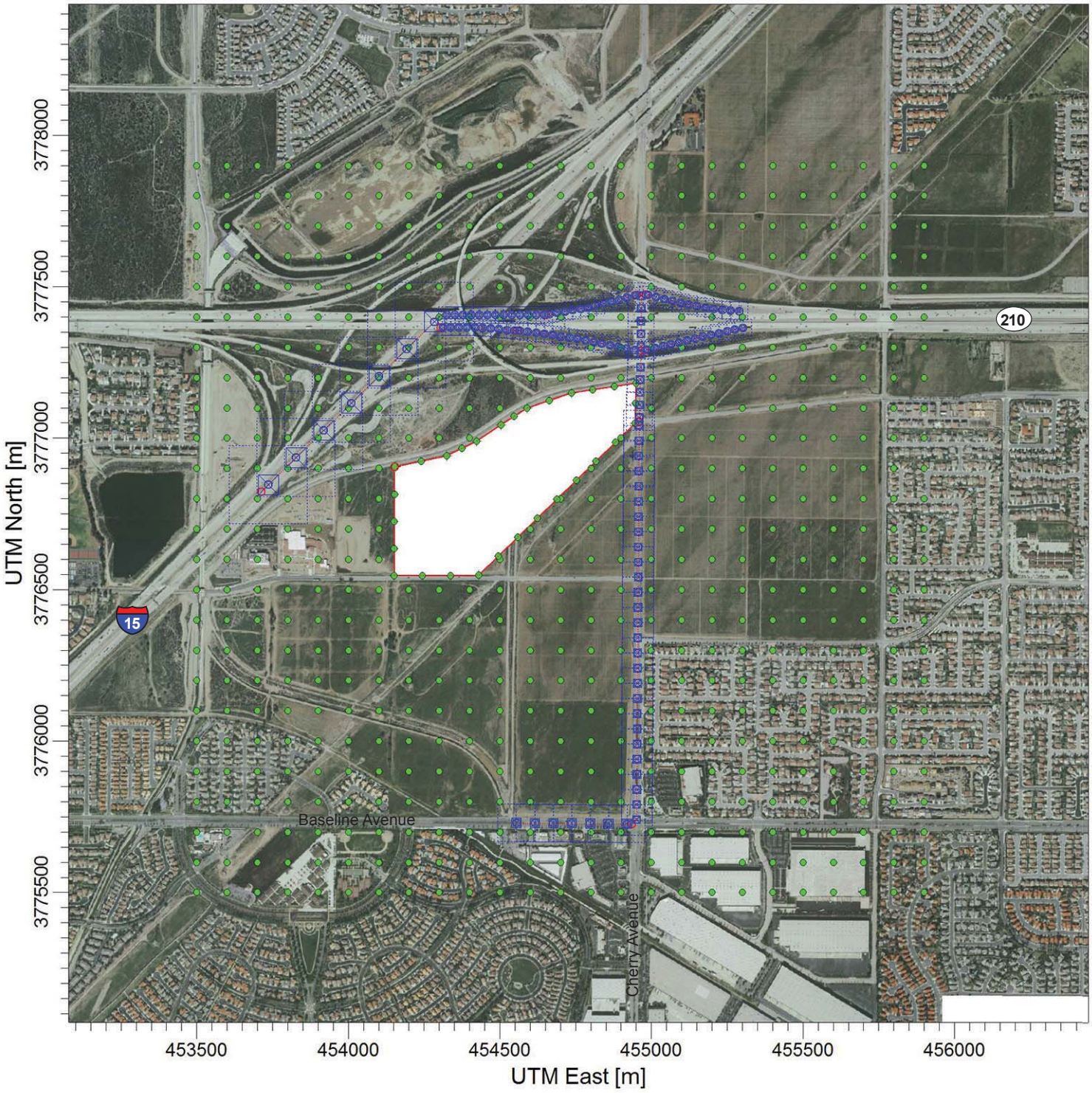
1. Based on 10 minutes of idling (5 minutes inbound, 5 minutes outbound) for trucks and 2 hours of idling for TRUs.
2. Based on the Westgate Specific Plan Traffic Impact Analysis (Table 5) (values rounded up to nearest integer).
3. Based on the Westgate Specific Plan Traffic Impact Analysis (Table 5) (values rounded to nearest integer).
4. Based on the number of peak hour trucks and maximum emission factors from Table WHRA-2.
5. Based on the number of daily trucks and maximum emission factors from Table WHRA-2.
6. Based on the number of annual trucks (daily trucks multiplied by 365) and maximum emission factors from Table WHRA-2.
7. Based on the number of annual trucks (daily trucks multiplied by 365) and the 70-year weighted average emission factors from Table WHRA-2.
8. At this time only a very small percentage of TRUs, if any, are anticipated. For the purposes of this analysis, the number of TRUs is estimated at 10% of the number of trucks.

Table WHRA-7
Emission Rates for AERMOD

AERMOD Source ID	Peak Hour Emissions Rate (grams/sec)		Daily [1] Emissions Rate (grams/sec)		Maximum Annual Emissions Rate (grams/sec)		70-Year Weighted Average Annual Emissions Rate (grams/sec)	
	TOG	PM10	TOG	PM10	TOG	PM10	TOG	PM10
I15	6.34E-05	2.77E-05	5.79E-05	2.52E-05	2.90E-05	1.26E-05	2.79E-05	1.02E-05
210_WB	1.25E-04	3.95E-05	9.97E-05	3.16E-05	4.98E-05	1.58E-05	4.82E-05	9.59E-06
210_WBN	1.13E-04	3.58E-05	9.03E-05	2.86E-05	4.52E-05	1.43E-05	4.37E-05	8.69E-06
210_WBF	4.17E-05	1.32E-05	3.82E-05	1.21E-05	1.91E-05	6.05E-06	1.85E-05	3.67E-06
210_EB	4.22E-05	1.34E-05	7.49E-05	2.38E-05	3.75E-05	1.19E-05	3.63E-05	7.21E-06
210_EBN	5.67E-05	1.80E-05	4.04E-05	1.28E-05	2.02E-05	6.41E-06	1.95E-05	3.88E-06
210_EBF	6.68E-05	2.12E-05	1.19E-04	3.76E-05	5.93E-05	1.88E-05	5.74E-05	1.14E-05
CHERR_N1	1.74E-04	5.52E-05	1.94E-04	6.17E-05	9.72E-05	3.08E-05	9.41E-05	1.87E-05
CHERR_N2	1.04E-04	3.31E-05	1.15E-04	3.65E-05	5.76E-05	1.83E-05	5.58E-05	1.11E-05
CHERR_S	4.94E-04	1.56E-04	4.75E-04	1.51E-04	2.37E-04	7.53E-05	2.30E-04	4.57E-05
BASELINE	1.47E-04	4.65E-05	1.41E-04	4.48E-05	7.06E-05	2.24E-05	6.83E-05	1.36E-05
PAREA1 (running exhaust)	1.40E-03	2.76E-04	1.62E-03	3.19E-04	8.11E-04	1.60E-04	7.88E-04	7.97E-05
PAREA1 (idling exhaust)	1.03E-02	1.89E-04	1.19E-02	2.20E-04	5.95E-03	1.10E-04	5.89E-03	8.64E-05
PAREA1 (total)	1.17E-02	4.65E-04	1.35E-02	5.40E-04	6.76E-03	2.70E-04	6.68E-03	1.66E-04

Source: PCR Services Corporation, 2014.

1. The daily emissions rate is used to assess acute impacts. For the purposes of this analysis, it is assumed the emissions during a single day are emitted over a 12-hour period.



Receptors
Planning Area 41 (Proposed High Cube Warehouse)
Roadway Sources within a ¼ mile of Planning Area 41*

* In order to model potential impacts from truck travel and TRUs at the nearest existing sensitive receptors, the distance along the portion of Cherry Avenue to south of Planning Area 41 was extended to the intersection of Cherry Avenue and Baseline Avenue and includes a one-quarter mile segment along Baseline Avenue, to the west of Cherry Avenue.

PCR

N
0 0.5 km

Proposed High Cube Warehouse Distribution Center Diesel Truck Health Risk Assessment – AERMOD Source-Receptor Grid

Westgate Specific Plan
Source: PCR Services Corporation, 2014.

FIGURE
1

Table WHRA-8
Diesel Exhaust Health Risk Factors and Acute Speciation

Pollutant	CAS Number	Inhalation CPF $(mg/kg\text{-}day)^{-1}$	Chronic Inhalation REL ($\mu g/m^3$)	Chronic Inhalation Target Organ*	Acute Inhalation (1-Hour) REL ($\mu g/m^3$)	Acute Inhalation (1-Hour) Target Organ*	Acute Inhalation (8-Hour) REL ($\mu g/m^3$)	Acute Inhalation (8-Hour) Target Organ*	Weight Fraction
DPM	9901	1.1	5	RESP	—	—	—	—	—
Organics									***TOG Fraction***
Acetaldehyde	75070				470	EYE, RESP	300	RESP	0.07350
Benzene	71432				1,300	DEV, HEM, IMMUN, REPRO	—	—	0.02000
Formaldehyde	50000				55	EYE	9	RESP	0.14710
Methanol	67561				28,000	NS	—	—	0.00030
MEK	78933				13,000	EYE, RESP	—	—	0.01480
Styrene	100425				21,000	DEV, EYE, REPRO, RESP	—	—	0.00060
Toluene	108883				37,000	DEV, EYE, NS, REPRO, RESP	—	—	0.01470
Xylenes	1330207				22,000	EYE, NS, RESP	—	—	0.01050
Particulates									***PM10 Fraction***
Arsenic	7440382				0.2	CVS, DEV, NS, REPRO	0.015	CVS, DEV, NS, REPRO, RESP, SK	0.000005
Chlorine	7782505				210	EYE, RESP	—	—	0.000344
Copper	7440508				100	RESP	—	—	0.000025
Manganese	7439965				—	—	0.17	NS	0.000040
Mercury	7439976				0.6	DEV, NS, REPRO	0.06	DEV, KIDN, NS, REPRO	0.000030
Nickel	7440020				0.2	IMMUN	0.06	IMMUN, RESP	0.000019
Sulfates	9960				120	RESP	—	—	0.017429
Vanadium	7440622				30	EYE, RESP	—	—	0.000029

Sources:

California Air Resources Board, "Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values," "OEHHA/ARB Approved Chronic Reference Exposure Levels and Target Organs," "OEHHA/ARB Approved Acute Reference Exposure Levels and Target Organs," and "OEHHA/ARB Approved 8-Hour Reference Exposure Levels and Target Organs," http://www.arb.ca.gov/toxics/healthval/healthval.htm. Tables last updated: January 30, 2014. Downloaded 03/13/2014.

California Air Resources Board, "Organic Gas Speciation Profile Reference Information," (09/20/12, Profile 818), and "CEIDARS Particulate Matter (PM) Speciation Profiles," (09/20/12, Profile 425), http://arb.ca.gov/ei/speciate/dnldoptvv10001.php. Downloaded 03/13/2014.

* Key to Toxicological Endpoints

ALIM	Alimentary Tract	IMMUN	Immune System
BN	Bone	KIDN	Kidney
CVS	Cardiovascular System	NS	Nervous System
DEV	Developmental System	REPRO	Reproductive System
ENDC	Endocrine System	RESP	Respiratory System
EYE	Eye	SK	Skin
HEM	Hematologic System		

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Table WHRA-9
Maximum Individual Cancer Risk (MICR)

Receptor	Pollutant	CPF [1]	CONC	DBR [2]	A	EF	ED	AT	Dose	MICR	Threshold	Over
MEI Worker	DPM	1.10E+00	7.70E-03	149	1	245	40	25550	0.44	0.48	10	NO
MEI Residential	DPM	1.10E+00	7.70E-03	302	1	350	70	25550	2.23	2.45	10	NO

1. California Air Resources Board, "Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values," http://www.arb.ca.gov/toxics/healthval/healthval.htm. Tables last updated: January 30, 2014. Downloaded 03/13/2014.
2. California Air Pollution Control Officer's Association, Health Risk Assessments for Proposed Land Use Projects, July 2009.

Exposure factors used to calculate cancer risk:

CPF	Cancer Potency Factor $(mg/kg\text{-}day)^{-1}$.
CONC	Pollutant Concentration ($\mu g/m^3$) from AERMOD.
DBR	Daily breathing rate (L/kg (body weight) per day).
A	Inhalation absorption factor (default = 1).
EF	Exposure frequency (days/year).
ED	Exposure duration (years).
AT	Average time period over which exposure is averaged in days (days).
Dose	Dose = DBR × A × EF × ED / AT.

Table WHRA-10
Maximum Noncancer Chronic Hazards / Toxicological Endpoints

Receptor Group	Pollutant	CREL[1]	CONC	WFrac	$CONC_{WF}$	HI	ALIM	BN	CVS	DEV	ENDC	EYE	HEM	IMMUN	KIDN	NS	REPRO	RESP	SK	Threshold	Over
MEI Sensitive	DPM	5.00E+00	2.92E-01	1	2.92E-01	5.84E-02	-	-	-	-	-	-	-	-	-	-	-	5.84E-02	-	1.0	NO

[1] California Air Resources Board, "Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values" and "OEHHA/ARB Approved Chronic Reference Exposure Levels and Target Organs," http://www.arb.ca.gov/toxics/healthval/healthval.htm. Tables last updated: January 30, 2014. Downloaded 03/13/2014.

Table WHRA-11
Maximum Noncancer Acute (1-Hour) Hazards / Toxicological Endpoints

Receptor Group	Pollutant	AREL[1]	CONC	WFrac	$CONC_{WF}$	HI	ALIM	BN	CVS	DEV	ENDC	EYE	HEM	IMMUN	KIDN	NS	REPRO	RESP	SK	Threshold	Over
MEI Residential	Acetaldehyde	4.70E+02	2.43E+00	0.0735	1.79E-01	3.80E-04	-	-	-	-	-	3.80E-04	-	-	-	-	-	3.80E-04	-	1.0	NO
	Benzene	1.30E+03	2.43E+00	0.02	4.86E-02	3.74E-05	-	-	-	3.74E-05	-	-	3.74E-05	3.74E-05	-	-	3.74E-05	-	-	1.0	NO
	Formaldehyde	5.50E+01	2.43E+00	0.1471	3.58E-01	6.51E-03	-	-	-	-	-	6.51E-03	-	-	-	-	-	-	-	1.0	NO
	Methanol	2.80E+04	2.43E+00	0.0003	7.30E-04	2.61E-08	-	-	-	-	-	-	-	-	-	2.61E-08	-	-	-	1.0	NO
	MEK	1.30E+04	2.43E+00	0.0148	3.60E-02	2.77E-06	-	-	-	-	-	2.77E-06	-	-	-	-	-	2.77E-06	-	1.0	NO
	Styrene	2.10E+04	2.43E+00	0.0006	1.46E-03	6.95E-08	-	-	-	6.95E-08	-	6.95E-08	-	-	-	-	6.95E-08	6.95E-08	-	1.0	NO
	Toluene	3.70E+04	2.43E+00	0.0147	3.58E-02	9.66E-07	-	-	-	9.66E-07	-	9.66E-07	-	-	-	9.66E-07	9.66E-07	9.66E-07	-	1.0	NO
	Xylenes	2.20E+04	2.43E+00	0.0105	2.55E-02	1.16E-06	-	-	-	-	-	1.16E-06	-	-	-	1.16E-06	-	1.16E-06	-	1.0	NO
	Arsenic	2.00E-01	1.04E-01	0.000005	5.19E-07	2.60E-06	-	-	2.60E-06	2.60E-06	-	-	-	-	-	2.60E-06	2.60E-06	-	-	1.0	NO
	Chlorine	2.10E+02	1.04E-01	0.000344	3.57E-05	1.70E-07	-	-	-	-	-	1.70E-07	-	-	-	-	-	1.70E-07	-	1.0	NO
	Copper	1.00E+02	1.04E-01	0.000025	2.60E-06	2.60E-08	-	-	-	-	-	-	-	-	-	-	-	2.60E-08	-	1.0	NO
	Manganese	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Mercury	6.00E-01	1.04E-01	0.00003	3.12E-06	5.19E-06	-	-	-	5.19E-06	-	-	-	-	-	5.19E-06	5.19E-06	-	-	1.0	NO
	Nickel	2.00E-01	1.04E-01	0.000019	1.97E-06	9.87E-06	-	-	-	-	-	-	-	9.87E-06	-	-	-	-	-	1.0	NO
	Sulfates	1.20E+02	1.04E-01	0.017429	1.81E-03	1.51E-05	-	-	-	-	-	-	-	-	-	-	-	1.51E-05	-	1.0	NO
	Vanadium	3.00E+01	1.04E-01	0.000029	3.01E-06	1.00E-07	-	-	-	-	-	1.00E-07	-	-	-	-	-	1.00E-07	-	1.0	NO
	Total						-	-	0.0000	0.0000	-	0.0069	0.0000	0.0000	-	0.0000	0.0000	0.0004	-	1.0	NO

[1] California Air Resources Board, "Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values" and "OEHHA/ARB Approved Acute Reference Exposure Levels and Target Organs," http://www.arb.ca.gov/toxics/healthval/healthval.htm. Tables last updated: January 30, 2014. Downloaded 03/13/2014.

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Table WHRA-12
Maximum Noncancer Acute (8-Hour) Hazards / Toxicological Endpoints

Receptor Group	Pollutant	AREL[1]	CONC	WFrac	$CONC_{WF}$	HI	ALIM	BN	CVS	DEV	ENDC	EYE	HEM	IMMUN	KIDN	NS	REPRO	RESP	SK	Threshold	Over
MEI Sensitive	Acetaldehyde	3.00E+02	1.84E+00	0.0735	1.35E-01	4.50E-04	-	-	-	-	-	-	-	-	-	-	-	4.50E-04	-	1.0	NO
	Benzene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Formaldehyde	9.00E+00	1.84E+00	0.1471	2.70E-01	3.00E-02	-	-	-	-	-	-	-	-	-	-	-	3.00E-02	-	1.0	NO
	Methanol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	MEK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Styrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Toluene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Xylenes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Arsenic	1.50E-02	7.55E-02	0.000005	3.78E-07	2.52E-05	-	-	2.52E-05	2.52E-05	-	-	-	-	-	2.52E-05	2.52E-05	2.52E-05	2.52E-05	1.0	NO
	Chlorine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Manganese	1.70E-01	7.55E-02	0.00004	3.02E-06	1.78E-05	-	-	-	-	-	-	-	-	-	1.78E-05	-	-	-	-	-
	Mercury	6.00E-02	7.55E-02	0.00003	2.27E-06	3.78E-05	-	-	-	3.78E-05	-	-	-	-	3.78E-05	3.78E-05	3.78E-05	-	-	1.0	NO
	Nickel	6.00E-02	7.55E-02	0.000019	1.44E-06	2.39E-05	-	-	-	-	-	-	-	2.39E-05	-	-	-	2.39E-05	-	1.0	NO
	Sulfates	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Vanadium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total						-	-	0.0000	0.0001	-	-	-	0.0000	0.0000	0.0001	0.0001	0.0305	0.0000	1.0	NO

[1] California Air Resources Board, "Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values" and "OEHHA/ARB Approved 8-Hour Reference Exposure Levels and Target Organs," http://www.arb.ca.gov/toxics/healthval/healthval.htm. Tables last updated: January 30, 2014. Downloaded 03/13/2014.

Where:

AREL	Acute Reference Exposure Level
$CONC_{WF}$	Pollutant Concentration ($\mu g/m^3$) multiplied by the weight fraction
CREL	Chronic Reference Exposure Level
HI	Hazard Index
MEI	Maximally Exposed Individual
WFrac	Weight fraction of speciated component

* Key to Toxicological Endpoints

ALIM	Alimentary Tract	EYE	Eye	NS	Nervous System
BN	Bone	HEM	Hematologic System	REPRO	Reproductive System
CVS	Cardiovascular System	IMMUN	Immune System	RESP	Respiratory System
DEV	Developmental System	KIDN	Kidney	SK	Skin
ENDC	Endocrine System				

EMFAC2011 Emission Rates
Region Type: Air Basin
Region: South Coast
Calendar Year: 2018
Season: Annual
Vehicle Classification: EMFAC2011 Categories

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	VMT (miles/day)	ROG_RUNEX (gms/mile)	TOG_RUNEX (gms/mile)	CO_RUNEX (gms/mile)	NOX_RUNEX (gms/mile)	CO2_RUNEX (gms/mile)	CO2_RUNEX (Pavley I+LCFS) (gms/mile)	PM10_RUNEX (gms/mile)	PM2_5_RUNEX (gms/mile)
South Coas	2018	Annual	T6 Public	DSL	Aggregated	15	1,731.7497	0.2295	0.2613	0.5022	8.0056	1,774.9911	1,659.6166	0.0550	0.0506
South Coas	2018	Annual	T6 Public	DSL	Aggregated	25	10,297.8952	0.0826	0.0940	0.2698	5.6851	1,306.5032	1,221.5805	0.0338	0.0311
South Coas	2018	Annual	T6 Public	DSL	Aggregated	45	12,992.4060	0.0464	0.0529	0.2145	4.8748	1,067.7087	998.3076	0.0303	0.0279
South Coas	2018	Annual	T7 Public	DSL	Aggregated	15	1,322.2039	0.3716	0.4231	1.0050	17.0203	2,771.8892	2,591.7164	0.1142	0.1051
South Coas	2018	Annual	T7 Public	DSL	Aggregated	25	8,066.5834	0.1318	0.1501	0.5820	12.2563	2,040.2818	1,907.6635	0.0684	0.0629
South Coas	2018	Annual	T7 Public	DSL	Aggregated	45	9,617.7870	0.0737	0.0839	0.4049	10.6851	1,667.3719	1,558.9927	0.0539	0.0496

EMFAC2011 Emission Rates
Region Type: Air Basin
Region: South Coast
Calendar Year: 2020
Season: Annual
Vehicle Classification: EMFAC2011 Categories

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	VMT (miles/day)	ROG_RUNEX (gms/mile)	TOG_RUNEX (gms/mile)	CO_RUNEX (gms/mile)	NOX_RUNEX (gms/mile)	CO2_RUNEX (gms/mile)	CO2_RUNEX (Pavley I+LCFS) (gms/mile)	PM10_RUNEX (gms/mile)	PM2_5_RUNEX (gms/mile)
South Coas	2020	Annual	T6 Public	DSL	Aggregated	15	1,686.4400	0.2400	0.2732	0.5245	6.6234	1,767.3415	1,590.6073	0.0477	0.0439
South Coas	2020	Annual	T6 Public	DSL	Aggregated	25	9,946.0693	0.0873	0.0994	0.2775	4.6764	1,300.8726	1,170.7853	0.0310	0.0285
South Coas	2020	Annual	T6 Public	DSL	Aggregated	45	12,979.4925	0.0497	0.0566	0.2318	3.9398	1,063.1072	956.7965	0.0297	0.0274
South Coas	2020	Annual	T7 Public	DSL	Aggregated	15	1,297.2781	0.3937	0.4482	1.0375	14.9465	2,761.0522	2,484.9470	0.0993	0.0914
South Coas	2020	Annual	T7 Public	DSL	Aggregated	25	7,737.0535	0.1419	0.1615	0.5852	10.6776	2,032.3051	1,829.0746	0.0623	0.0573
South Coas	2020	Annual	T7 Public	DSL	Aggregated	45	9,729.9394	0.0805	0.0916	0.4380	9.0637	1,660.8531	1,494.7678	0.0529	0.0486

EMFAC2011 Emission Rates
Region Type: Air Basin
Region: South Coast
Calendar Year: 2025
Season: Annual
Vehicle Classification: EMFAC2011 Categories

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	VMT (miles/day)	ROG_RUNEX (gms/mile)	TOG_RUNEX (gms/mile)	CO_RUNEX (gms/mile)	NOX_RUNEX (gms/mile)	CO2_RUNEX (gms/mile)	CO2_RUNEX (Pavley I+LCFS) (gms/mile)	PM10_RUNEX (gms/mile)	PM2_5_RUNEX (gms/mile)
South Coas	2025	Annual	T6 Public	DSL	Aggregated	15	2,108.1678	0.2581	0.2939	0.5623	3.7954	1,751.0992	1,575.9892	0.0356	0.0328
South Coas	2025	Annual	T6 Public	DSL	Aggregated	25	11,033.7309	0.0956	0.1089	0.2913	2.6506	1,288.9172	1,160.0255	0.0261	0.0240
South Coas	2025	Annual	T6 Public	DSL	Aggregated	45	14,443.7825	0.0554	0.0630	0.2610	2.1522	1,053.3370	948.0033	0.0284	0.0262
South Coas	2025	Annual	T7 Public	DSL	Aggregated	15	1,547.4600	0.4705	0.5356	1.1915	9.5799	2,727.1293	2,454.4163	0.0742	0.0683
South Coas	2025	Annual	T7 Public	DSL	Aggregated	25	8,641.4717	0.1726	0.1965	0.6375	6.7945	2,007.3358	1,806.6022	0.0493	0.0454
South Coas	2025	Annual	T7 Public	DSL	Aggregated	45	10,868.9764	0.0992	0.1130	0.5334	5.7045	1,640.4475	1,476.4027	0.0468	0.0431

EMFAC2011 Emission Rates
Region Type: Air Basin
Region: South Coast
Calendar Year: 2030
Season: Annual
Vehicle Classification: EMFAC2011 Categories

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	VMT (miles/day)	ROG_RUNEX (gms/mile)	TOG_RUNEX (gms/mile)	CO_RUNEX (gms/mile)	NOX_RUNEX (gms/mile)	CO2_RUNEX (gms/mile)	CO2_RUNEX (Pavley I+LCFS) (gms/mile)	PM10_RUNEX (gms/mile)	PM2_5_RUNEX (gms/mile)
South Coas	2030	Annual	T6 Public	DSL	Aggregated	15	2,327.5876	0.2623	0.2986	0.5697	2.3139	1,742.3748	1,568.1374	0.0296	0.0273
South Coas	2030	Annual	T6 Public	DSL	Aggregated	25	12,182.1305	0.0980	0.1116	0.2929	1.5962	1,282.4956	1,154.2461	0.0238	0.0219
South Coas	2030	Annual	T6 Public	DSL	Aggregated	45	15,947.1030	0.0573	0.0652	0.2706	1.2304	1,048.0891	943.2802	0.0277	0.0255
South Coas	2030	Annual	T7 Public	DSL	Aggregated	15	1,708.5209	0.4972	0.5660	1.2368	6.1071	2,703.3089	2,432.9780	0.0593	0.0546
South Coas	2030	Annual	T7 Public	DSL	Aggregated	25	9,540.8831	0.1837	0.2091	0.6466	4.3248	1,989.8025	1,790.8222	0.0414	0.0381
South Coas	2030	Annual	T7 Public	DSL	Aggregated	45	12,000.2282	0.1061	0.1208	0.5670	3.6791	1,626.1188	1,463.5070	0.0426	0.0392

EMFAC2011 Emission Rates
Region Type: Air Basin
Region: South Coast
Calendar Year: 2035
Season: Annual
Vehicle Classification: EMFAC2011 Categories

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	VMT (miles/day)	ROG_RUNEX (gms/mile)	TOG_RUNEX (gms/mile)	CO_RUNEX (gms/mile)	NOX_RUNEX (gms/mile)	CO2_RUNEX (gms/mile)	CO2_RUNEX (Pavley I+LCFS) (gms/mile)	PM10_RUNEX (gms/mile)	PM2_5_RUNEX (gms/mile)
South Coas	2035	Annual	T6 Public	DSL	Aggregated	15	2,477.1245	0.2631	0.2995	0.5707	1.6620	1,738.4515	1,564.6063	0.0271	0.0249
South Coas	2035	Annual	T6 Public	DSL	Aggregated	25	13,414.6989	0.0987	0.1123	0.2924	1.1332	1,279.6078	1,151.6470	0.0228	0.0210
South Coas	2035	Annual	T6 Public	DSL	Aggregated	45	18,231.7702	0.0579	0.0659	0.2738	0.8292	1,045.7291	941.1561	0.0274	0.0252
South Coas	2035	Annual	T7 Public	DSL	Aggregated	15	1,844.8719	0.5059	0.5759	1.2387	4.4172	2,694.9493	2,425.4544	0.0483	0.0444
South Coas	2035	Annual	T7 Public	DSL	Aggregated	25	10,563.5774	0.1883	0.2144	0.6379	3.0765	1,983.6493	1,785.2844	0.0368	0.0339
South Coas	2035	Annual	T7 Public	DSL	Aggregated	45	13,819.2371	0.1096	0.1248	0.5827	2.4884	1,621.0903	1,458.9813	0.0415	0.0382

EMFAC2011 Idling Emission Rates
Region: South Coast
Calendar Year: 2018, 2020, 2025, 2030, 2035
Season: Annual

CY	EMFAC2007 Vehicle Category	Fuel_Type	air_basin	season	HC (g/hr-veh)	CO (g/hr-veh)	NOX (g/hr-veh)	PM10 (g/hr-veh)	PM2.5 (g/hr-veh)	CO2 (g/hr-veh)	CO2 (with Pavley+LCFS) (g/hr-veh)	TOG (g/hr-veh)	ROG (g/hr-veh)	SOX (g/hr-veh)
2018	MHDT	D	SC	a	1.4988	22.0504	66.9316	0.2051	0.1887	7,581.0003	7,088.2353	2.1608	1.8981	0.0723
2018	HHDT	D	SC	a	5.0317	35.7854	52.0009	0.1227	0.1129	7,043.5957	6,585.7620	7.2542	6.3722	0.0672
2020	MHDT	D	SC	a	1.5213	22.6466	56.2243	0.1331	0.1224	7,626.8865	6,864.1979	2.1932	1.9265	0.0728
2020	HHDT	D	SC	a	5.3186	37.9082	47.2198	0.1168	0.1075	7,042.8963	6,338.6066	7.6679	6.7355	0.0672
2025	MHDT	D	SC	a	1.6723	25.0166	40.2036	0.0921	0.0847	7,632.6786	6,869.4107	2.4109	2.1178	0.0728
2025	HHDT	D	SC	a	5.7741	41.2268	39.4871	0.1096	0.1008	7,034.5905	6,331.1314	8.3246	7.3124	0.0671
2030	MHDT	D	SC	a	1.6855	25.2323	39.2675	0.0910	0.0837	7,636.5624	6,872.9061	2.4300	2.1345	0.0729
2030	HHDT	D	SC	a	5.7996	41.4243	39.0765	0.1086	0.0999	7,035.2244	6,331.7019	8.3613	7.3447	0.0671
2035	MHDT	D	SC	a	1.6926	25.3453	38.7672	0.0905	0.0832	7,638.1167	6,874.3051	2.4402	2.1435	0.0729
2035	HHDT	D	SC	a	5.8171	41.5579	38.7926	0.1081	0.0994	7,035.6051	6,332.0446	8.3865	7.3668	0.0671

Appendix B.4
Freeway Health Risk Assessment Results

- Freeway Health Risk Assessment Results

Fontana - Westgate Specific Plan

1 mile = 1 609.344 meter

Freeway Health Risk Assessment

Traffic Data

	Average Hourly Trips[a]			Emission Factor (g/mi)[b]		Emission Rates (g/s)				
Main Link Freeway Segment	**Non-Truck**	**Truck**	**Segment Length (mi)**	**Non-Truck ROG**	**Truck DPM**	**Non-Truck ROG**	**Truck DPM**			
I-15, Foothill to Baseline	2881	447	0.55	0.049	0.041	0.0216	0.0028		South to North	West to East
I-15, Baseline to Interchange	4610	447	1.46	0.049	0.041	0.0908	0.0074		Foothill	Interchange
I-15, Interchange to Summit	3660	216	2.04	0.049	0.041	0.1009	0.0050	Input these values into AERMOD	Baseline	Cherry
CA-210, Interchange to Cherry	4563	227	0.90	0.049	0.041	0.0558	0.0023		Interchange	Beech
CA-210, Cherry to Beech	4082	277	1.16	0.049	0.041	0.0641	0.0036		Summit	
Freeway Ramps										
Cherry Avenue On-Ramp, WB 210	282	15	0.17	0.049	0.041	0.00066	0.00003			
Cherry Avenue On-Ramp, EB 210	92	5	0.18	0.049	0.041	0.00022	0.00001			
Cherry Avenue Off-Ramp, WB 210	80	4	0.16	0.049	0.041	0.00018	0.00001			
Cherry Avenue Off-Ramp, EB 210	294	15	0.27	0.049	0.041	0.00107	0.00005			

a Data from Caltrans Performance Measurement System (PeMS). http://pems.dot.ca.gov/

b Data from EMFAC 2011 Web Based Data Access. http://www.arb.ca.gov/jpub/webapp//EMFAC2011WebApp/rateSelectionPage_1.jsp

Fontana - Westgate Specific Plan

I-15 Foothill to Baseline

	NB			SB			Combined		Percent of Total		Non-HDT		Non-Truck	Truck
Hour	Flow	Truck	Speed	Flow	Truck	Speed	Flow	Truck	Flow	Truck	Flow	Percentage	HROFDY (Hour of Day Ad ustment)	HROFDY (Hour of Day Ad ustment)
0:00	609	173	71	710	59	63	1319	232	1.7%	2.2%	1087	1.6%	0.38	0.52
1:00	539	162	72	584	68	61	1123	230	1.4%	2.1%	893	1.3%	0.31	0.52
2:00	511	151	72	589	85	63	1100	236	1.4%	2.2%	864	1.2%	0.30	0.53
3:00	531	182	72	862	104	66	1393	286	1.7%	2.7%	1106	1.6%	0.38	0.64
4:00	587	271	71	1676	74	66	2264	345	2.8%	3.2%	1918	2.8%	0.67	0.77
5:00	739	339	71	2564	42	67	3303	381	4.1%	3.5%	2922	4.2%	1.01	0.85
6:00	904	365	72	3004	36	66	3908	400	4.9%	3.7%	3507	5.1%	1.22	0.90
7:00	1035	399	72	3157	66	66	4192	465	5.2%	4.3%	3727	5.4%	1.29	1.04
8:00	1135	422	72	2778	96	65	3913	519	4.9%	4.8%	3395	4.9%	1.18	1.16
9:00	1228	465	72	2715	113	64	3943	578	4.9%	5.4%	3365	4.9%	1.17	1.29
10:00	1351	491	71	2688	118	64	4038	609	5.1%	5.7%	3429	5.0%	1.19	1.36
11:00	1423	511	72	2760	115	64	4183	626	5.2%	5.8%	3558	5.1%	1.24	1.40
12:00	1463	526	72	2915	104	65	4378	630	5.5%	5.9%	3748	5.4%	1.30	1.41
13:00	1514	532	71	3068	91	65	4582	624	5.7%	5.8%	3959	5.7%	1.37	1.39
14:00	1547	526	72	3158	75	66	4705	602	5.9%	5.6%	4103	5.9%	1.42	1.35
15:00	1625	507	72	3219	67	66	4844	574	6.1%	5.3%	4271	6.2%	1.48	1.28
16:00	1711	494	72	3163	64	66	4874	557	6.1%	5.2%	4317	6.2%	1.50	1.25
17:00	1694	466	71	3001	69	67	4695	534	5.9%	5.0%	4161	6.0%	1.44	1.19
18:00	1483	407	71	2625	67	67	4108	474	5.1%	4.4%	3633	5.3%	1.26	1.06
19:00	1257	380	72	2166	63	67	3422	443	4.3%	4.1%	2980	4.3%	1.03	0.99
20:00	1113	357	72	1882	61	67	2995	418	3.7%	3.9%	2577	3.7%	0.89	0.93
21:00	1001	329	72	1652	61	66	2654	390	3.3%	3.6%	2264	3.3%	0.79	0.87
22:00	885	261	72	1335	59	65	2220	320	2.8%	3.0%	1900	2.7%	0.66	0.72
23:00	739	205	72	978	56	66	1716	261	2.1%	2.4%	1456	2.1%	0.51	0.58
Total	26624	8922		53249	1812		79873	10733			69140			
Average							3328	447			2881			

Emission Factor Calculation

Emission Factor @ 65 MPH (g/mi)

Emission Rate

I-15 Baseline to Interchange

	NB			SB			Combined		Percent of Total		Non-HDT			
Hour	Flow	Truck	Speed	Flow	Truck	Speed	Flow	Truck	Flow	Truck	Flow	Percentage	HROFDY (Hour of Day Ad ustment)	HROFDY (Hour of Day Ad ustment)
0:00	888	173	66	710	59	63	1597	232	2.0%	2.2%	1365	2.0%	0.30	0.52
1:00	722	162	66	584	68	61	1307	230	1.6%	2.1%	1076	1.6%	0.23	0.52
2:00	629	151	64	589	85	63	1217	236	1.5%	2.2%	981	1.4%	0.21	0.53
3:00	805	182	64	862	104	66	1667	286	2.1%	2.7%	1381	2.0%	0.30	0.64
4:00	1360	271	66	1676	74	66	3036	345	3.8%	3.2%	2691	3.9%	0.58	0.77
5:00	2027	339	68	2564	42	67	4591	381	5.7%	3.5%	4210	6.1%	0.91	0.85
6:00	2468	365	69	3004	36	66	5472	400	6.9%	3.7%	5072	7.3%	1.10	0.90
7:00	2613	399	68	3157	66	66	5770	465	7.2%	4.3%	5305	7.7%	1.15	1.04
8:00	2785	422	67	2778	96	65	5563	519	7.0%	4.8%	5044	7.3%	1.09	1.16
9:00	3083	465	67	2715	113	64	5797	578	7.3%	5.4%	5220	7.5%	1.13	1.29
10:00	3386	491	66	2688	118	64	6074	609	7.6%	5.7%	5465	7.9%	1.19	1.36
11:00	3666	511	66	2760	115	64	6426	626	8.0%	5.8%	5800	8.4%	1.26	1.40
12:00	3949	526	66	2915	104	65	6863	630	8.6%	5.9%	6233	9.0%	1.35	1.41
13:00	4484	532	66	3068	91	65	7552	624	9.5%	5.8%	6928	10.0%	1.50	1.39
14:00	4884	526	66	3158	75	66	8042	602	10.1%	5.6%	7440	10.8%	1.61	1.35
15:00	5015	507	66	3219	67	66	8234	574	10.3%	5.3%	7660	11.1%	1.66	1.28
16:00	4986	494	65	3163	64	66	8149	557	10.2%	5.2%	7591	11.0%	1.65	1.25
17:00	4449	466	65	3001	69	67	7450	534	9.3%	5.0%	6916	10.0%	1.50	1.19
18:00	3736	407	66	2625	67	67	6362	474	8.0%	4.4%	5887	8.5%	1.28	1.06
19:00	3351	380	66	2166	63	67	5517	443	6.9%	4.1%	5074	7.3%	1.10	0.99
20:00	3121	357	67	1882	61	67	5003	418	6.3%	3.9%	4585	6.6%	0.99	0.93
21:00	2594	329	67	1652	61	66	4246	390	5.3%	3.6%	3856	5.6%	0.84	0.87
22:00	1847	261	67	1335	59	65	3182	320	4.0%	3.0%	2862	4.1%	0.62	0.72
23:00	1290	205	68	978	56	66	2268	261	2.8%	2.4%	2007	2.9%	0.44	0.58

Total	68136	8922		53249	1812		**121385**	**10733**			**110652**	
Average							5058	447			4610	

I-15 Interchange to Summit

	NB			SB			Combined		Percent of Total		Non-HDT	
Hour	**Flow**	**Truck**	**Speed**	**Flow**	**Truck**	**Speed**	**Flow**	**Truck**	**Flow**	**Truck**	**Flow**	**Percentage**
0:00	468	68	66	718	59	71	1187	127	1.5%	1.2%	1059	1.5%
1:00	382	67	63	579	68	71	961	135	1.2%	1.3%	825	1.2%
2:00	358	65	62	565	85	71	923	150	1.2%	1.4%	773	1.1%
3:00	496	80	63	813	104	71	1309	184	1.6%	1.7%	1125	1.6%
4:00	819	108	65	1553	74	71	2372	182	3.0%	1.7%	2190	3.2%
5:00	1185	134	66	2400	42	70	3585	176	4.5%	1.6%	3409	4.9%
6:00	1429	141	67	2500	36	70	3929	177	4.9%	1.6%	3752	5.4%
7:00	1577	157	65	2725	66	71	4303	223	5.4%	2.1%	4080	5.9%
8:00	1742	169	62	2559	96	71	4301	266	5.4%	2.5%	4035	5.8%
9:00	2001	195	60	2642	113	71	4643	308	5.8%	2.9%	4335	6.3%
10:00	2175	203	59	2732	118	71	4907	321	6.1%	3.0%	4586	6.6%
11:00	2267	203	57	2860	115	70	5127	318	6.4%	3.0%	4809	7.0%
12:00	2361	205	57	3053	104	70	5414	309	6.8%	2.9%	5104	7.4%
13:00	2588	195	57	3240	91	69	5828	286	7.3%	2.7%	5541	8.0%
14:00	2808	184	58	3380	75	69	6188	259	7.7%	2.4%	5929	8.6%
15:00	2863	170	58	3415	67	69	6278	238	7.9%	2.2%	6041	8.7%
16:00	2824	160	59	3416	64	69	6240	224	7.8%	2.1%	6016	8.7%
17:00	2554	163	59	3193	69	69	5747	231	7.2%	2.2%	5516	8.0%
18:00	2178	145	61	2785	67	70	4963	212	6.2%	2.0%	4751	6.9%
19:00	1956	138	62	2234	63	71	4190	201	5.2%	1.9%	3989	5.8%
20:00	1754	128	63	1891	61	71	3645	189	4.6%	1.8%	3456	5.0%
21:00	1412	123	65	1626	61	72	3038	184	3.8%	1.7%	2854	4.1%
22:00	982	98	66	1308	59	72	2289	157	2.9%	1.5%	2132	3.1%
23:00	680	76	68	983	56	72	1663	133	2.1%	1.2%	1530	2.2%
Total	39860	3378		53170	1812		**93030**	**5190**			**87840**	
Average							3876	216			3660	

HROFDY (Hour of Day Ad ustment)	HROFDY (Hour of Day Ad ustment)
0.29	0.59
0.23	0.63
0.21	0.69
0.31	0.85
0.60	0.84
0.93	0.81
1.03	0.82
1.11	1.03
1.10	1.23
1.18	1.42
1.25	1.48
1.31	1.47
1.39	1.43
1.51	1.32
1.62	1.20
1.65	1.10
1.64	1.04
1.51	1.07
1.30	0.98
1.09	0.93
0.94	0.87
0.78	0.85
0.58	0.73
0.42	0.61

CA-210 Interchange to Cherry

	WB			EB			Combined		Percent of Total		Non-HDT	
Hour	**Flow**	**Truck**	**Speed**	**Flow**	**Truck**	**Speed**	**Flow**	**Truck**	**Flow**	**Truck**	**Flow**	**Percentage**
0:00	548	35	67	567	48	66	1115	83	1.4%	0.8%	1032	1.5%
1:00	527	31	66	410	43	65	938	73	1.2%	0.7%	865	1.3%
2:00	652	29	66	325	38	64	977	67	1.2%	0.6%	910	1.3%
3:00	1277	32	67	405	43	64	1682	75	2.1%	0.7%	1607	2.3%
4:00	2429	49	67	811	69	65	3240	118	4.1%	1.1%	3122	4.5%
5:00	2703	80	67	1796	119	66	4499	199	5.6%	1.9%	4300	6.2%
6:00	3449	102	66	2842	155	67	6292	258	7.9%	2.4%	6034	8.7%
7:00	2949	107	66	2731	162	67	5679	268	7.1%	2.5%	5411	7.8%
8:00	2788	117	66	2551	166	66	5339	283	6.7%	2.6%	5056	7.3%
9:00	2725	128	66	2754	176	66	5480	304	6.9%	2.8%	5175	7.5%
10:00	2806	141	66	3030	193	66	5836	334	7.3%	3.1%	5502	8.0%
11:00	2928	150	66	3293	209	66	6221	359	7.8%	3.3%	5862	8.5%
12:00	3052	150	67	3492	220	65	6545	370	8.2%	3.4%	6175	8.9%
13:00	3272	146	66	3951	235	65	7223	380	9.0%	3.5%	6843	9.9%
14:00	3393	125	67	4430	224	65	7823	348	9.8%	3.2%	7475	10.8%
15:00	3579	106	66	4525	198	65	8104	304	10.1%	2.8%	7801	11.3%
16:00	3714	92	66	4531	179	65	8244	271	10.3%	2.5%	7973	11.5%
17:00	3081	95	66	4105	181	65	7186	276	9.0%	2.6%	6910	10.0%
18:00	2324	99	67	3481	156	65	5805	255	7.3%	2.4%	5550	8.0%
19:00	2008	88	67	2995	135	66	5003	223	6.3%	2.1%	4780	6.9%
20:00	1767	76	68	2604	119	67	4371	194	5.5%	1.8%	4177	6.0%
21:00	1417	65	68	1969	105	67	3386	170	4.2%	1.6%	3216	4.7%
22:00	1020	54	67	1373	83	67	2393	137	3.0%	1.3%	2256	3.3%
23:00	710	43	67	879	64	67	1589	108	2.0%	1.0%	1482	2.1%
Total	55119	2137		59851	3319		**114970**	**5457**			**109514**	
Average							4790	227			4563	
								0.047461			0.952539	

HROFDY (Hour of Day Ad ustment)	HROFDY (Hour of Day Ad ustment)
0.23	0.37
0.19	0.32
0.20	0.29
0.35	0.33
0.68	0.52
0.94	0.87
1.32	1.13
1.19	1.18
1.11	1.24
1.13	1.34
1.21	1.47
1.28	1.58
1.35	1.63
1.50	1.67
1.64	1.53
1.71	1.34
1.75	1.19
1.51	1.21
1.22	1.12
1.05	0.98
0.92	0.86
0.70	0.75
0.49	0.60
0.32	0.47

CA-210 Cherry to Beech

	WB			EB			Combined		Percent of Total		Non-HDT	
Hour	Flow	Truck	Speed	Flow	Truck	Speed	Flow	Truck	Flow	Truck	Flow	Percentage
0:00	476	48	67	567	48	66	1043	96	1.3%	0.9%	947	1.4%
1:00	474	43	67	410	43	65	885	85	1.1%	0.8%	800	1.2%
2:00	598	38	66	325	38	64	923	76	1.2%	0.7%	847	1.2%
3:00	1172	43	67	405	43	64	1578	86	2.0%	0.8%	1492	2.2%
4:00	2110	69	67	811	69	65	2921	137	3.7%	1.3%	2784	4.0%
5:00	2273	119	67	1796	119	66	4069	238	5.1%	2.2%	3831	5.5%
6:00	2733	155	67	2842	155	67	5575	311	7.0%	2.9%	5264	7.6%
7:00	2258	162	67	2731	162	67	4988	323	6.2%	3.0%	4665	6.7%
8:00	2127	166	66	2551	166	66	4678	331	5.9%	3.1%	4347	6.3%
9:00	2141	176	66	2754	176	66	4895	352	6.1%	3.3%	4543	6.6%
10:00	2237	193	66	3030	193	66	5267	387	6.6%	3.6%	4880	7.1%
11:00	2370	209	66	3293	209	66	5663	418	7.1%	3.9%	5244	7.6%
12:00	2497	220	66	3492	220	65	5990	441	7.5%	4.1%	5549	8.0%
13:00	2650	235	66	3951	235	65	6601	469	8.3%	4.4%	6132	8.9%
14:00	2751	224	66	4430	224	65	7181	448	9.0%	4.2%	6734	9.7%
15:00	2930	198	66	4525	198	65	7455	397	9.3%	3.7%	7059	10.2%
16:00	3022	179	66	4531	179	65	7552	358	9.5%	3.3%	7195	10.4%
17:00	2447	181	66	4105	181	65	6552	361	8.2%	3.4%	6191	9.0%
18:00	1876	156	66	3481	156	65	5356	312	6.7%	2.9%	5044	7.3%
19:00	1624	135	67	2995	135	66	4618	270	5.8%	2.5%	4349	6.3%
20:00	1405	119	67	2604	119	67	4009	238	5.0%	2.2%	3771	5.5%
21:00	1143	105	68	1969	105	67	3112	211	3.9%	2.0%	2901	4.2%
22:00	848	83	67	1373	83	67	2221	167	2.8%	1.6%	2054	3.0%
23:00	595	64	67	879	64	67	1473	128	1.8%	1.2%	1345	1.9%
Total	44756	3319		59851	3319		**104607**	**6639**			**97968**	
Average							4359	277			4082	

HROFDY (Hour of Day Ad ustment)	HROFDY (Hour of Day Ad ustment)
0.23	0.35
0.20	0.31
0.21	0.28
0.37	0.31
0.68	0.50
0.94	0.86
1.29	1.12
1.14	1.17
1.06	1.20
1.11	1.27
1.20	1.40
1.28	1.51
1.36	1.59
1.50	1.70
1.65	1.62
1.73	1.43
1.76	1.29
1.52	1.31
1.24	1.13
1.07	0.97
0.92	0.86
0.71	0.76
0.50	0.60
0.33	0.46

Emission Factor Calculations

Note: Columns C through L are linked to previous tab. Do not edit.

				Emissions (tons/day)								Emission Rate (g/mi)							
Fleet	Speed (mph)	Index	VMT	ROG_RUNEX	TOG_RUNEX	CO_RUNEX	NOX_RUNEX	CO2_RUNEX	CO2_RUNEX(Pavley I+LCFS)	PM10_RUNEX	PM2_5_RUNEX	ROG	TOG	CO	NOx	CO2	CO2 (Pavley + LCFS)	PM10	PM2.5
Non-Truck	5	Non-Truck5	13,830	0.0026	0.0038	0.0359	0.0031	18.7719	14.4284	0.0002	0.0002	0.1678	0.2522	2.3560	0.2020	1231.1685	946.3008	0.0116	0.0107
Non-Truck	10	Non-Truck10	263,101	0.0332	0.0488	0.5876	0.0521	260.9958	200.6481	0.0021	0.0020	0.1144	0.1682	2.0258	0.1795	899.8211	691.7638	0.0074	0.0068
Non-Truck	15	Non-Truck15	398,894	0.0361	0.0524	0.8131	0.0676	309.8795	238.2030	0.0022	0.0020	0.0822	0.1192	1.8490	0.1536	704.6618	541.6704	0.0050	0.0046
Non-Truck	20	Non-Truck20	805,621	0.0544	0.0779	1.4730	0.1231	499.3110	383.8407	0.0031	0.0029	0.0612	0.0877	1.6585	0.1386	562.1933	432.1808	0.0035	0.0033
Non-Truck	25	Non-Truck25	3,019,616	0.1604	0.2270	5.0172	0.4237	1551.5667	1192.8083	0.0088	0.0081	0.0482	0.0682	1.5071	0.1273	466.0842	358.3147	0.0026	0.0024
Non-Truck	30	Non-Truck30	5,332,229	0.2353	0.3285	8.1108	0.7004	2354.6578	1810.3065	0.0122	0.0113	0.0400	0.0559	1.3797	0.1191	400.5573	307.9562	0.0021	0.0019
Non-Truck	35	Non-Truck35	5,001,692	0.1934	0.2666	7.0458	0.6259	1971.2499	1515.6054	0.0095	0.0088	0.0351	0.0484	1.2778	0.1135	357.4953	274.8621	0.0017	0.0016
Non-Truck	40	Non-Truck40	3,951,815	0.1412	0.1923	5.2117	0.4791	1442.5935	1109.1924	0.0065	0.0061	0.0324	0.0441	1.1963	0.1100	331.1257	254.5985	0.0015	0.0014
Non-Truck	45	Non-Truck45	2,929,172	0.1021	0.1376	3.6985	0.3472	1033.6408	794.7427	0.0044	0.0041	0.0316	0.0426	1.1453	0.1075	320.0887	246.1089	0.0014	0.0013
Non-Truck	50	Non-Truck50	2,479,831	0.0889	0.1185	3.0372	0.2932	876.3244	673.7847	0.0036	0.0034	0.0325	0.0433	1.1109	0.1073	320.5446	246.4590	0.0013	0.0012
Non-Truck	55	Non-Truck55	2,473,614	0.0960	0.1267	2.9992	0.2972	907.8422	698.0187	0.0037	0.0034	0.0352	0.0465	1.0998	0.1090	332.9079	255.9651	0.0013	0.0012
Non-Truck	60	Non-Truck60	2,761,996	0.1226	0.1594	3.3467	0.3511	1074.7676	826.4890	0.0044	0.0041	0.0403	0.0523	1.0991	0.1153	352.9694	271.4311	0.0014	0.0013
Non-Truck	65	Non-Truck65	2,157,461	0.1159	0.1481	2.7367	0.2966	920.4670	707.9658	0.0039	0.0036	0.0487	0.0623	1.1506	0.1247	387.0000	297.6562	0.0016	0.0015
Non-Truck	70	Non-Truck70	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Truck	5	Truck5	4,899	0.0044	0.0053	0.0350	0.0249	11.7747	10.3599	0.0004	0.0004	0.8089	0.9821	6.4782	4.6168	2180.1791	1918.2255	0.0782	0.0719
Truck	10	Truck10	115,701	0.0734	0.0886	0.5295	0.4036	236.1820	211.8084	0.0049	0.0045	0.5753	0.6944	4.1514	3.1644	1851.6288	1660.5436	0.0387	0.0356
Truck	15	Truck15	175,870	0.0595	0.0729	0.6237	0.3980	264.2586	236.3689	0.0054	0.0050	0.3071	0.3762	3.2166	2.0529	1362.9579	1219.1120	0.0280	0.0258
Truck	20	Truck20	367,743	0.0736	0.0909	0.8982	1.0896	507.1388	456.9182	0.0106	0.0098	0.1817	0.2242	2.2156	2.6876	1250.9158	1127.0411	0.0262	0.0241
Truck	25	Truck25	1,082,733	0.1502	0.1912	2.5721	1.4925	1057.1921	934.8663	0.0179	0.0165	0.1259	0.1601	2.1548	1.2504	885.6824	783.2017	0.0150	0.0138
Truck	30	Truck30	1,714,134	0.1803	0.2321	3.7154	1.9527	1437.6800	1262.8995	0.0226	0.0208	0.0954	0.1228	1.9661	1.0333	760.7869	668.2971	0.0119	0.0110
Truck	35	Truck35	1,612,101	0.1451	0.1860	3.1798	1.8102	1243.5773	1094.6756	0.0210	0.0194	0.0816	0.1046	1.7892	1.0186	699.7231	615.9406	0.0118	0.0109
Truck	40	Truck40	1,383,027	0.1159	0.1466	2.4540	1.6996	1038.8882	921.5596	0.0211	0.0194	0.0760	0.0961	1.6095	1.1147	681.3713	604.4194	0.0138	0.0127
Truck	45	Truck45	1,196,343	0.0974	0.1213	1.9262	1.6554	910.0076	815.1781	0.0228	0.0210	0.0739	0.0920	1.4605	1.2552	689.9777	618.0769	0.0173	0.0159
Truck	50	Truck50	1,124,149	0.0885	0.1094	1.7145	1.6839	873.8600	786.8147	0.0260	0.0239	0.0714	0.0883	1.3834	1.3588	705.1212	634.8840	0.0210	0.0193
Truck	55	Truck55	1,119,366	0.0857	0.1064	1.7041	1.7757	901.5320	811.6050	0.0305	0.0281	0.0694	0.0862	1.3809	1.4389	730.5579	657.6855	0.0248	0.0228
Truck	60	Truck60	1,520,076	0.1294	0.1580	2.1674	3.2141	1346.0781	1221.5166	0.0573	0.0527	0.0772	0.0943	1.2933	1.9180	803.2497	728.9197	0.0342	0.0315
Truck	65	Truck65	1,233,338	0.1102	0.1346	1.7607	3.0381	1165.6216	1058.1328	0.0556	0.0511	0.0810	0.0990	1.2950	2.2344	857.2765	778.2221	0.0409	0.0376
Truck	70	Truck70	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Fontana - Westgate Specific Plan

Pollutant	1-hr Max Concentration (ug/m3)	Inhalation Acute REL	Acute Risk	Inhalation Acute REL Acute Risk												
				Cardiovascular	CNS	Immune System	Kidney	Alimentary System	Reproductive	Respiratory	Skin	Eye	Bone	Endocrine	Development	Hematopoietic
NOx																
CO																
POC																
SOx																
PM10																
1,3-Butadiene	9.47E-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetaldehyde	8.45E-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	8.76E+00	1300	6.73E-03	-	-	6.52E-04	-	-	6.52E-04	-	-	-	-	-	6.52E-04	6.52E-04
Formaldehyde	2.24E+00	94	2.38E-02	-	-	8.05E-03	-	-	-	8.05E-03	-	8.05E-03	-	-	-	-
DieselExhPM	5.00E-02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hazard Index	**0.009**			-	-	8.70E-03	-	-	6.52E-04	8.05E-03	-	8.05E-03	-	-	6.52E-04	6.52E-04

Fontana - Westgate Specific Plan

Pollutant	Annual Max Concentration (ug/m3)	Inhalation Chronic REL	Oral Chronic REL	Inhalation Chronic Risk	Oral Chronic Risk	Onsite Residential												
						Inhalation Risk												
						Cardiovascular	CNS	Immune System	Kidney	Alimentary System	Reproductive	Respiratory	Skin	Eye	Bone	Endocrine	Development	Hematopoietic
1,3-Butadiene	7.40E-02	20	-	3.70E-03	-	-	-	-	-	-	4.29E-03	-	-	-	-	-	-	-
Acetaldehyde	6.60E-02	9	-	7.33E-03	-	-	-	-	-	-	-	8.51E-03	-	-	-	-	-	-
Benzene	6.84E-01	60	-	1.14E-02	-	-	1.32E-02	-	-	-	-	-	-	-	-	-	1.32E-02	1.32E-02
Formaldehyde	1.75E-01	3	-	5.83E-02	-	-	-	-	-	-	-	6.77E-02	-	6.77E-02	-	-	-	-
DieselExhPM	5.00E-02	5	-	1.00E-02	-	-	-	-	-	-	-	1.44E-01	-	-	-	-	-	-
Hazard Index	**0.220**					-	1.32E-02	-	-	-	4.29E-03	2.20E-01	-	6.77E-02	-	-	1.32E-02	1.32E-02

Fontana - Westgate Specific Plan

Adult Risk (70 year Estimate)

North

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk			
	(ug/m3)				URF (ug/m3)	CPF $(mg/kg/day)^{-1}$	Dose (mg/kg*day)	RISK
(a)	(b)		(d)	(e)	(f)	(g)		(h)
Freeway Segment	1.00000		6.84E-01	Benzene	2.9E-05	1.0E-01	1.8E-04	1.78E-05
			1.75E-01	Formaldehyde	6.0E-06	2.0E-02	4.5E-05	9.10E-07
			7.40E-02	1,3-Butadiene	1.7E-04	6.0E-01	1.9E-05	1.15E-05
			6.60E-02	Acetaldehyde	2.7E-06	0.0E+00	1.7E-05	0.00E+00
	0.05000		1.00E+00	Particulates	3.0E-04	1.1E+00	1.30E-05	1.43E-05

Total **4.45E-05** 9.68E-01
45 in a million

South

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk			
	(ug/m3)				URF (ug/m3)	CPF $(mg/kg/day)^{-1}$	Dose (mg/kg*day)	RISK
(a)	(b)		(d)	(e)	(f)	(g)		(h)
Freeway Segment	0.55000		6.84E-01	Benzene	2.9E-05	1.0E-01	9.8E-05	9.78E-06
			1.75E-01	Formaldehyde	6.0E-06	2.0E-02	2.5E-05	5.00E-07
			7.40E-02	1,3-Butadiene	1.7E-04	6.0E-01	1.1E-05	6.35E-06
			6.60E-02	Acetaldehyde	2.7E-06	0.0E+00	9.4E-06	0.00E+00
	0.04000		1.00E+00	Particulates	3.0E-04	1.1E+00	1.04E-05	1.14E-05

Total **2.81E-05** 6.10E-01
28 in a million

East 1

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk			
	(ug/m3)				URF (ug/m3)	CPF $(mg/kg/day)^{-1}$	Dose (mg/kg*day)	RISK
(a)	(b)		(d)	(e)	(f)	(g)		(h)
Freeway Segment	0.66000		6.84E-01	Benzene	2.9E-05	1.0E-01	1.2E-04	1.17E-05
			1.75E-01	Formaldehyde	6.0E-06	2.0E-02	3.0E-05	6.00E-07
			7.40E-02	1,3-Butadiene	1.7E-04	6.0E-01	1.3E-05	7.62E-06
			6.60E-02	Acetaldehyde	2.7E-06	0.0E+00	1.1E-05	0.00E+00
	0.04000		1.00E+00	Particulates	3.0E-04	1.1E+00	1.04E-05	1.14E-05

Total **3.14E-05** 6.82E-01
31 in a million

East 2

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk			
	(ug/m3)				URF (ug/m3)	CPF $(mg/kg/day)^{-1}$	Dose (mg/kg*day)	RISK
(a)	(b)		(d)	(e)	(f)	(g)		(h)
Freeway Segment	1.00000		6.84E-01	Benzene	2.9E-05	1.0E-01	1.8E-04	1.78E-05
			1.75E-01	Formaldehyde	6.0E-06	2.0E-02	4.5E-05	9.10E-07
			7.40E-02	1,3-Butadiene	1.7E-04	6.0E-01	1.9E-05	1.15E-05
			6.60E-02	Acetaldehyde	2.7E-06	0.0E+00	1.7E-05	0.00E+00
	0.06000		1.00E+00	Particulates	3.0E-04	1.1E+00	1.56E-05	1.72E-05

Total **4.74E-05** 1.03E+00
47 in a million

* Key to Toxocological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g., teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	70
inhalation rate (L/kg*day)	271
average body weight (kg)	70
averaging $time_{(cancer)}$ (days)	25550
averaging $time_{(noncancer)}$ (days)	25550

Note: Olympus Greek Tavern and Sizzler ISC emission rates include a scaler of 1000 to adjust for an ISC limitation on the number of significant figures. Therefore, an output concentration of 1.9 E-3 is 1.9 E-6.

inhalation rate (l/kg*day)	393
dose calculation (mg/kg*day)	24.8
average body weight (kg)	63

Fontana - Westgate Specific Plan

Adult Risk (70 year Estimate) - after implementation of air filters in residences with MERV rating of 8 or better
(assuming 85% contaminant capture)

North

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk			
	(ug/m3)				URF (ug/m3)	CPF $(mg/kg/day)^{-1}$	Dose (mg/kg*day)	RISK
(a)	(b)		(d)	(e)	(f)	(g)		(h)
Freeway Segment	1.00000		6.84E-01	Benzene	2.9E-05	1.0E-01	1.8E-04	1.78E-05
			1.75E-01	Formaldehyde	6.0E-06	2.0E-02	4.5E-05	9.10E-07
			7.40E-02	1,3-Butadiene	1.7E-04	6.0E-01	1.9E-05	1.15E-05
			6.60E-02	Acetaldehyde	2.7E-06	0.0E+00	1.7E-05	0.00E+00
	0.00750		1.00E+00	Particulates	3.0E-04	1.1E+00	1.95E-06	2.14E-06

Total **3.24E-05** 7.04E-01
32 in a million

South

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk			
	(ug/m3)				URF (ug/m3)	CPF $(mg/kg/day)^{-1}$	Dose (mg/kg*day)	RISK
(a)	(b)		(d)	(e)	(f)	(g)		(h)
Freeway Segment	0.55000		6.84E-01	Benzene	2.9E-05	1.0E-01	9.8E-05	9.78E-06
			1.75E-01	Formaldehyde	6.0E-06	2.0E-02	2.5E-05	5.00E-07
			7.40E-02	1,3-Butadiene	1.7E-04	6.0E-01	1.1E-05	6.35E-06
			6.60E-02	Acetaldehyde	2.7E-06	0.0E+00	9.4E-06	0.00E+00
	0.00600		1.00E+00	Particulates	3.0E-04	1.1E+00	1.56E-06	1.72E-06

Total **1.83E-05** 3.99E-01
18 in a million

East 1

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk			
	(ug/m3)				URF (ug/m3)	CPF $(mg/kg/day)^{-1}$	Dose (mg/kg*day)	RISK
(a)	(b)		(d)	(e)	(f)	(g)		(h)
Freeway Segment	0.66000		6.84E-01	Benzene	2.9E-05	1.0E-01	1.2E-04	1.17E-05
			1.75E-01	Formaldehyde	6.0E-06	2.0E-02	3.0E-05	6.00E-07
			7.40E-02	1,3-Butadiene	1.7E-04	6.0E-01	1.3E-05	7.62E-06
			6.60E-02	Acetaldehyde	2.7E-06	0.0E+00	1.1E-05	0.00E+00
	0.00600		1.00E+00	Particulates	3.0E-04	1.1E+00	1.56E-06	1.72E-06

Total **2.17E-05** 4.71E-01

Westgate Specific Plan Project
Health Risk Assessment

22 in a million

East 2

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk			
	(ug/m3)				URF (ug/m3)	CPF $(mg/kg/day)^{-1}$	Dose (mg/kg*day)	RISK
(a)	(b)		(d)	(e)	(f)	(g)		(h)
Freeway Segment	1.00000		6.84E-01	Benzene	2.9E-05	1.0E-01	1.8E-04	1.78E-05
			1.75E-01	Formaldehyde	6.0E-06	2.0E-02	4.5E-05	9.10E-07
			7.40E-02	1,3-Butadiene	1.7E-04	6.0E-01	1.9E-05	1.15E-05
			6.60E-02	Acetaldehyde	2.7E-06	0.0E+00	1.7E-05	0.00E+00
	0.00900		1.00E+00	Particulates	3.0E-04	1.1E+00	2.34E-06	2.57E-06

Total **3.28E-05** 7.13E-01

33 in a million

* Key to Toxocological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g., teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	70
inhalation rate (L/kg*day)	271
average body weight (kg)	70
averaging $time_{(cancer)}$ (days)	25550
averaging $time_{(noncancer)}$ (days)	25550

Note: Olympus Greek Tavern and Sizzler ISC emission rates include a scaler of 1000 to adjust for an ISC limitation on the number of significant figures. Therefore, an output concentration of 1.9 E-3 is 1.9 E-6.

inhalation rate (l/kg*day)	393
dose calculation (mg/kg*day)	24.8
average body weight (kg)	63

APPENDIX C - BIOLOGICAL RESOURCES ASSESSMENT

Biological Resources Assessment

Westgate Specific Plan
City of Fontana, San Bernardino County, California

Project Location:
U.S. Geological Survey (USGS) 7.5-minute
Devore topographic quadrangle map, Sections 23, 24, 26, 27, and 34; T. 1 N., R. 6 W.;
Cucamonga Peak topographic quadrangle map, Sections 33 and 34, T. 1 N., R. 6 W.;
Guasti topographic quadrangle map, Sections 33 and 34, T. 1 N., R. 6 W.; and
Fontana topographic quadrangle map, Section 34, T. 1 N., R. 6 W.

Prepared For:
The City of Fontana
8353 Sierra Avenue
Fontana, CA 92335

Contact:
Mr. Charles Fahie, AICP, Senior Planner

Prepared By:
PCR Services Corporation
One Venture, Suite 150
Irvine, California 92618

Contacts:
Ceri Williams-Dodd, Ph.D., Senior Biologist II
Amir Morales, Principal Regulatory Scientist

Report Date:
August 2012 (Revised March 2014)

Biological Resources Assessment

Westgate Specific Plan
City of Fontana, San Bernardino County, California

The undersigned certify that this report is a complete and accurate account of the findings and conclusions of a supplemental biological resources assessment for the above-referenced project.

PCR Services Corporation

_____
Ceri Williams-Dodd, Ph.D., Senior Biologist II

_____
Amir Morales, Principal Regulatory Scientist

August 2012 (Revised March 2014)

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1.0 INTRODUCTION

1.1 BACKGROUND AND PURPOSE

This report presents the findings of a biological resources assessment (BRA) conducted by **PCR Services Corporation (PCR)** for the approximately 964-acre Westgate Specific Plan area ("study area") in the City of Fontana (City), San Bernardino County, California. The purpose of this study is to satisfy the requirements of the California Environmental Quality Act (CEQA). Unitex Management Corporation (Project Applicant) is requesting approvals from the City and Responsible Agencies (Agencies) that would allow the study area to be utilized as a village-oriented mixed-use development that provides a broad range of uses including residential, school, retail, office, business, parks, trails, and open space uses.

1.2 SOURCES

This BRA is based on information compiled through field reconnaissance and appropriate reference materials. A general biological survey and vegetation mapping was conducted, in addition to a jurisdictional waters and wetland delineation and habitat assessments for burrowing owl (*Athene cunicularia*) and San Bernardino kangaroo rat (*Dipodomys merriami parvus*). No focused surveys were conducted. The information sources used in preparation of this Biological Resource Assessment are provided in Section 10.0, *References*.

1.3 STUDY AREA LOCATION

The approximately 964-acre study area is generally situated adjacent to Interstate 15 (I-15) and just north and south of State Route 210 (SR-210), as shown in **Figure 1**, *Regional Map*. Specifically, the study area is located southeast of I-15, north of Baseline Avenue, and south of Duncan Canyon Road. The study area can be found on the U.S. Geological Survey (USGS) 7.5' Devore topographic quadrangle map, Sections 23, 24, 26, 27, and 34; T. 1 N., R. 6 W.; Cucamonga Peak topographic quadrangle map, Sections 33 and 34, T. 1 N., R. 6 W.; Guasti topographic quadrangle map, Sections 33 and 34, T. 1 N., R. 6 W.; and Fontana topographic quadrangle map, Section 34, T. 1 N., R. 6 W., as shown in **Figure 2**, *Vicinity Map*. Surrounding land uses include residential development in all directions, I-15 to the immediate northeast, unimproved vacant properties to the northeast and northwest, and some commercial/industrial areas to the south.

The topography is relatively flat throughout the study area. Elevations range from approximately 1,298 feet above mean sea level (MSL) in the southwestern portion of the study area to approximately 1,670 feet above MSL in the northeastern portion of the study area.

1.4 SCOPE OF STUDY

The scope of this BRA encompasses:

1. This introduction;
2. Description of the proposed project;

3. Description of methods of study;
4. Description of existing conditions;
5. Description of the proposed project's regulatory setting;
6. The establishment of significance thresholds;
7. Evaluation of potential project impacts; and,
8. Summary of potential significant project impacts, mitigation measures, and level of significance after mitigation.

PCR

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5 0 5 Miles

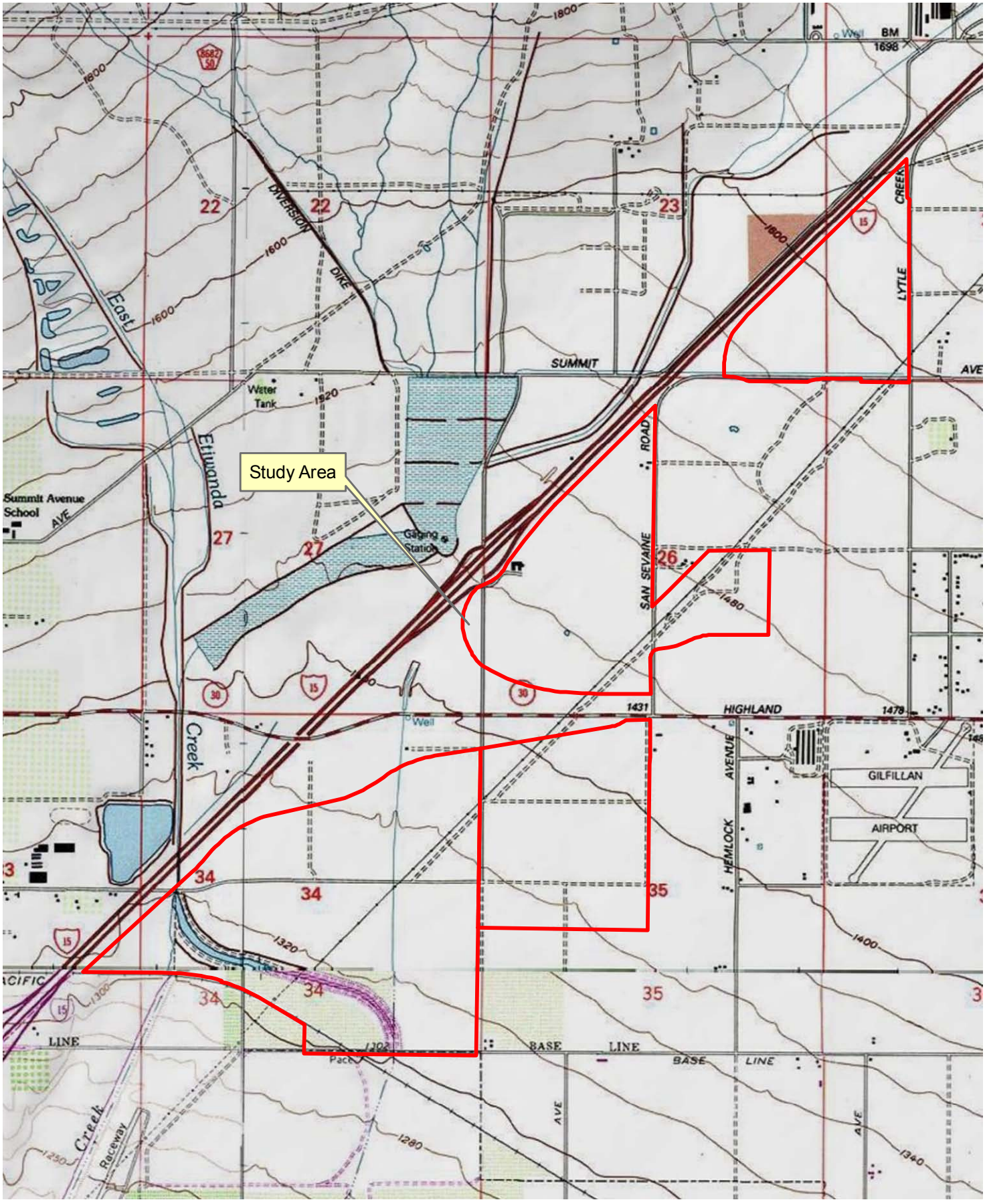
Regional Map

Westgate Specific Plan

Source: ESRI Street Map, 2009; Hall & Foreman Inc., 2012; PCR Services Corporation, 2012.

FIGURE

1



PCR

2,000 0 2,000 Feet

Vicinity Map

Westgate Specific Plan

Source: USGS Topographic Series (Cucamonga Peak, Devore, Guasti, Fontana, CA); Hall & Foreman Inc., 2012; PCR Services Corporation, 2012.

FIGURE

2

2.0 PROJECT DESCRIPTION

2.1 PROJECT DESCRIPTION

Unitex Management Corporation, the project applicant, proposes to replace the existing Westgate Specific Plan, which was adopted by the City of Fontana in 1996. Since that time, the region has experienced substantial growth and the dynamics of the area have changed considerably. The new Westgate Specific Plan (the proposed 'project') is intended to update the existing Specific Plan to reflect current conditions and respond to changing market conditions relative to future development in the study area. The Westgate Specific Plan sets forth a range of land uses that focuses on creating a village-oriented mixed-use development that provides a broad range of uses including residential, school, retail, office, business and open space uses within four distinct areas. Currently, two major development projects have been completed within the Specific Plan boundary, including the Falcon Ridge Town Center and the Caltrans Transportation Management Facility and Southern Regional Lab.

Residential land uses are located throughout the community and are designed to establish a village character. The residential uses are interconnected to the entire Westgate Community and surrounding uses through pedestrian walks and both off and on-street bicycle lanes. In addition, the Westgate Specific Plan includes 262.7 acres of Business Park, Business Park/Public Facilities and Retail uses. Two elementary school areas and one high school area are included in the Plan, totaling 84.0 acres. The Westgate Specific Plan provides a variety of open space, parks, recreation and trail uses. Public and private parks total 56.5 acres, plus approximately 90 acres of additional open space within utility corridors.

Four villages have been designed as part of the Westgate Specific Plan (**Figure 3,** *Specific Plan Area*). The villages were defined based on a logical clustering of development in relationship to the overall Specific Plan area and context, and to meet the community vision and objectives while integrating business park, retail, residential uses and amenities in the form of parks, recreation, trails and open space. While each village will have its own unique identity and character, they have been integrated into a cohesive and unified land use plan.

- **Falcon Ridge Village -** Falcon Ridge Village is intended to complement the existing Falcon Ridge Towne Center that is part of this village, and includes retail, park, recreation, school, and residential uses. A centrally located elementary school is designed to provide a community hub for both Falcon Ridge Village and other nearby residential neighborhoods.
- **Westgate Center -** Westgate Center is designed as an integrated mixed use business and residential setting with high amenity urban life style options. With 85 acres of business park uses planned, it will provide a major regional employment hub. Located adjacent to the Business Park are high density residential uses. The location will encourage people to walk and/or bike to the business park, retail, and park uses, reinforcing the goal of creating a pedestrian friendly, sustainable community. Residential uses within Westgate Center are oriented to multiple recreation and park areas, including a centrally located five-acre park planned for a community building, pool, tennis courts, basketball courts, volleyball, benches, outdoor fireplace, and picnic areas.
- **Westgate Village -** This village includes a diversity of uses including over 80 acres of business park, a neighborhood retail center, elementary school area, and residential uses in a highly amenitized

setting. The Caltrans Transportation Management Facility and Southern Regional Lab is located within this village. Within residential areas, the intent is to create pedestrian friendly setting, with attractive streetscapes and multiple amenities. Amenities for the village include six parks, trails, a lake, and a pedestrian bridge.

- **Westgate Village East -** Westgate Village East includes 25 acres of business park uses, residential uses with 1,121 dwelling units, three parks, and a high school area with plans to construct a fully lighted stadium. Business Park uses are located principally along the 210 freeway as part of the corporate corridor. Residential uses will include a variety of housing types and style including duplexes, townhomes, and multi-family uses. All residential uses are located within walking distance of the high school area and park areas. Three parks are planned to serve Westgate Village East. A clubhouse building, swim and recreational complex are planned on 2.8 acres, and two additional parks will include a range of amenities such as a sports court, barbeque areas, and free play areas.

2.2 PROJECT DESIGN FEATURES

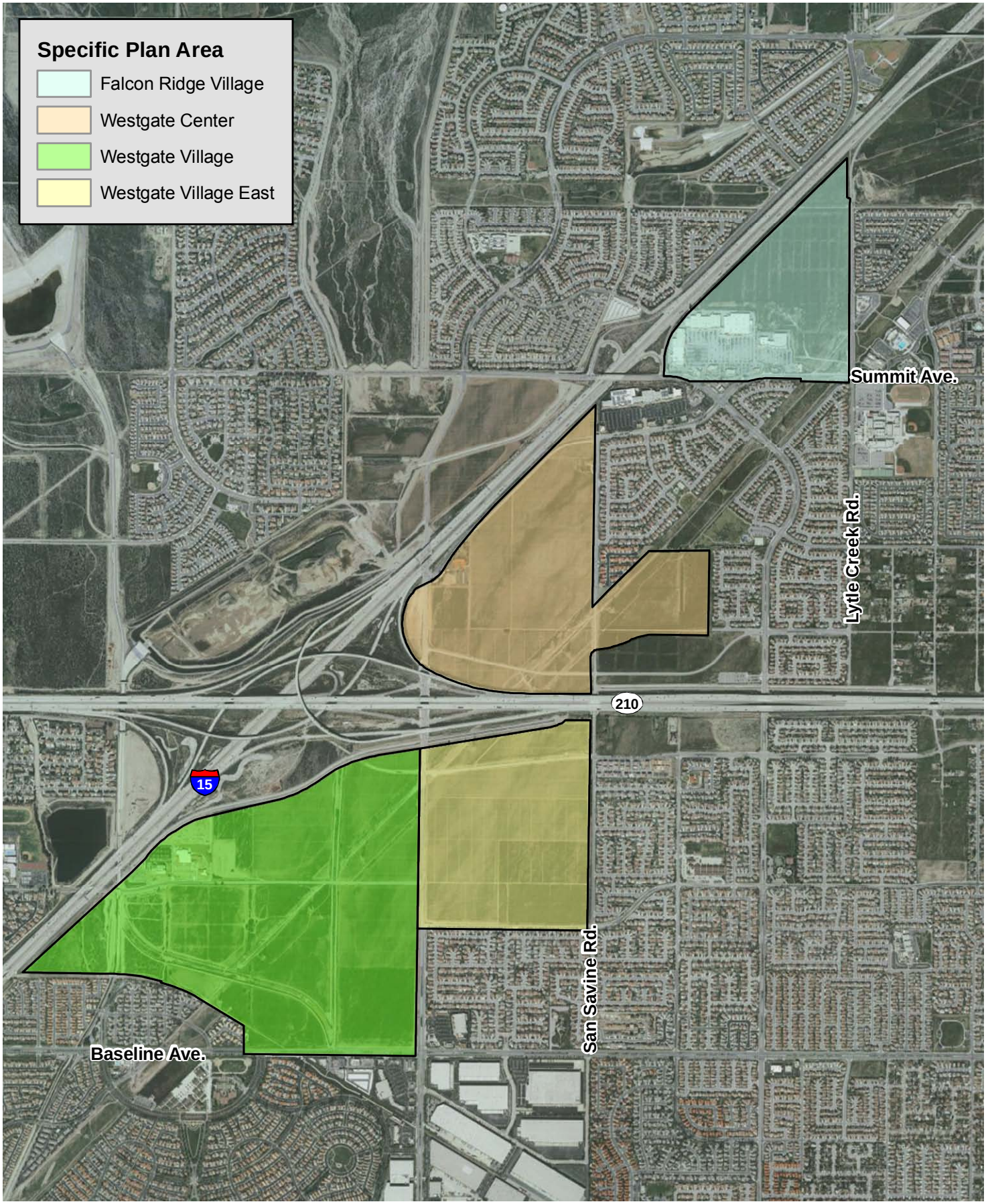
The proposed Westgate Specific Plan includes a number of sustainability features that are intended to minimize the development's impacts on the environment. Such features that the applicant has committed to implementing include the following:

PDF-1: By providing jobs near housing, with retail, parks and schools within walking distance of compact residential villages, the Westgate Specific Plan residents will have less reliance on the automobile. This in turn will result in reduced vehicular emissions and an overall healthier community.

PDF-2: The Westgate Specific Plan will also become one of the first large scale planned communities in the Inland Empire to meet one of the nation's first mandatory green building standards code (CalGreen). These comprehensive regulations were adopted by the State of California and went into effect as of January 1, 2011. By adhering to these regulations, the Westgate Specific Plan will achieve significant reductions in greenhouse gas emissions, energy consumption and water use. CalGreen, for example, requires that every new building constructed in California reduce water consumption by 20 percent, divert 50 percent of construction waste from landfills and install low pollutant-emitting materials. It also requires separate water meters for nonresidential buildings' indoor and outdoor water use, with a requirement for moisture-sensing irrigation systems for large scale landscape projects and mandatory inspections of energy systems (e.g., heat furnace, air conditioner and mechanical equipment) for nonresidential buildings over 10,000 square feet designed to ensure that all are working at their maximum capacity and according to their design efficiencies.

PDF-3: In order to further conserve resources, in addition to the above, the Westgate Specific Plan is designed to use recycled water for landscape in public parks and rights of ways. The Inland Empire Utilities Agency (IEUA) is in the process of building a regional recycled water system to serve the Westgate Specific Plan and others areas in Fontana.

PDF-4: The Westgate Specific Plan infrastructure plans include a reclaimed water "purple pipe" system that will be installed as part of the major streets for all medians, parkways and public parks. It will be connected to the IEUA master plan upon its completion.



PCR

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0 2,000 4,000 Feet

Specific Plan Area

Westgate Specific Plan

Source: Aerial Express, 2010; Hall & Foreman Inc., 2012; PCR Services Corporation, 2012.

FIGURE

3

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3.0 METHODS OF STUDY

3.1 APPROACH

This BRA is based on information compiled through field reconnaissance and appropriate reference materials. A general biological survey and vegetation mapping was conducted, in addition to a jurisdictional waters and wetlands delineation and habitat assessments for burrowing owl and San Bernardino kangaroo rat. No focused surveys were conducted.

3.2 LITERATURE REVIEW

The BRA began with a review of relevant literature on the biological resources of the study area and surrounding vicinity. The California Natural Diversity Database (CNDDB), a California Department of Fish and Wildlife (CDFW)[1] species account database, was reviewed for all pertinent information regarding the localities of known observations of sensitive species and habitats in the vicinity of the study area (CNDDB, 2012). The vicinity of the study area included the following USGS topographic quadrangles: Mount San Antonio, Telegraph Peak, Cajon, Devore, Lake Arrowhead, Mount Baldy, Cucamonga Peak, Harrison Mountain, San Dimas, Ontario, Guasti, Fontana, San Bernardino South, Prado Dam, Riverside West, Riverside East and Sunnymead. Federal register listings, protocols, and species data provided by the United States Fish and Wildlife Service (USFWS) (USFWS, 2012a), CDFW and the California Native Plant Society (CNPS) were reviewed in conjunction with anticipated Federally and State listed species potentially occurring within the vicinity. Other data sources reviewed include USFWS critical habitat maps (USFWS, 2012b) and United States Department of Agriculture Natural Resources Conservation Service (NRCS) soils mapping (NRCS, 2012). In addition, numerous regional flora and fauna field guides were utilized to assist in the identification of species and suitable habitats, in addition to relevant local policies such as the *North Fontana Interim MSHCP Policy* (Michael Brandman Associates, 2004). Documentation on previous assessments and surveys conducted on the study area was also reviewed, namely the *Final Environmental Impact Report* (EIR) for the Westgate Specific Plan (City of Fontana, 1996). A list of all relevant references reviewed is included in Section 10.0, *References*.

3.3 FIELD INVESTIGATIONS

A general biological survey and vegetation mapping was conducted by PCR biologist Ceri Williams-Dodd on May 15, 2012 to document plant communities and existing conditions. During the course of this survey, an inventory of all plant and wildlife species observed was compiled, focusing on dominant plant species for the purposes of vegetation mapping. Survey coverage of the entire study area, with special attention to sensitive habitats or those areas potentially supporting sensitive flora or fauna, was ensured using aerial photographs. Habitat assessments for burrowing owl and San Bernardino kangaroo rat (SBKR) were also conducted. PCR environmental scientist Amir Morales also conducted a jurisdictional delineation on May 15, 2012. The vegetation mapping and jurisdictional delineation was updated for portions of the study area by PCR

[1] *California Department of Fish and Wildlife (CDFW) were previously known as the California Department of Fish and Game (CDFG). The name change was effective on January 1, 2013.*

biologist Ezekiel Cooley on February 20, 2014. Specifically, the areas reassessed in the field included the jurisdictional features within the Westgate Center and Westgate Village portions of the study area, and the remnant drainage features within the Westgate Village portion of the study area.

3.3.1 Plant Community Mapping

Plant communities were mapped directly in the field utilizing a 250-scale (1"=250') aerial photograph. Plant community names and descriptions follow Holland (1986) and A *California Manual of Vegetation* (Sawyer and Keeler-Wolf, 1995). After completing the fieldwork, the plant community polygons were digitized using Geographic Information System (GIS) technology to calculate acreages.

3.3.2 General Plant Inventory

All plant species observed during surveys were either identified in the field or collected and later identified using taxonomic keys. Plant taxonomy follows Hickman (1993). Common plant names, when not available from Hickman, were taken from Munz (1974) and/or Clarke (2007). Since common names vary significantly between references, scientific names are included upon initial mention of each species; common names consistent throughout the report are employed thereafter. All plant species observed are included in the Appendix A, *Floral and Faunal Compendium*, attached. Sensitive plant species are discussed below in Section 3.3.3, *Sensitive Plant Species*.

3.3.3 Sensitive Plant Species

The potential for sensitive plant species was assessed based upon the known occurrence of species in the area as identified from CDFW, USFWS and CNPS databases (see Section 3.2, *Literature Review*), and the presence or absence of suitable habitat within the study area based on plant community mapping (see Section 3.3.1, *Plant Community Mapping*). Suitable habitat was defined as areas with appropriate vegetation communities, soils and/or topography (elevation at MSL) to support the species based on known occurrences in those habitats and/or CDFW and CNPS documented habitat descriptions for the species. The definitions of suitable habitat were then compared against the vegetation mapping conducted for the study area and local knowledge. A table of sensitive plant species for which potentially suitable habitat occurs within the study area was prepared prior to the field survey, and the potential for occurrence for each species was determined following completion of the vegetation mapping conducted during the field survey. The potential for occurrence for each species is summarized in Appendix B, *Sensitive Plant Species.* No focused surveys were conducted for sensitive plant species.

3.3.4 General Wildlife Inventory

All wildlife species observed within the study area, as well as any diagnostic sign (call, tracks, nests, scat, remains, or other sign), were recorded in field notes. Binoculars and regional field guides were utilized for the identification of wildlife, as necessary. Wildlife taxonomy follows Stebbins (2003) for amphibians and reptiles, the American Ornithologists' Union (1998) for birds, and Jameson and Peeters (1988) for mammals. Scientific names are used during the first mention of a species; common names only are used in the remainder of the text. A list of all wildlife species detected is included in Appendix A, *Floral and Faunal Compendium*, attached. Sensitive wildlife species are discussed below in Section 3.3.5, *Sensitive Wildlife Species*.

3.3.5 Sensitive Wildlife Species

The potential for sensitive wildlife species was assessed based upon the known occurrence of species in the area as identified from CDFW and USFWS databases (see Section 3.2, *Literature Review*), and the presence or absence of suitable habitat within the study area based on plant community mapping (see Section 3.3.1, *Plant Community Mapping*). Suitable habitat was defined as areas with appropriate vegetation communities and/or topography (elevation at MSL) to support the species based on known occurrences in those habitats and/or CDFW and CNPS documented habitat descriptions for the species. The definitions of suitable habitat were then compared against the vegetation mapping conducted for the study area and local knowledge. A table of sensitive wildlife species for which potentially suitable habitat occurs within the study area was prepared prior to the field survey, and the potential for occurrence for each species was determined following completion of the vegetation mapping conducted during the field survey. The potential for occurrence for each species is summarized in Appendix C, *Sensitive Wildlife Species.* No focused surveys were conducted for sensitive wildlife species. A more detailed assessment of habitat was conducted for burrowing owl and SBKR, as described below in Section 3.3.6, *Habitat Assessments*.

3.3.6 Habitat Assessments

A more detailed assessment of habitat was conducted for burrowing owl and SBKR, two species determined as potentially occurring within the study area based on occurrences in the project vicinity. The habitat assessment field survey for burrowing owl was conducted pursuant to Appendix C of the Department of Fish and Wildlife (DFW) data collection guidelines (DFW, 2012), including identifying suitable vegetation communities, burrows, or any owl sign within the study area. For SBKR, a determination of whether suitable habitat is present or absent within the study area was determined based on a site assessment conducted by a mammal expert with local knowledge, Dr. Michael O'Farrell .

3.3.7 Regional Connectivity/Wildlife Movement Corridor

An analysis of wildlife movement was conducted based on information compiled from the literature, analysis of aerial photographs and topographic maps, direct observations made in the field during survey work, and an analysis of existing wildlife movement functions. Relative to corridor issues, the focus of this assessment is to determine if the change of the existing land use within the study area will have significant impacts on the regional wildlife movement associated with the study area and the immediate vicinity.

The *North Fontana Interim MSHCP Policy* was reviewed since a small portion of the northernmost boundary of the study area is located within the Multiple Species Habitat Conservation Plan (MSHCP) boundary (Michael Brandman Associates, 2004). Additionally, the *South Coast Missing Linkage Project: A Linkage Design for the San Gabriel-San Bernardino Connection* document was reviewed (Penrod *et al*., 2004).

3.3.8 Jurisdictional Delineation

A jurisdictional delineation of all existing on-site drainage features was conducted by PCR Principal Regulatory Scientist Amir Morales on May 15, 2012 to assess the extent of "waters of the U.S."/"waters of the State" and/or wetlands under the jurisdiction of the U.S. Army Corps of Engineers (USACE)/Regional Water Quality Control Board (RWQCB), and/or streambed and associated riparian habitat under the jurisdiction of the CDFW. Published regulatory guidelines were followed, including USACE methodologies (USACE, 2008a; USACE, 2008b; Environmental Laboratory, 1987). The jurisdictional delineation was reassessed by PCR

biologist Ezekiel Cooley on February 20, 2014 for the Westgate Center and Westgate Village portions of the study area.

4.0 EXISTING CONDITIONS

4.1 CHARACTERISTICS OF THE STUDY AREA AND SURROUNDING AREA

The approximately 964-acre study area is located within the City of Fontana (City), in San Bernardino County. The Falcon Ridge Village portion of the study area consists of non-native and disturbed plant communities in addition to a retail development (Falcon Ridge Town Center). Both the Westgate Center and Westgate Village East portions of the study area consist of predominately former vineyards, in addition to non-native and disturbed plant communities. The Westgate Village portion of the study area consists of a mix of non-native and disturbed plant communities, former vineyards, and native Riversidean sage scrub and Riversidean alluvial fan sage scrub plant communities. Approximately 7.69 acres of the northern portion of the Falcon Ridge Village is within the proposed North Fontana MSHCP planning area (**Figure 4,** *Relationship to the Interim MSHCP*). The Falcon Ridge Village portion of the study area is also within USFWS designated critical habitat for SBKR based on the adopted 2002 mapping; the proposed 2008 revisions to SBKR critical habitat excluded the study area but was invalidated in 2011 (**Figure 5,** *Critical Habitat*). As shown in Figure 5, critical habitat for arroyo toad (*Bufo californicus*) associated with Lytle Creek and Cajon Wash is also mapped to the northeast of the study area, and to the northwest critical habitat is mapped for mountain yellow legged frog (*Rana muscosa*) from within the San Bernardino National Forest. Critical habitat for coastal California gnatcatcher (*Polioptila californica californica*), southwestern willow flycatcher (*Empidonax traillii extimus*) and least Bell's Vireo (*Vireo bellii pusillus*) also occur south of the study area.

The study area supports three (3) drainage features observed to support field indicators associated with USACE, RWQCB, and CDFW (collectively "the resource agencies") jurisdictional waters. The Falcon Ridge Village portion of the study area is within close proximity to maintained drainage features such as one (1) "roadside ditch" and three (3) detention basins that do not appear to support federal or State jurisdictional waters. The Westgate Center portion of the study area supports one (1) maintained trapezoidal concrete channel that is likely regulated by the resource agencies. The Westgate Village portion of the study area supports a segment of the Etiwanda (Creek) Channel which is a concrete trapezoidal channel considered to support resource agency jurisdiction. No jurisdictional features occur on the Westgate Center East portion of the study area. However, the San Sevaine concrete trapezoidal channel is a jurisdictional feature located off-site, adjacent to the northern boundary of both the Westgate Center and Westgate Center East portions of the study area.

The topography is relatively flat throughout the study area, with elevations ranging from approximately 1,298 feet above MSL in the southwestern portion to approximately 1,670 feet above MSL in the northeastern portion. Mapped soils in the study area are dominated by Tujunga Gravelly Loam sand (0-9 percent slopes), in addition to Handford Coarse Sandy Loam (2-9 percent slopes) and Soboba Gravelly Loamy Sand (0-9 percent slopes). Surrounding land uses include residential development in all directions, I-15 to the immediate northeast, unimproved vacant properties to the northeast and northwest, and some commercial/industrial areas to the south. Lytle Creek occurs to the northeast of the study area.

4.2 PLANT COMMUNITIES

Descriptions of each of the plant communities found within the study area are provided below, and locations of each of the plant communities are shown in **Figure 6**, *Plant Communities*. **Table 1**, *Plant Communities* lists each of the plant communities observed as well as the acreage within the study area. Representative photographs of plant communities found within the study area are included in **Figure 7**, *Site Photographs*.

Table 1

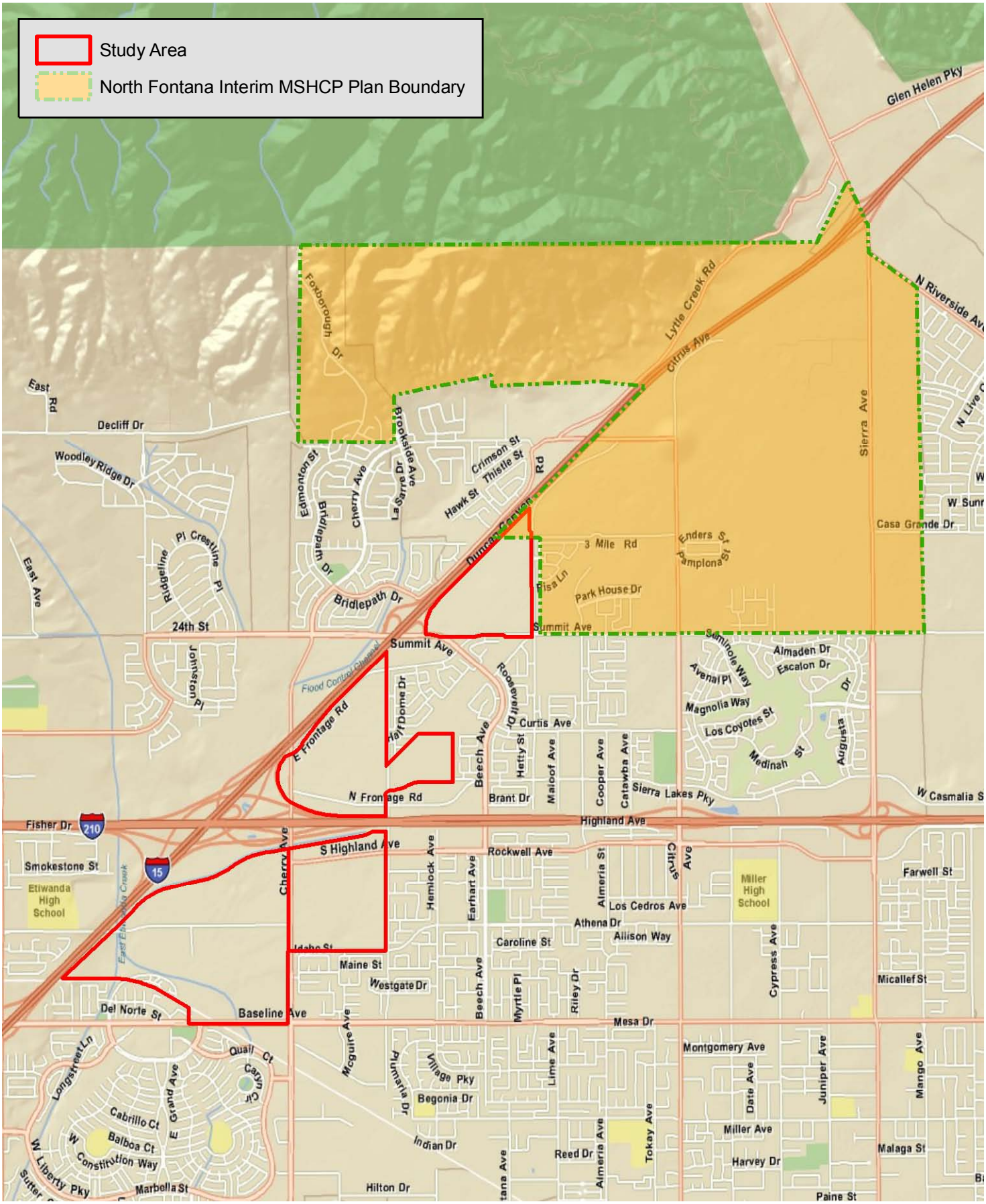
Plant Communities

Plant Community	Falcon Ridge Village	Westgate Center	Westgate Village	Westgate Village East	Total (acres)
Developed	44.40	16.37	36.19	13.42	**110.38**
Disturbed	20.84	30.49	77.99	20.80	**150.12**
Disturbed/Ruderal	0.0	0.0	34.13	0.0	**34.13**
Ruderal	0.0	25.87	0.0	0.0	**25.87**
Ruderal/Disturbed	0.42	13.30	97.10	3.42	**114.24**
Former Vineyard	0.0	141.90	118.10	146.99	**406.99**
Windrow	0.0	1.32	2.15	0.0	**3.47**
Landscaped	0.0	4.57	0.21	0.0	**4.78**
Non-native Grassland	7.25	4.53	0.0	0.0	**11.78**
Non-native Grassland/Disturbed	63.70	0.0	0.0	0.0	**63.70**
Riversidean Sage Scrub	0.0	0.0	23.62	0.0	**23.62**
Disturbed Riversidean Sage Scrub	0.0	0.0	0.46	0.0	**0.46**
Riversidean Alluvial Fan Sage Scrub/Disturbed	0.0	0.0	5.23	0.0	**5.23**
Disturbed Riversidean Alluvial Fan Sage Scrub	0.0	0.0	9.22	0.0	**9.22**
Total	**136.61**	**238.35**	**404.40**	**184.63**	**963.99**

Source: PCR Services Corporation, 2012 and 2014.

4.2.1 Developed (Holland Code: 12000)

Developed areas were unvegetated and consisted of structures and paved roads encompassing approximately 110.38 acres. Structures included those associated with the following existing developments: Falcon Ridge Town Center and residential housing in the Falcon Ridge Village portion of the study area, a church and residential housing in the Westgate Center of the study area, residential housing in the Westgate Village East portion of the study area, and the Caltrans Transportation Management Facility and Southern Regional Lab and residential housing in the Westgate Village portion of the study area.



PCR

N

0 3,500 7,000 Feet

Relationship to the Interim MSHCP

Westgate Specific Plan

Source: City of Fontana, Hall & Foreman Inc., 2012; PCR Services Corporation, 2012.

FIGURE

4

Study Area

Critical Habitat

- Arroyo Toad
- Coastal California Gnatcatcher
- Southwestern Willow Flycatcher
- Mountain Yellow Legged Frog
- Least Bell's Vireo
- SBKR 2008 Designated Critical Habitat (Invalidated 2011)
- SBKR 2002 Designated Critical Habitat

PCR

N

0 1.5 3 Miles

Critical Habitat

Westgate Specific Plan

Source: Aerial Express, 2010; Hall & Foreman Inc., 2012; PCR Services Corporation, 2012.

FIGURE

5

Study Area

Plant Communities

DEV - Developed

D - Disturbed

D/RUD - Disturbed / Ruderal

RUD - Ruderal

RUD/D - Ruderal / Disturbed

VINE - Former Vineyard

WR - Windrow

LDSC - Landscaped

NNG - Non-native Grassland

NNG/D - Non-native Grassland / Disturbed

RSS - Riversidean Sage Scrub

DRSS - Disturbed Riversidean Sage Scrub

RAFSS/D - Riversidean Alluvial Fan Sage Scrub / Disturbed

DRAFSS - Disturbed Riversidean Alluvial Fan Sage Scrub

15

210

Lytle Creek Rd.

Summit Ave.

San Sevaine Ave.

Baseline Ave.

N

1,500 0 1,500 Feet

PCR

Plant Communities

FIGURE 6

Westgate Specific Plan

Source: Aerial Express, 2010; Hall & Foreman Inc., 2012; PCR Services Corporation, 2014.

Photograph 1: Non-native Grassland/Disturbed area on the Falcon Ridge Village portion of the study area, facing south.

Photograph 2: Non-native Grassland/Disturbed and Disturbed areas on the Falcon Ridge Village portion of the study area, facing approximately southwest.

Photograph 3: Non-native Grassland/Disturbed and Disturbed areas on the Falcon Ridge Village portion of the study area, facing approximately northwest.

P C R

Site Photographs (Falcon Ridge Village)

Westgate Specific Plan
Source: PCR Services Corporation, 2012.

FIGURE
7a

Photograph 4: Ruderal, Windrow and Disturbed areas on the Westgate Center portion of the study area, facing approximately west to east.

Photograph 5: Maintained channel, with Ruderal area in the background, on the Westgate Center portion of the study area, facing approximately southwest.

PCR

Site Photographs (Westgate Center)

Westgate Specific Plan

Source: PCR Services Corporation, 2012.

FIGURE

7b

Photograph 6: Downstream of the maintained channel on the Westgate Center portion of the study area, facing east.

Photograph 7: Ruderal area on the Westgate Center portion of the study area, facing approximately northeast.

Photograph 8: Former Vineyard on the Westgate Center portion of the study area, facing approximately southwest.

PCR

Site Photographs (Westgate Center)

Westgate Specific Plan

Source: PCR Services Corporation, 2012.

FIGURE

7c

Photograph 9: Ruderal/Disturbed and Disturbed areas on the Westgate Village portion of the study area, facing approximately west to east.

Photograph 10: Ruderal/Disturbed area on the Westgate Village portion of the study area, facing approximately northeast.

Photograph 11: Riversidean Sage Scrub on the Westgate Village portion of the study area, facing approximately northwest.

P C R

Site Photographs (Westgate Village)

Westgate Specific Plan
Source: PCR Services Corporation, 2012.

FIGURE
7d

Photograph 12: Riversidean Alluvial Fan Sage Scrub/Disturbed area on the Westgate Village portion of the study area, facing approximately southwest.

Photograph 13: Riversidean Alluvial Fan Sage Scrub/Disturbed area on the Westgate Village portion of the study area, facing approximately northwest.

Photograph 14: Disturbed Riversidean Alluvial Fan Sage Scrub/Disturbed area on the Westgate Village portion of the study area, facing approximately southeast.

Photograph 15: Ruderal/Disturbed, Riversidean Sage Scrub (remnant), and Landscaped areas on the Westgate Village portion of the study area, facing approximately northwest.

P C R

Site Photographs (Westgate Village)

Westgate Specific Plan
Source: PCR Services Corporation, 2012.

FIGURE
7e

4.2.2 Disturbed (Holland Code: 11300)

Disturbed areas were one of the following: barren and completely lacking vegetation, or supported scattered, stumps and/or newer growth of primarily ruderal species (see Section 4.2.4, *Ruderal* below), and/or displayed signs of recent soil disturbance. Disturbed areas within the study area consisted of dirt roads compacted by vehicular use, or recently disced or graded areas with various degrees of vegetation regrowth. Disturbed areas were observed in all four portions of the study area encompassing approximately 150.12 acres.

4.2.3 Disturbed/Ruderal (Holland Codes: 11300/10000)

The Disturbed/Ruderal within the study area were characterized by an area with a mix of primarily unvegetated areas or more recently disturbed areas as described above in Section 4.2.2, *Disturbed*, in addition to areas dominated by ruderal species, as described below in Section 4.2.4, *Ruderal.* The Disturbed/Ruderal area was observed in the Westgate Village portion of the study area encompassing approximately 34.13 acres. Although this area did not show signs of recent maintenance, it appeared to be subject to long-term maintenance. As such, the classification could revert to a Disturbed area following maintenance, or if left unmaintained for a longer period of time could revert to a Ruderal area.

4.2.4 Ruderal (Holland Code: 10000)

The ruderal area was dominated by species that are characteristic of areas that have been routinely disturbed over a long period of time, including primarily non-native species in addition to some native species. Typical ruderal species observed included short pod mustard (*Hirschfeldia incana*), slender wild oat (*Avena barbata*), brome grasses (*Bromus* spp.), rattail fescue (*Vulpia myuros*), red stemmed filaree (*Erodium circutarium*), yellow star thistle (*Centaurea solstitialis*), common sunflower (*Helianthus annuus*), horehound (*Marrubium vulgare*), pigweed (*Chenopodium album*), horseweed (*Conyza canadensis*), Spanish clover (*Lotus purshianus*), false jimsonweed (*Datura wrightii*), telegraph weed (*Heterotheca grandiflora*), fiddleneck (*Amsinckia menziesii*). This area was observed in the Westgate Center portion of the study area encompassing approximately 25.87 acres. Ruderal areas were distinguished from Disturbed areas based on whether recent versus more long-term signs of maintenance or other disturbances were observed.

4.2.5 Ruderal/Disturbed (Holland Codes: 10000/11300)

The Ruderal/Disturbed areas within the study area were characterized by predominately ruderal species as described above in Section 4.2.4, *Ruderal*, in addition to disturbed areas, as described above in Section 4.2.2, *Disturbed.* Ruderal/Disturbed areas were observed in all four portions of the study area encompassing approximately 114.24 acres, of which the majority was in the Westgate Village portion. Since this area appeared to be subject to periodic long-term maintenance, the classification could revert to a Disturbed area if disturbed in the future, or if left unmaintained for a longer time period could revert to a Ruderal area.

4.2.6 Former Vineyard (Holland Code: 18100)

The former grape vineyards were observed in three of the four portions of the study area, including Westgate Center, Westgate Village East, and Westgate Village, encompassing approximately 406.99 acres.

4.2.7 Windrow

Windrows were characterized as rows of planted ornamental trees and were observed in two of the four portions of the study area, encompassing approximately 3.47 acres. One windrow was observed in Westgate Center and consisted of olive trees (*Olea europaea*), and two windrows were observed in Westgate Village and consisted of eucalyptus trees (*Eucalyptus* sp.).

4.2.8 Landscaped

Landscaped areas were observed along the I-15 freeway and consisted of planted areas primarily comprised of native vegetation typical of Riversidean Sage Scrub plant communities (see Section 4.2.11 below), such as California buckwheat (*Eriogonum fasciculatum*), encompassing approximately 4.78 acres.

4.2.9 Non-Native Grassland (Holland Code: 42200)

The non-native grassland areas were dominated by non-native annual grasses such as ripgut brome (*Bromus diandrus*), red brome (*Bromus madritensis*), slender wild oat, and shortpod mustard. Ruderal species were also observed such as storksbill filaree and telegraph weed, in addition to a few scattered native species including California buckwheat and deerweed (*Lotus scoparius*). Non-native grassland was observed within the Falcon Ridge Village and Westgate Center portions of the study area, encompassing approximately 11.78 acres.

4.2.10 Non-Native Grassland/Disturbed (Holland Codes: 42200/11300)

The non-native grassland areas were dominated by the non-native annual grasses in addition to other ruderal and native species, as described above in Section 4.2.9, *Non-Native Grassland*. Non-native grassland was observed within the Falcon Ridge Village, encompassing approximately 63.70 acres. The area had recently been disced in a grid pattern, resulting in rectangular patches of non-native grassland separated by the disced areas.

4.2.11 Riversidean Sage Scrub (Holland Code: 32710)

Riversidean sage scrub (RSS) is the driest, most inland expression of the collection of sage scrub or coastal scrub series and ranges throughout southern California. It typically occurs on steep slopes, severely drained soils, or clays that release soil moisture slowly. Typical stands of this type of sage scrub are fairly open and dominated by California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and foxtail chess (*Bromus madritensis* ssp. *rubens*). Additional species characteristic of this plant community include deerweed (*Lotus scoparius*), white sage (*Salvia apiana*), black sage (*Salvia mellifera*), our Lord's candle (*Yucca whipplei*), matchweed (*Gutierrezia californica*), and bushmallow (*Malacothamnus fasciculatus*).

The RSS areas within the study area were primarily dominated by California buckwheat in addition to other species such as California sagebrush, deerweed, white sage, wishbone bush (*Mirabilis californica*), showy penstemon (*Penstemon spectabilis*), and an understory of ruderal species including doveweed (*Eremocarpus setigerus*), shortpod mustard, Spanish clover, and telegraph weed. RSS was observed in the Westgate Village

portion of the study area in remnant patches within or adjacent to historic channels, and adjacent to the I-15 freeway, encompassing 23.62 acres.

4.2.12 Disturbed Riversidean Sage Scrub

The plant species observed in the disturbed RSS areas were comparable to the RSS areas, with the exception that the disturbed RSS was characterized by a higher density of ruderal species and a lower density of native species due to disturbance. One small area of disturbed RSS was observed in the Westgate Village portion of the study area adjacent to a pathway, encompassing 0.46 acre.

4.2.13 Riversidean Alluvial Fan Sage Scrub/Disturbed (Holland Codes: 32720/11300)

Alluvial fan sage scrub is a plant community that grows on sandy, rock alluvia deposited by streams that experience infrequent episodes of severe overbank flooding. This vegetation dominates major outwash fans at the mouths of canyons along the coastal side of the Transverse and Peninsular Ranges of southern California. Alluvial scrub is composed of an assortment of drought-deciduous subshrubs and large evergreen wood shrubs that are adapted to porous, low-fertility substrates and to survival of intense, periodic flooding and erosion. Early classification work on this plant community commonly recognized three types or phases of alluvial scrub related to such factors as the scouring action of flood channels, distance from the flood channel, time since the last catastrophic flood, and substrate features such as texture and moisture content (Smith, 1980; Hanes *et al.*, 1989). These three types are commonly referred to as: 1) pioneer – where vegetation is sparse, with a low species' diversity and stature and is found within active stream channels or recently scoured streambeds; 2) intermediate – where vegetation is rather dense and is composed mainly of subshrubs; and 3) mature – where vegetation is composed of fully developed subshrubs and wood shrubs. According to the earlier studies, however, when areas supporting alluvial fan sage scrub are permanently precluded from experiencing flooding, such as in the case of areas "downstream" of flood control improvements or protected by flood control structures, they commonly develop into an upland, often dominated by chaparral where they remain as a climax community. Conversely, episodic floods can eliminate existing stands of intermediate or mature alluvial scrub and thus initiate new pioneer stands. In a study of the floristic composition and diversity of alluvial sage scrub vegetation in San Diego County, Smith (1996) generally supports this successional concept by stating that "shrubs and sub-shrub overstories are reduced only in large-scale catastrophic floods", as is the generalized successional scenario put forth by Smith (1980) and Hanes *et al*. (1989).

According to even more recent scientific studies and literature on alluvial scrub in southern California, the processes described above may be generalizations that do not apply in all cases. Specifically, Barbour and Wirka (1997) suggest: 1) the three-phase classification of alluvial scrub may oversimplify succession throughout this community; 2) the true timeframe over which succession occurs may be longer than previously thought; and 3) the specific dynamics of succession may differ by drainage and geography.

In any case, the alluvial scrub community is distinguished by its vegetative composition, which according to the body of research available and referenced herein contrasts in several respects with that of the Riversidean and coastal sage scrub community, the plant association that characterizes most of the coastal plains and slopes of southern California. These contrasts are: (1) greater numbers of alluvial scrub species are mesic (adapted to moist habitats), whereas most coastal sage scrub species are xeric (adapted to dry

habitats); (2) coastal sage scrub vegetation is composed primarily of drought-deciduous shrubs and sparse evergreens, while alluvial scrub vegetation consists of numerous evergreen shrubs and a diverse assemblage of subshrubs; (3) scale-broom (*Lepidospartum squamatum*), a plant with high fidelity to alluvial substrates, is found throughout alluvial scrub plant communities but seldom in coastal sage scrub vegetation; (4) species commonly found in chaparral or xeric plant assemblages, such as spiny redberry (*Rhamnus crocea*) and California juniper (*Juniperus californica*), are also common in the alluvial scrub community; (5) lemonadeberry (*Rhus integrifolia*) is usually sparse in coastal sage scrub communities but occurs frequently in alluvial scrub vegetation; and (6) alluvial scrub vegetation exhibits a greater species diversity than coastal sage scrub vegetation (Hanes *et al.*, 1989).

As a vegetation type or plant community, alluvial scrub has been classified more specifically by the CNDDB as Riversidean alluvial fan sage scrub and is considered rare and worthy of consideration according to the *List of California Terrestrial Natural Communities Recognized by The California Natural Diversity Database* (CDFW 2003). Earlier work by Kirkpatrick and Hutchinson (1977) has classified the California coastal sage scrub community as Riversidean, Venturan, and San Diegan based upon floristic characteristics and this distinction has been applied to alluvial scrub as well. According to Sawyer and Keeler-Wolfe's *A Manual of California Vegetation* (1995), Riversidean alluvial fan sage scrub is categorized within the scale-broom series. The new *Terrestrial Vegetation of California* (Barbour *et al.*, 2007) acknowledges this previous classification but describes the difficulty in assigning series (now termed alliances) to communities that experience successional transitions. Barbour *et al.* (2007) defines alluvial scrub as a specific type of interior sage scrub or Riversidean sage scrub that occurs on alluvial fans and floodplains. This new classification defers to the current scientific literature on this community, including Barbour and Wirka (1997) for Los Angeles, Riverside, and San Bernardino Counties and Smith (1996) for San Diego County, for more detailed descriptions and groupings.

Despite the likelihood that studies on the most appropriate way of classifying floristic variations in alluvial scrub will continue, this plant community as a whole remains distinct and unique due to its dependency upon active fluvial processes which influence its functions and values as a habitat. Therefore, for the purposes of this BRA, the alluvial scrub that occurs within the study area will be referred to as Riversidean alluvial fan sage scrub (to date, the most widely used terminology). Furthermore, because this CEQA assessment focuses on the subjects of existing plant communities, wildlife populations, and sensitive biological resources, it remained appropriate to divide the alluvial fan sage scrub into the three phases due to the distinctions in relative age, topography, and vegetation present within the study area and the varying habitat functions and values these phases represent.

The Riversidean Alluvial Fan Sage Scrub (RAFSS) within the study area was comprised of species observed within the RSS, including California buckwheat, California sagebush, wishbone bush, deerweed, white sage, and showy penstemon, in addition to other species including Mexican elderberry (*Sambucus mexicana*), coyote bush (*Baccharis pilularis*), yerba santa (*Eriodictyon trichocalyx*), prickly pear cactus (*Opuntia littoralis*), spiny redberry (*Rhamnus crocea*), holly-leafed cherry (*Prunus ilicifolia*), skunkbrush (*Rhus trilobata*), and scale-broom (*Lepidospartum squamatum*). The RAFSS has areas of disturbance throughout consisting primarily of dirt trails that are bare or sparsely vegetated with ruderal species. The RAFSS was observed in one area within the Westgate Village portion of the study area only, associated with a remnant channel system and adjacent to an established trail, encompassing 5.23 acres. The natural channel system in this area has been replaced by an open concrete box channel from which the RAFSS is isolated, thereby removing the active fluvial processes typical for this plant community. As such, although the habitat consists

of subshrubs and woody shrubs that are typical of mature RAFSS, the habitat is either likely to develop into more of an upland chaparral dominated community based on the absence of flooding events, or become more disturbed due to the current level of human activity in the area.

4.2.14 Disturbed Riversidean Alluvial Fan Sage Scrub

The disturbed RAFSS within the study area was comprised of remnant stands of native vegetation including scale broom, holly-leafed cherry, California buckwheat, and Mexican elderberry, with a high density of ruderal species dominated by shortpod mustard and brome grasses. This plant community was observed in one area of the Westgate Village portion of the study area only, adjacent to a remnant channel system just north of the RAFSS described above, encompassing 9.22 acres.

4.3 GENERAL PLANT INVENTORY

The plant communities discussed above are composed of numerous plant species. Observations regarding the plant species present were made during the field visit to the study area, and a list of all plant species observed is provided in Appendix A, *Floral and Faunal Compendium*. Sensitive plant species occurring or potentially occurring within the study area are discussed below in Section 4.8.3, *Sensitive Plant Species*.

4.4 GENERAL WILDLIFE INVENTORY

The plant communities discussed above provide habitat for common wildlife species, including the following that were observed: western fence lizard (*Sceloporus occidentalis*), gopher snake (*Pituophis melanoleucus*), mourning dove (*Zenaida macroura*), northern mockingbird (*Mimus polyglottos*), house finch (*Carpodacus mexicanus*), Anna's hummingbird (*Calypte anna*), American crow (*Corvus brachyrhynchos*), European starling (*Sturnus vulgaris*), red-tailed hawk (*Buteo jamaicensis*), killdeer (*Charadrius vociferus*), desert cottontail (*Sylvilagus audubonii*), coyote (*Canis latrans*), and California ground squirrel (*Spermophilus beecheyi*). Both non-native habitats, such as non-native grassland and ruderal areas, in addition to the native habitats, such as Riversidean Sage Scrub and Riversidean Alluvial Fan Sage Scrub, can provide habitat for these species. Observations regarding the wildlife species present were made during the field visit to the study area, and a list of all species observed is provided in Appendix A, *Floral and Faunal Compendium*. The larger Dulzura kangaroo rat (*Dipodomys simulans*) was observed by Dr. O'Farrell during the SBKR assessment over much of the study area, although numbers appeared to be small consistent with the degradation of the habitat (O'Farrell Biological Consulting, 2012. The assessment memo is also provided as Appendix D, *San Bernardino Kangaroo Rat Assessment*). Since this species is not protected by any regulations, it is not considered sensitive. Sensitive wildlife species occurring or potentially occurring are discussed below in Section 4.8.4, *Sensitive Wildlife Species*.

4.5 WILDLIFE MOVEMENT

4.5.1 Overview

Wildlife corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to

adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic material (MacArthur and Wilson, 1967; Soulé, 1987; Harris and Gallagher, 1989; Bennet, 1990).

Corridors effectively act as links between different populations of a species. A group of smaller populations (termed "demes") linked together via a system of corridors is termed a "metapopulation." The long-term health of each deme within the metapopulation is dependent upon its size and the frequency of interchange of individuals (immigration vs. emigration). The smaller the deme, the more important immigration becomes, because prolonged inbreeding with the same individuals can reduce genetic variability. Immigrant individuals that move into the deme from adjoining demes mate with individuals and supply that deme with new genes and gene combinations that increases overall genetic diversity. An increase in a population's genetic variability is generally associated with an increase in a population's health and long-term viability.

Corridors mitigate the effects of habitat fragmentation by: (1) allowing animals to move between remaining habitats, which allows depleted populations to be replenished and promotes genetic diversity; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fires or disease) will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs (Noss, 1983; Fahrig and Merriam, 1985; Simberloff and Cox, 1987; Harris and Gallagher, 1989).

Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, individuals extending range distributions); (2) seasonal migration; and, (3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover). A number of terms have been used in various wildlife movement studies, such as "wildlife corridor," "travel route," and "wildlife crossing" to refer to areas in which wildlife move from one area to another. To clarify the meaning of these terms and facilitate the discussion on wildlife movement in this study, these terms are defined as follows:

Travel Route: A landscape feature (such as a ridgeline, drainage, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and provide access to necessary resources (e.g., water, food, cover, den areas). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another; it contains adequate food, water, and/or cover while moving between habitat areas; and provides a relatively direct link between target habitat areas.

Wildlife Corridor: A piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another. Wildlife corridors are usually bounded by urban land areas or other areas unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and facilitate movement while in the corridor. Larger, landscape-level corridors (often referred to as "habitat or landscape linkages") can provide both transitory and resident habitat for a variety of species.

Wildlife Crossing: A small, narrow area, relatively short in length and generally constricted in nature, that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents

movement. Crossings typically are manmade and include culverts, underpasses, drainage pipes, and tunnels to provide access across or under roads, highways, pipelines, or other physical obstacles. These are often "choke points" along a movement corridor.

4.5.2 Wildlife Movement Within the Study area

As previously described, wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, or individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover). Although the nature of each of these types of movement is species specific, large open spaces will generally support a diverse wildlife community representing all types of movement. Each type of movement may also be represented at a variety of scales from non-migratory movement of amphibians, reptiles, and some birds on a "local" level to home ranges encompassing many square-miles for large mammals moving on a "regional" level.

Regional movement through the study area to the surrounding vicinity immediately adjacent to the study area is restricted in all directions due to the surrounding development and the I-15 freeway. The study area is situated approximately 0.75 mile southeast of the foothills of the San Gabriel Mountains, approximately 2.6 miles southwest of Lytle Creek Wash, and approximately 5.0 miles southwest of Cajon Wash (refer to **Figure 8**, *Aerial Photograph*). The study area is immediately adjacent to the San Sevaine Flood Control Basin which is located to the west, and a portion of Etiwanda San Sevaine Flood Control Channel runs along the study area boundary in the southwestern portion. These two resources may provide important water sources to wildlife in the study area vicinity, in addition to other basin features to the northwest of the study area.

Due to the past urbanization of the region, the study area is immediately surrounded by the I-15 freeway and residential development to the north, and residential development with patches of vacant land to the east, south and west. Development in the area would deter the movement of larger mammals that require larger home range areas and dispersal distances or dense vegetative cover. Species that are less restricted in movement pathway requirements or are adapted to urban areas (e.g., raccoon, skunk, coyote, birds) likely move through the study area. However, the study area does not support habitat that connects two or more habitat patches that would otherwise be fragmented or isolated from one another; thus, the study area is not considered a wildlife corridor. Additionally, the South Coast Missing Linkage Project: A Linkage Design for the San Gabriel-San Bernardino Connection was reviewed (Penrod *et al.*, 2004). Although the study area is immediately adjacent to the San Gabriel-San Bernardino Connection to the south (less than approximately 0.25 mile), as identified by South Coast Missing Linkage Project, it is not within any wildlife corridors. A small portion of the northernmost boundary of the study area is located within the *North Fontana Interim MSHCP Policy* boundary. However, however, no known corridors or linkages are identified in the plan within the study area, based on the *North Fontana Interim MSHCP Policy* document (Michael Brandman Associates, 2004).

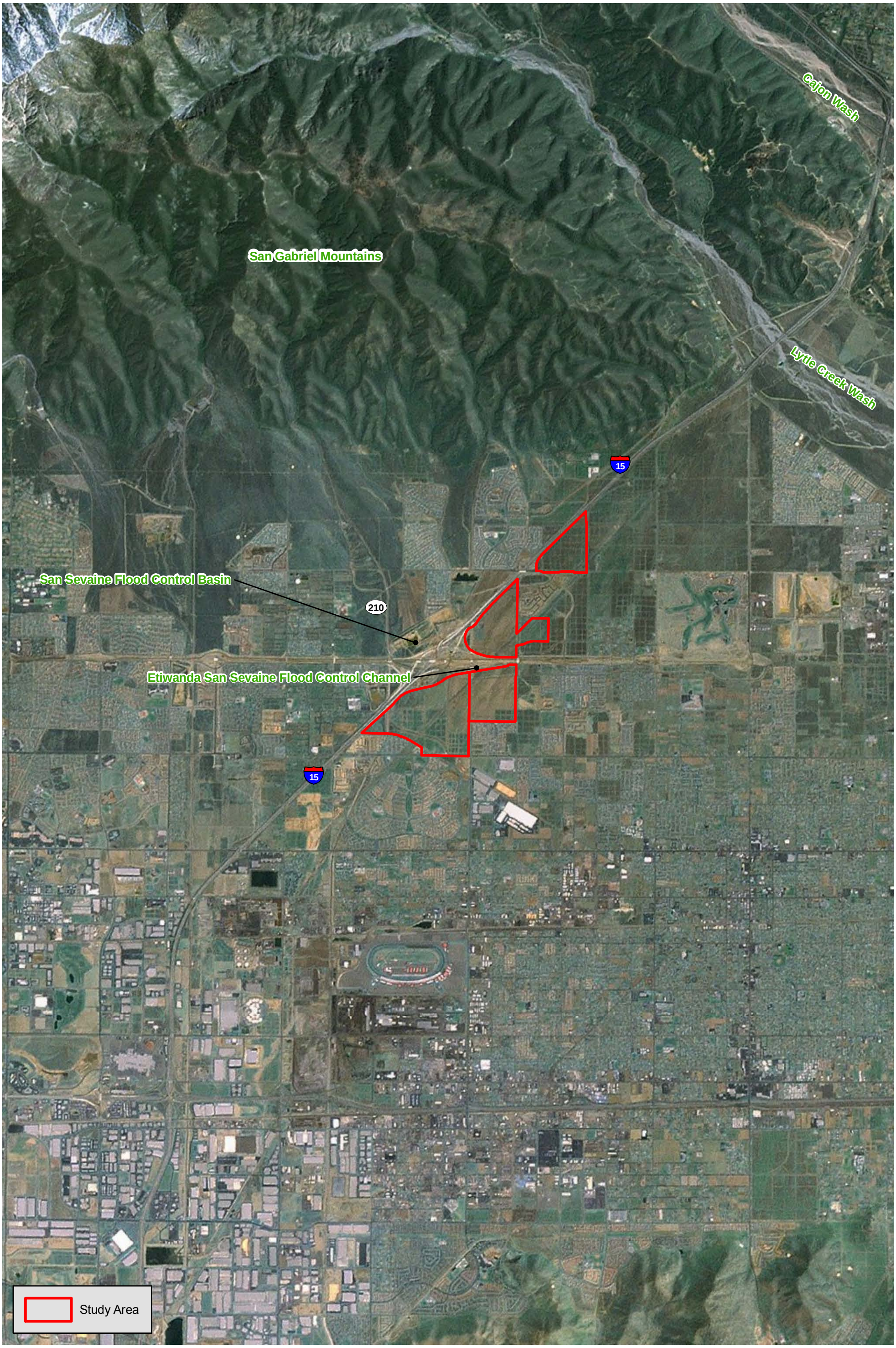
Movement on a smaller or "local" scale could occur within the study area. Portions of the study area were previously utilized for agricultural purposes, and former vineyards currently exist within the study area (excluding the Falcon Ridge Village portion). Limited habitat within the study area therefore consists of primarily ruderal and non-native grassland, with remnant patches of RSS and RAFSS. A portion of Etiwanda San Sevaine Flood Control Channel runs along the study area boundary in the southwestern portion

(northern boundary of Westgate Village), which consists of a concrete-lined channel, located both on- and off-site (see **Figure 9**, *Jurisdictional Features*). Two remnant non-jurisdictional channels that no longer provide an upstream or downstream connection are also present within the Westgate Village portion of the study area; these features are likely historic from prior to construction of the Etiwanda San Sevaine Flood Control Channel. Native vegetation in these features is limited to the northern segments and consists of RSS and Disturbed RSS; the southern segments are vegetated with Ruderal species. Other channel features on-site consist of one concrete ditch located in the Westgate Center portion of the study area and a roadside dirt ditch in the Falcon Ridge Village portion. These features are only a few feet wide and do not support habitat. Based on the lack of habitat and off-site connection, these features are not expected to support wildlife movement on a regional scale. Although the habitat on-site is disturbed and/or remnant, it likely supports some wildlife movement within the study area for foraging. Data gathered from the biological survey indicates that the study area contains habitat that supports common species of invertebrates, reptiles, birds, and mammals. The home range and average dispersal distance of many of these species may be entirely contained within the study area and immediate vicinity. Populations of animals such as insects, reptiles, small mammals, and a few bird species may find all their resource requirements without moving far or outside of the study area at all. Occasionally, individuals expanding their home range or dispersing from their parental range will attempt to move outside of the study area, if feasible based on the surrounding restrictions to movement from development (see above). Bird species may fly over the development and I-15 freeway and utilize the study area for foraging, although this is expected to be limited due to the high level of human activity in the region. Birds are more likely to use the water basins off-site on the north side of the I-15 freeway, including the San Sevaine Flood Control Basin.

Although the study area supports live-in and movement habitat for species on a local scale (i.e., some limited live-in and at least marginal movement habitat for reptile, bird, and mammal species), it likely provides little to no function to facilitate wildlife movement for wildlife species on a regional scale, and is not identified as a regionally important dispersal or seasonal migration corridor.

4.6 JURISDICTIONAL WATERS AND WETLANDS

The potential for USACE, RWQCB, and/or CDFW jurisdictional waters associated with the project study area was assessed based primarily on the presence or absence of jurisdictional field indicators such as an ordinary high water mark (OHWM) and defined bed-and-bank given the concrete nature of the jurisdictional features examined (i.e. secondary indicators of hydrology such as erosion, the deposition of debris, scour, sediment sorting, and changes in vegetation did not apply). If these criteria were met, data was collected to estimate the channel width of jurisdictional waters potentially regulated by the resource agencies. Downstream surface connections to known USACE jurisdictional waters were also evaluated using satellite imagery and mapping, for the purpose of establishing "waters of the U.S." Although this BRA provides a



PCR

N

0 1 2 Miles

Aerial Photograph

Westgate Specific Plan

Source: Aerial Express, 2010; Hall & Foreman Inc., 2012; PCR Services Corporation, 2012.

FIGURE

8

Study Area

Jurisdictional Features (Concrete Lined Trapezoidal Channels)

USACE/RWQCB/CDFW Jurisdiction

CDFW Jurisdiction

Off-Site USACE/RWQCB/CDFW Jurisdiction

Off-Site CDFW Jurisdiction

Non-Jurisdictional Features

Detention Basin

Remnant Drainage Feature

Off-Site Roadside Ditch

15

Lytle Creek Rd.

Summit Ave.

Maintained Channel

210

San Sevaine Channel

15

Etiwanda Channel

San Sevaine Ave.

Baseline Ave.

PCR

N

1,500 0 1,500 Feet

Jurisdictional Features

Westgate Specific Plan

Source: Aerial Express, 2010; Hall & Foreman Inc., 2012; PCR Services Corporation, 2014.

FIGURE

9

specific-plan level jurisdictional assessment of existing field conditions, concurrence by the resource agencies will likely be sought during regulatory approvals for future projects within the proposed specific-plan areas. Therefore, this jurisdictional assessment should provide a basis for future concurrence by the resource agencies, where appropriate. The study area supports three (3) jurisdictional drainage features comprised of concrete channels that appear to meet the definition of jurisdictional waters (**Figure 9**, *Jurisdictional Features*). Photographs of jurisdictional features are provided in **Figure 10**, *Drainage Photographs*.

Jurisdictional concrete-lined channels associated with the Westgate Specific Plan study area total approximately 2.77 acres of USACE/RWQCB "waters of the U.S." and 5.04 acres of CDFW jurisdiction. The following table and associated drainage descriptions provide a summary of jurisdictional drainage features assessed as part of the study area (**Table 2**, *Jurisdictional Features*):

Table 2
Jurisdictional Features[a]

		Area (acres)		
Concrete Channels	Length (feet)	USACE/ RWQCB	CDFW	Flow Type
Maintained Channel	1,736	0.12	0.40	Ephemeral
San Sevaine channel (Off-Site)	7,395	1.69	2.71	Intermittent
Etiwanda Channel	1,401	0.96	1.93	Intermittent
Total	**10,532**	**2.77**	**5.04**	

Jurisdictional acreages overlap and are not additive (e.g., USACE acreages are included in the total RWQCB and CDFW jurisdictional acreages).

PCR Services Corporation, 2012 and 2014.

Maintained Channel

A concrete trapezoidal channel is located within the Westgate Center portion of the study area that commences at a culvert located near the southeasternmost corner of the Westgate Center boundary, and extends from the terminus of Sierra Lakes Parkway located approximately 800 feet west of its intersection with Beech Avenue. The maintained channel accepts flows from a stormdrain beneath Sierra Lakes Highway via an open concrete-lined trapezoidal channel that extends to the west for approximately 1,736 linear feet before discharging flow into a stand-pipe inlet that appears to drain to the feature identified in this BRA as the "San Sevaine Channel" approximately 0.20 miles south of the inlet. Given that the San Sevaine channel supports USACE jurisdictional field indicators such as an OHWM, and appears to support flow exceeding three months in duration a year, the San Sevaine channel is likely to be considered a Relatively Permanent Water (RPW) regulated by the USACE. Therefore, the maintained channel is a tributary to an RPW, is regulated by the USACE and is thus considered jurisdictional "waters of the U.S." for the purpose of this specific-plan level BRA.

The maintained channel is unvegetated and is presumed to be subject to regular flood control maintenance. USACE jurisdictional channel widths ranged from 3-14 feet while CDFW jurisdictional channel widths ranged from 10-14 feet.

Jurisdiction associated with the maintained channel totals approximately 0.12 acre of USACE/RWQCB "waters of the U.S." and 0.40 acre of CDFW streambed.

San Sevaine Channel (off-site)

A concrete trapezoidal channel occurs directly off-site adjacent to the northern boundary of the Westgate Village and Westgate Village East portions of the study area. The channel commences from a culvert beneath the 210 freeway near the northeast boundary of the Westgate Village East portion of the study area, and extends toward the west/southwest for approximately 7,395 linear feet prior to joining the Etiwanda Creek Channel near the 15 freeway. The channel is identified as the San Sevaine Channel for the purpose of this assessment as it diverts flow that historically entered the earthen/remnant extent of San Sevaine Creek that remains on the Westgate Village portion of the study area (see Section 4.7 "Remnant East Etiwanda & San Sevaine Creek" description). However, based on USGS topographic mapping and historic aerial imagery, it appears that all San Sevaine Creek flows were diverted into the Etiwanda Creek channel in the late 1990's. Therefore it should be noted that the San Sevaine channel assessed by this BRA does not appear to carry any flow from San Sevaine Creek and is not within the historical downstream location of that creek, but serves to accept flow from developed areas north of the 210 freeway. Jurisdictional channel widths averaged approximately 10 feet for USACE/RWQCB and 16 feet for CDFW.

The off-site San Sevaine channel supports approximately 1.69 acres of USACE/RWQCB concrete-lined jurisdictional "waters of the U.S." and 2.71 acres of CDFW jurisdiction.

Etiwanda Channel

Etiwanda Channel is a concrete box channel located near the southwest tip of the Westgate Village portion of the study area that extends directly south from beneath the 15 freeway for approximately 1,401 linear feet prior to exiting the study area. Etiwanda Channel accepts storm flow from foothills located approximately 3 miles north of the study area associated with East Etiwanda and San Sevaine Canyons, through a series of basins and diversion structures. The channel also accepts flow from the off-site jurisdictional drainage feature identified as San Sevaine channel. Based on review of historic aerial imagery, it appears that East Etiwanda Creek was channelized in its current configuration in the 1980's. An earthen, non-jurisdictional remnant portion of the historic configuration of the Etiwanda Channel occurs on the Westgate Village study area as described in Section 4.7 (see "Remnant Etiwanda Creek" description). However, all flows are confined to the concrete extent of the jurisdictional Etiwanda Channel as no hydraulic connection to the remnant portion of the creek exists. Jurisdictional channel widths ranged from 6-30 feet for USACE/RWQCB and 20-60 feet for CDFW.

The Etiwanda Channel supports approximately 0.96 acre of USACE/RWQCB concrete-lined jurisdictional "waters of the U.S." and 1.93 acres of CDFW jurisdiction.

Photograph 1: Maintained channel looking upstream/east from raised road culvert.

Photograph 2: San Sevaine channel looking downstream/southwest near center of northern Westgate Village boundary.

Photograph 3: Etiwanda Channel looking downstream/south near 15 freeway.

PCR

Drainage Photographs

Westgate Specific Plan

Source: PCR Services Corporation, 2012.

FIGURE

10a

Photograph 4: Non-jurisdictional roadside ditch looking north near center of eastern Falcon Ridge Village boundary.

Photograph 5: Remnant San Sevaine Creek looking upstream/north from southern Westgate Village boundary.

Photograph 6: Remnant East Etiwanda Creek looking upstream/north from southern Westgate Village boundary.

PCR

Drainage Photographs

Westgate Specific Plan

Source: PCR Services Corporation, 2012.

FIGURE

10b

4.7 NON-JURISDICTIONAL DRAINAGE FEATURES

The following provides a summary of non-jurisdictional drainage features observed in association with the study areas. Concurrence regarding the lack of jurisdiction should be obtained from the resource agencies on a project-by-project basis during future regulatory approvals within the proposed Westgate Specific Plan area. As depicted on **Figure 9**, *Jurisdictional Features*, six (6) drainage features do not appear to meet the definition of jurisdictional waters including one (1) off-site roadside ditch, four (4) man-made detention basins, and two (2) remnant channels associated with the historic extents of East Etiwanda Creek and San Sevaine Creek that do not appear to meet the definition of USACE, RWQCB, and/or CDFW jurisdictional resources. Photographs of non-jurisdictional drainage features are provided in **Figure 10b**, *Drainage Photographs*.

Detention Basins

Three man-made detention basins are located on the Falcon Ridge Village portion of the study area directly behind an existing commercial retail development constructed in 2006/2007 based on satellite imagery. The basins support disturbed vegetation likely subject to regular maintenance. No USACE/RWQCB jurisdictional field indicators such as an OHWM or defined bed-and-bank were observed within the detention basins. Therefore, the basins were determined not to support resource agency jurisdiction.

Roadside Ditch (Off-Site)

A roadside ditch occurs directly off-site along the majority of the eastern boundary of the Falcon Ridge Village portion of the study area. The ditch runs along the western shoulder of Lytle Creek Road and appears to be regularly maintained. The ditch is comprised primarily of earthen gullies that discharge into a series of stand-pipes located approximately every 200-300 linear feet along Lytle Creek Road. The ditch is characterized as an earthen gully with scattered ruderal vegetation. In several areas, the ditch supports little evidence of flow and is not discernable as a drainage feature. The roadside feature appears to be consistent with the USACE definition of non-regulated features based on the legal memorandum jointly issued by the USACE and Environmental Protection Agency on June 5, 2007 which defines such ditches as, "*…ditches (including roadside ditches) excavated wholly in and draining only uplands that do not carry a relatively permanent flow of water*." Given the above observations and the lack of a discernable streambed and/or defined bed-and-bank, the roadside ditch was determined not to support resource agency jurisdiction.

Remnant East Etiwanda & San Sevaine Creeks

A remnant portion of the historically channelized extent of East Etiwanda and San Sevaine Creeks occur on the Westgate Village portion of the study area. Both remnant drainages have been hydraulically severed from upstream creek flow, based on the complete diversion of flow created by the concrete channelization of the jurisdictional components of the Etiwanda Channel and the San Sevaine channel described in Section 4.6. As depicted on Figure 6, both features support upland vegetation communities including RSS, disturbed RSS, ruderal/disturbed, and disturbed. In addition, no jurisdictional field indicators where observed within the remnant drainages. Therefore, the remnant extents of East Etiwanda Creek and San Sevaine Creek were determined not to support resource agency jurisdiction.

4.8 SENSITIVE BIOLOGICAL RESOURCES

The following discussion describes the plant and wildlife species present, or potentially present, within the study area that have been afforded special recognition by Federal, State, or local resource conservation agencies and organizations. These species have declining or limited population sizes, usually resulting from habitat loss. Also discussed are habitats that are unique, of relatively limited distribution, or of particular value to wildlife. Protected sensitive species are classified by either Federal or State resource management agencies, or both, as threatened or endangered, under provisions of the Federal and State Endangered Species Acts (FESA and CESA, respectively).

4.8.1 Sensitive Resource Classification

Federal Protection and Classifications

The FESA of 1973 defines an endangered species as "any species which is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species which is likely to become an Endangered species within the foreseeable future throughout all or a significant portion of its range." Under provisions of Section 9(a)(1)(B) of the FESA, unless properly permitted, it is unlawful to "take" any listed species. "Take" is defined in Section 3(18) of FESA: "...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Further, the USFWS, through regulation, has interpreted the terms "harm" and "harass" to include certain types of habitat modification as forms of "take." These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species.

All references to Federally-protected species in this report include the most current published status or candidate category to which each species has been assigned by USFWS.

For purposes of this assessment the following acronyms are used for Federal status species, as applicable:

- FE Federally-listed as Endangered
- FT Federally-listed as Threatened
- FPE Federally proposed for listing as Endangered
- FPT Federally proposed for listing as Threatened
- FPD Federally proposed for delisting
- FC Federal candidate species (former C1 species)

The Migratory Bird Treaty Act (MBTA) protects individuals as well as any part, nest, or eggs of any bird listed as migratory. In practice, Federal permits issued for activities that potentially impact migratory birds typically have conditions that require pre-disturbance surveys for nesting birds. In the event nesting is observed, a buffer area with a specified radius must be established, within which no disturbance or intrusion is allowed until the young have fledged and left the nest, or it has been determined that the nest has failed. If not otherwise specified in the permit, the size of the buffer area varies with species and local circumstances (e.g., presence of busy roads, intervening topography, etc.), and is based on the professional judgment of a monitoring biologist.

State of California Protection and Classifications

California's Endangered Species Act (CESA) defines an endangered species as:

> "…a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease."

The State defines a threatened species as:

> "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a threatened species."

Candidate species are defined as:

> "…a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list."

Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the FESA, CESA does not include listing provisions for invertebrate species.

Article 3, Sections 2080 through 2085, of the CESA addresses the taking of threatened or endangered species by stating:

> "no person shall import into this State, export out of this State, or take, possess, purchase, or sell within this State, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided."

Under the CESA, "take" is defined as, "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

Additionally, some sensitive mammals and birds are protected by the State as Fully Protected Mammals or Fully Protected Birds, as described in the California Fish and Game Code, Sections 4700 and 3511, respectively.

California Species of Special Concern are species designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. Informally listed species are not protected per se, but warrant consideration in the preparation of biological assessments. For some species, the CNDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nest areas.

For the purposes of this assessment, the following acronyms are used for State status species, as applicable:

- SE State-listed as Endangered
- ST State-listed as Threatened
- SR State-listed as Rare
- SCE State candidate for listing as Endangered
- SCT State candidate for listing as Threatened
- SFP State Fully Protected
- SSC California Species of Special Concern

California Native Plant Society

The CNPS is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in California. CNPS has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of Rare, Threatened, or Endangered vascular plant species of California (CNPS 2001). The list serves as the candidate list for listing as Threatened and Endangered by CDFW. CNPS has developed five categories of rarity, of which Lists 1A, 1B, and 2 are particularly considered sensitive:

- List 1A Presumed extinct in California.
- List 1B Plants Rare, Threatened, or Endangered in California and elsewhere.
- List 2 Plants Rare, Threatened, or Endangered in California, but more common elsewhere.
- List 3 Plants about which we need more information – a review list.
- List 4 Plants of limited distribution – a watch list.

The CNPS recently added "threat ranks" which parallel the ranks used by the CNDDB. These ranks are added as a decimal code after the CNPS List (e.g., List 1B.1). The threat codes are as follows:

- .1 – Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat);
- .2 – Fairly endangered in California (20-80% occurrences threatened);
- .3 – Not very endangered in California (<20% of occurrences threatened or no current threats known).

Sensitive species that occur or potentially could occur within the study area are based on one or more of the following: (1) the direct observation of the species within the study area during any field surveys; (2) a record reported in the CNDDB; and (3) the study area is within known distribution of a species and contains appropriate habitat.

North Fontana MSHCP

A portion of the Westgate Specific Plan study area (7.69 acres) is located within the proposed North Fontana MSHCP Plan Area boundary. The City of Fontana has prepared and submitted an MSHCP to address impacts and mitigation for listed and sensitive species found within the Plan Area. While the MSHCP is being processed, the City of Fontana has issued the *North Fontana Interim MSHCP Policy* that is in keeping with the intent and direction of the upcoming MSHCP (Michael Brandman Associates, 2004). The policy was established to assess and develop mitigation measures for all development applications within the designated Plan Area.

4.8.2 Sensitive Plant Communities/Habitat

Due to its ability to support listed plant and wildlife species, RSS and RAFSS are considered sensitive habitats by wildlife agencies such as CDFW and USFWS, and as also identified in the *North Fontana Interim MSHCP Policy*. As described above in Section 4.2 and Table 1, the study area supports 25.3 acres of RSS, 3.11 acres of Disturbed RSS, 5.23 acres of RAFSS/Disturbed and 9.22 acres of Disturbed RAFSS. These areas are all within the Westgate Village portion of the study area and, as described in Section 4.2, are disturbed, remnant patches of habitat surrounded by development. Therefore, due to their disturbed and isolated nature, the value of these areas for plant and wildlife species is expected to be low.

4.8.3 Sensitive Plant Species

Sensitive plants include those listed, or candidates for listing, by the USFWS and CDFW, and species considered sensitive by the CNPS (particularly Lists 1A, 1B, and 2). Several sensitive plant species were reported in the vicinity based on CNDDB, the *North Fontana Interim MSHCP Policy* (Michael Brandman Associates, 2004), and the *Final EIR* (City of Fontana, 1996). A total of 13 species were identified as having a potential to occur within the study area based on the literature review and habitat anticipated within the study area, as listed in Appendix B. Following the field survey, 10 of the species were identified as having a low potential to occur within the RSS and RAFSS habitats due to the disturbance and remnant nature of these areas. Although the species are not anticipated to occur, focused surveys would be required to confirm absence based on a low potential for these species to occur. The remaining three species were determined as having no potential to occur. For two species, this was determined due to the absence of suitable habitat within the study area, namely slender-horned spineflower (*Dodecahema leptoceras*) and Santa Ana River woollystar (*Eriastrum densifolium* ssp*. sanctorum*). For the remaining species, Nevin's barberry (*Berberis nevinii*), this was based on the lack of any known occurrences (USFWS, 2009), limited/poor quality, and the lack of any observations during the field survey (this species is evergreen and therefore should be visible year-round). The sensitive plant species reviewed, as well as their potential to occur on-site, are detailed in Appendix B.

4.8.4 Sensitive Wildlife Species

Sensitive wildlife include those species listed as Endangered or Threatened under the FESA or CESA, candidates for listing by the USFWS or CDFW, and species of special concern to the CDFW. Several sensitive wildlife species were reported in the vicinity based on CNDDB, the *North Fontana Interim MSHCP Policy* (Michael Brandman Associates, 2004), and the *Final EIR* (City of Fontana, 1996). A total of 43 species were identified as having a potential to occur within the study area based on the literature review and habitat anticipated within the study area, as listed in Appendix C. Following the field survey, 17 species were

determined as having no potential due to the lack of suitable habitat in the study area. Of the remaining species, 18 species were identified as having a low potential to occur within the RSS, RAFSS and/or grassland habitats due to the limited and poor quality nature of these areas, 6 bird species were identified as having a moderate potential to occur based on the presence of suitable foraging habitat, and 2 species were identified has having a high potential to occur based on past observations within the study area. Four sensitive species, in addition to a group of species, are analyzed in more detail below due to known presence within the study area or within the vicinity. These species are listed in Appendix C and include SBKR, coastal California gnatcatcher (*Polioptila californica californica*), burrowing owl, Delhi Sands flower-loving fly (*Rhaphiomidas terminates abdominalis*), and raptors. The sensitive wildlife species reviewed, as well as their potential to occur on-site, are detailed in Appendix B.

San Bernardino Kangaroo Rat (SBKR)

The SBKR is federally endangered species and a California Species of Special Concern. As documented in the *North Fontana Interim MSHCP Policy* document, a permitted SBKR survey effort was conducted in 2002 and 2004 on the Fontana Fan (Michael Brandman Associates, 2004). In 2002, seven SBKR were captured during a total of 4,950 trapping nights. The few isolated pockets of SBKR were distributed within RAFSS communities. No SBKR were trapped in 2004 during a total of 2,700 trapping nights. Habitat within the study area includes critical habitat mapped within the Falcon Ridge Village portion, and two small areas of RAFSS in the southwestern portion of Westgate Village (5.23 acres of RAFSS/Disturbed and 9.22 acres of Disturbed RAFSS). The area mapped as critical habitat consists of Developed, Disturbed, and Non-native Grassland that does not support any alluvial scrub vegetation, alluvial fans or flood plain systems. The RAFSS in the southwestern portion of the study area are disturbed and hydrologically isolated from the San Sevaine Flood Control Channel. They are located immediately adjacent to a remnant drainage channel. As described in Sections 4.2.13 and 4.2.14 above, the natural channel system in these areas have been replaced by an open concrete box channel from which the RAFSS is isolated, thereby removing the active fluvial processes typical for this plant community. As such, although the habitat consists of subshrubs and woody shrubs that are typical of mature RAFSS, the habitat is either likely to develop into more of an upland chaparral dominated community based on the absence of flooding events, or become more disturbed due to the current level of human activity in the area. A high level of disturbance and ruderal species is present in these areas, including dense areas of brome grasses. Habitat within the remnant channel area is characteristic of RSS and does not support a dominance of species typical of RAFSS habitat. Based on the lack of suitable habitat and limited occurrences in the study area vicinity, SBKR is not expected to occur within the study area. Dr. Michael O'Farrell conducted a site assessment for SBKR and prepared a memo of findings, provided as Appendix D. As outlined in the memo, no diagnostic sign or residents of SBKR were found on or adjacent to the study area, and habitat present on-site excludes the potential for occupation by SBKR, including the continual disking of the majority of the study area, and densely vegetated areas (O'Farrell Biological Consulting, 2012). The study area is also surrounded by heavy development that prevents the possibility of this species recolonizing from off-site. Therefore, Dr. O'Farrell concluded that the Westgate Specific Plan would not result in take of SBKR.

Coastal California Gnatcatcher

The coastal California gnatcatcher (CAGN) is federally threatened species and a California Species of Special Concern. As documented in the *North Fontana Interim MSHCP Policy* document, the Fontana Fan between Sierra and Citrus Avenues north of Summit Avenue to the I-15 freeway were surveyed in 2002 and 2004

(Michael Brandman Associates, 2004). The species was not observed or heard within the MSHCP Plan Area, although habitat was documented as present. CNDDB and USFWS occurrences of this species are documented as the base of the San Gabriel Mountains approximately two miles northwest of the study area. Also, as described in Sections 4.2.11 and 4.2.12 above, the RSS within the study area is limited and of poor habitat quality. Based on the presence of CAGN within 2 miles of the study area, and the limited/poor quality of the habitat, this species is considered as having a low potential to occur within the study area.

Burrowing Owl

Burrowing owl is a California Species of Special Concern that was documented as occurring within the vicinity of the North Fontana Interim MSHCP (Michael Brandman Associates, 2004). The species was not observed within the study area based on the *Final EIR* (City of Fontana, 1996). Although the study area does provide potentially suitable habitat for burrowing owl, including Ruderal and Non-native Grassland, this species is considered rare in the vicinity of the study area and, as a result, is considered to have limited potential for occurrence. The study area is also surrounded by existing development and the habitat is highly disturbed. Based on the presence of burrowing owl in the vicinity, and the limited/poor quality of the habitat, this species is considered as having a low potential to occur within the study area.

Delhi Sands Flower-Loving Fly

Delhi Sands flower-loving fly is a federally endangered species that requires Delhi Sands formations with wholly or partly consolidated dunes and sparse vegetation. The southern portion of the study area, within Westgate Village, is mapped as a Delhi Sands flower-loving fly occurrence in CNDDB. This area consists of Developed areas, in addition to Ruderal/Disturbed and Disturbed areas and is not mapped as Delhi Sands soils. Based on the absence of required soils and dune formations, Delhi Sands flower-loving fly is considered as having no potential to occur within the study area.

Raptors

The study area has the potential to support foraging habitat for seven species of raptors, including a low potential for golden eagle (*Aquila chrysaetos*) based on the rarity of the species in this area, in addition to a moderate potential for white-tailed kite (*Elanus leucurus*), northern harrier (*Circus cyaneus*), Cooper's hawk (*Accipiter cooperi*), sharp-shinned hawk (*Accipiter striatus*), ferruginous hawk (*Buteo regalis*), and American peregrine falcon (*Falco peregrinus anatum*) based on the presence of suitable habitat.

5.0 APPROACH TO THE ANALYSIS

5.1 REGULATORY SETTING

Sensitive species are provided protection by either Federal or State resource management agencies, or both, under provisions of the FESA and CESA. The following provides a discussion of Federal Regulations, State of California Regulations, CNPS, and Local Regulations including the City of Fontana Tree Preservation Ordinance, the City of Fontana General Plan, and the *North Fontana Interim MSHCP Policy* (Michael Brandman Associates, 2004).

There are a number of performance criteria and standard conditions that must be met as part of any review and approval of the proposed project. These include compliance with all of the terms, provisions, and requirements with applicable laws that relate to Federal, State, and local regulating agencies related to potential impacts to sensitive plant and wildlife species, wetlands, riparian habitats, and blue lined stream courses.

5.1.1 Federal Regulations

As previously discussed in Section 4.8.1, *Sensitive Resource Classification*, under provisions of Section 9(a)(1)(B) of the FESA, unless properly permitted, it is unlawful to "take" any listed species. In a case where a property owner seeks permission from a Federal agency for an action which could affect a Federally-listed plant and animal species, the property owner and agency are required to consult with USFWS to obtain appropriate permits. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants.

The North Fontana MSHCP, once adopted, will likely provide permits for the take of all species identified in the MSHCP as covered and conditionally covered, so long as the conditions imposed are satisfied.

5.1.1.1 Federal Clean Water Act, Section 404

Section 404 of the Clean Water Act (CWA) regulates the discharge of dredged material, placement of fill material, or excavation within "waters of the U.S." and authorizes the Secretary of the Army, through the Chief of Engineers, to issue permits for such actions. "Waters of the U.S." are defined by the CWA as "rivers, creeks, streams, and lakes extending to their headwaters and any associated wetlands." Wetlands are defined by the CWA as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions." The permit review process entails an assessment of potentially adverse impacts to USACE jurisdictional "waters of the U.S." and wetlands. In response to the permit application, the USACE will also require conditions amounting to mitigation measures. Where a Federally-listed species may be affected, they will also require an Endangered Species Act Section 7 consultation with the USFWS. Through this process, potentially significant adverse impacts within the Federal jurisdictional limits could be mitigated to a level that is less than significant.

Over the years, the USACE has modified its regulations, typically due to evolving policy or judicial decisions, through the issuance of Regulatory Guidance Letters, memorandums, or more expansive instruction guidebooks. These guidance documents help to update and define how jurisdiction is claimed, and how

these waters of the U.S. will be regulated. The most recent significant modification occurred on June 5, 2007, subsequently updated in December 2008 when the USACE and the U.S. Environmental Protection Agency issued a series of guidance documents outlining the requirements and procedures, effective immediately, to establish jurisdiction under Section 404 of the CWA and the Section 10 of the Rivers and Harbors Act of 1899. These documents are intended to be used for all jurisdictional delineations and provide specific guidance for the jurisdictional determination of potentially jurisdictional features affected by the United States Supreme Court rulings in *Rapanos v. the United States* and *Carabell v. the United States* 547U.S. 715 (2006) (jointly referred to as "*Rapanos*").

The *Rapanos* case outlines the conditions and criteria used by the USACE to assess and claim jurisdiction over non-navigable, ephemeral tributaries. Under a plurality ruling, the Court noted that certain "not relatively permanent" (i.e. ephemeral), non-navigable tributaries must have a "significant nexus" to downstream traditional navigable waters to be jurisdictional. An ephemeral tributary has a significant nexus to downstream navigable "waters" when it has "more than a speculative or an insubstantial effect on the chemical, physical, and/or biological integrity of a Traditional Navigable Water (TNW)." A significant nexus is established through the consideration of a variety of hydrologic, geologic and ecological factors specific to the particular drainage feature in question.

5.1.1.2 Federal Clean Water Act, Section 401

> *The mission of the California Regional Water Quality Control Board (RWQCB) is to develop and enforce water quality objectives and implement plans that will best protect the beneficial uses of the State's waters, recognizing local differences in climate, topography, geology, and hydrology. The California RWQCB is responsible for implementing compliance not only with State codes such as the California Water Code, but also Federal acts such as Section 401 of the CWA which requires that: Any applicant for a Federal permit for activities that involve a discharge to waters of the State shall provide the Federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the Federal Clean Water Act.*

Therefore, before the USACE will issue a CWA Section 404 permit, applicants must apply for and receive a Section 401 water quality certification from the RWQCB. A complete application for 401 Certification will include a detailed Water Quality Management Plan that addresses the key water quality features of the project to ensure the integrity of water quality in the area during and post-construction.

Under separate authorities granted by State law (i.e., the Porter-Cologne Water Quality Control Act), a RWQCB may choose to regulate discharges of dredge or fill materials by issuing or waiving (with or without conditions) Waste Discharge Requirements (WDRs), a type of State discharge permit, instead of taking a water quality certification action. Processing of a WDR is similar to that of a Section 401 certification; however, the RWQCB has slightly more discretion to add conditions to a project under Porter-Cologne than under the Federal CWA.

5.1.2 State of California Regulations

As previously discussed in Section 4.8.1, Sensitive Resource Classification, Article 3, Sections 2080 through 2085, of the CESA addresses the taking of threatened or endangered species. Exceptions authorized by the State to allow "take" require permits or memoranda of understanding and can be authorized for "endangered species, threatened species, or candidate species for scientific, educational, or management purposes." Sections 1901 and 1913 of the California Fish and Game Code provide that notification is required by an initiator prior to disturbance.

5.1.2.1 State of California Fish and Game Code, Section 1602

Section 1602 of the California Fish and Game Code requires any entity (e.g., person, state or local government agency, or public utility) who proposes a project that will substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake to notify the CDFW of the proposed project. In the course of this notification process, the CDFW will review the proposed project as it affects streambed habitats within the project area. The CDFW may then place conditions in the Section 1602 Streambed Alteration Agreement to avoid, minimize, and mitigate any potentially significant adverse impacts within CDFW jurisdictional limits.

5.1.3 California Native Plant Society

As previously discussed in Section 4.8.1, Sensitive Resource Classification, the CNPS has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of rare, threatened, or endangered vascular plant species of California which classifies plant species into categories of rarity. Informally listed species are not protected per se, but warrant consideration in the preparation of biological assessments.

5.1.4 Local Regulations

5.1.4.1 North Fontana MSHCP

As previously discussed in Section 4.8.1, Sensitive Resource Classification, the study area is within the proposed North Fontana MSHCP Plan area that is currently being processed. The City of Fontana has issued the North Fontana Interim MSHCP Policy until the MSHCP is adopted, which outlines proposed mitigation fees (Michael Brandman Associates, 2004).

5.1.4.2 City of Fontana Tree Preservation Ordinance

The City Tree Preservation Ordinance under Section 12.32.110 Subdivisions or Grading Plan states the following tree policy:

> In the case of a subdivision, or grading plan, the grading plan shall show the location of each tree proposed to be removed. If the City approves the subdivision map, or grading permit, the Director of Community Services may, in his discretion, relieve the applicant of any necessity to apply for a separate permit for tree removal. In cases which the Director constitutes a permit to remove the trees designated on the subdivision map or grading plan subject to any conditions which the Director may attach to the issuance of the permit.

5.1.4.3 City of Fontana General Plan Goals and Policies

The City of Fontana General Plan goal and policies related to biological resources are outlined below.

GOAL 2.0 - Protect air, water, and energy resources from pollution and overuse.

- Policy 2.16 - Protect in-stream habitat and natural stream and channel features.

GOAL 4.0 - Conserve and protect wildlife habitat, plant and animal species of concern, and general biodiversity.

- Policy 4.1 - Preserve and protect native and habitat-supporting plant resources throughout the City.
- Policy 4.2 - Work with agencies, including the San Bernardino County Flood Control District, to identify opportunities to enhance the natural qualities of Santiago Creek to protect habitat and reintroduce native plants and animals.
- Policy 4.3 - Reduce the impact of urban development on important ecological and biological resources.
- Policy 4.4 - Repair or improve ecological and biological conditions in the urban and natural environments when reviewing proposals for area development and redevelopment, as well as public improvements.

GOAL 3.0 - Protect lives and property of Orange residents and businesses from urban and wildland fire hazards.

- Policy 3.2 - Consider non-traditional methods of controlling vegetation in undeveloped areas.
- Policy 3.3 - Require planting and maintenance of fire-resistant slope cover to reduce the risk of brush fires within the wildland-urban interface areas located in the northern and eastern portions of the City and in areas adjacent to canyons, and develop and implement stringent area design and maintenance standards for all areas with high wild land fire potential. To the extent possible, native, non-invasive plant materials are encouraged.

GOAL 6.0 - Advance development activity that is mutually beneficial to both the environment and the community.

- Policy 6.4 - Create and maintain open space resources that provide recreational opportunities, protect hillside vistas and ridgelines, and conserve natural resources.
- Policy 6.7 - Integrate natural amenities and connections, including waterways and wildlife corridors, within the design of urban and suburban spaces.
- Policy 6.11 - Recognize the value of natural and cultural resources in the undeveloped portions of the planning area.

GOAL 7.0 - Promote coordinated planning among City departments and agencies, property owners, residents, special districts, and other jurisdictions in the region.

- Policy 7.4 - Ensure positive benefits for Orange from regional transportation, land use, air quality, waste management and disposal, and habitat conservation plans.

6.0 THRESHOLDS OF SIGNIFICANCE

The environmental impacts relative to biological resources are assessed using impact significance threshold criteria which mirror the policy statement contained in the CEQA, Section 21001(c) of the California Public Resources Code. Accordingly, the State Legislature has established it to be the policy of the State to:

> "Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities..."

Determining whether a project may have a significant effect, or impact, plays a critical role in the CEQA process. According to CEQA, Section 15064.7, Thresholds of Significance, each public agency is encouraged to develop and adopt (by ordinance, resolution, rule, or regulation) thresholds of significance that the agency uses in the determination of the significance of environmental effects. A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. In the development of thresholds of significance for impacts to biological resources CEQA provides guidance primarily in Section 15065, Mandatory Findings of Significance, and the State CEQA Guidelines, Appendix G, *Environmental Checklist Form*. Section 15065(a) states that a project may have a significant effect where:

> "The project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or wildlife community, reduce the number or restrict the range of an endangered, rare, or threatened species..."

Appendix G of the State CEQA Guidelines is more specific in addressing biological resources and encompasses a broader range of resources to be considered, including: candidate, sensitive, or special status species; riparian habitat or other sensitive natural communities; Federally protected wetlands; fish and wildlife movement corridors; local policies or ordinances protecting biological resources; and, adopted HCPs. This is done in the form of a checklist of questions to be answered during the Initial Study leading to the preparation of the appropriate environmental documentation for a project [i.e., Negative Declaration, Mitigated Negative Declaration, or Environmental Impacts Report (EIR)]. Because these questions are derived from standards in other laws, regulations, and other commonly used thresholds, it is reasonable to use these standards as a basis for defining significance thresholds in an EIR. Therefore, for the purpose of this analysis, impacts to biological resources are considered potentially significant (before considering offsetting mitigation measures) if one or more of the following conditions would result from implementation of the proposed project.

Threshold BIO-A Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Wildlife Service.

Threshold BIO-B Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U. S. Fish and Wildlife Service.

Threshold BIO-C Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Threshold BIO-D Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery areas.

Threshold BIO-E Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Threshold BIO-F Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

For the purposes of this impact analysis the following definitions apply:

- "Substantial adverse effect" means loss or harm of a magnitude which, based on current scientific data and knowledge would: (1) substantially reduce population numbers of a listed, candidate, sensitive, rare, or otherwise special status species; (2) substantially reduce the distribution of a sensitive natural community/habitat type; or (3) eliminate or substantially impair the functions and values of a biological resource (e.g., streams, wetlands, or woodlands) in a geographical area defined by interrelated biological components and systems. In the case of this analysis the prescribed geographical area is considered to be the region that includes the USGS topographic quadrangles for the study area, namely Fontana, Devore, Cucamonga Peak, Guasti and Fontana. For some species, the geographic area may extend to the vicinity of the study area based on known distributions of the species. The vicinity of the study area is considered to comprise the following USGS topographic quadrangles: Mount San Antonio, Telegraph Peak, Cajon, Lake Arrowhead, Mount Baldy, Harrison Mountain, San Dimas, Ontario, San Bernardino South, Prado Dam, Riverside West, Riverside East and Sunnymead.

- "Conflict" means contradiction of a magnitude, which based on foreseeable circumstances, would preclude or prevent substantial compliance.

- "Rare" means: (1) that the species exists in such small numbers throughout all, or a significant portion of, its range that it may become endangered if its environment worsens; or (2) the species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered "threatened" as that term is used in the FESA.

7.0 PROJECT RELATED IMPACTS

7.1 APPROACH TO THE ANALYSIS

The following discussion examines the potential impacts to plant and wildlife resources that may occur as a result of implementation of the Westgate Specific Plan. For the purpose of this assessment, project-related impacts take two forms, direct and indirect. Direct impacts are considered to be those that involve the loss, modification or disturbance of natural habitats (i.e., vegetation or plant communities), which in turn, directly affect plant and wildlife species dependent on that habitat. Direct impacts also include the destruction of individual plants or wildlife, which is typically the case in species of low mobility (i.e., plants, amphibians, reptiles, and small mammals). The collective loss of individuals in these manners may also directly affect regional population numbers of a species or result in the physical isolation of populations thereby reducing genetic diversity and, hence, population stability.

Indirect impacts are considered to be those that involve the effects of increases in ambient levels of sensory stimuli (e.g., noise, light), unnatural predators (e.g., domestic cats and other non-native animals), and competitors (e.g., exotic plants, non-native animals). Indirect impacts may be associated with the construction and/or eventual habitation/operation of a project; therefore, these impacts may be both short-term and long-term in their duration. These impacts are commonly referred to as "edge effects" and may result in changes in the behavioral patterns of wildlife and reduced wildlife diversity and abundance in habitats adjacent to study areas.

The determination of impacts in this analysis is based on both the proposed Westgate Specific Plan and the biological values of the habitat and/or sensitivity of plant and wildlife species to be affected. Since this analysis is based on a specific plan, the impacts discussion is general in nature based on anticipated impacts from the general proposed development plan. As required by CEQA, future proposed projects within the Westgate Specific Plan area would require independent environmental approval. As part of that approval, a detailed project-specific impacts analysis would be required. Any recommended mitigation measures and conditions of approval for future projects are discussed in Section 8.0 below.

The biological values of resources within, adjacent to, and outside the area to be affected by the Westgate Specific Plan were determined by consideration of several factors, as applicable. These included the overall size of habitats to be affected, the study area's previous land uses and disturbance history, the study area's surrounding environment and regional context, the on-area biological diversity and abundance, the presence of sensitive and special-status plant and wildlife species, the study area's importance to regional populations of these species, and the degree to which on-area habitats are limited or restricted in distribution on a regional basis and, therefore, are considered sensitive in themselves. Whereas this assessment is comprehensive, the focus is on sensitive plant communities/habitats, resources that play an important role in the regional biological systems, and special-status species.

7.2 IMPACT ANALYSIS

7.2.1 Impacts to Sensitive Species

Threshold BIO-A: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Wildlife Service?

Less than Significant with Mitigation Incorporated

7.2.1.1 Sensitive Plant Species

Development of the study area would result in the direct removal of numerous common plant species within the study area. A list of plant species observed within the study area is included in Appendix A, *Floral and Faunal Compendium*. Common plant species present within the study area occur in large numbers throughout the region and their removal does not meet the significance thresholds defined in Section 6.0, *Thresholds of Significance* above. Therefore, impacts to common plant species would be considered a less than significant impact and no mitigation measures would be required.

The sensitive plant species discussed in Section 4.8.3, *Sensitive Plant Species* and Appendix B, *Sensitive Plant Species*, may occur within the region but were determined either to have no potential for occurrence based on the lack of suitable habitat, including the federally and state endangered slender-horned spineflower, Santa Ana River woollystar, and Nevin's barberry. Therefore, no impacts to these sensitive plant species would occur and no mitigation measures would be required.

The remaining 10 sensitive plant species were identified as having a low potential for occurrence based on the presence of limited habitat that is of poor quality. Potentially suitable habitat for sensitive species is limited to the southern portion of the study area within Westgate Village, namely areas mapped as RSS, Disturbed RSS, RAFSS/Disturbed, and Disturbed RAFSS. Individual projects under the Westgate Specific Plan would conduct focused surveys for sensitive plant species within these habitats, if determined warranted by a qualified biologist at the time the project is processed. If any sensitive species are determined present, mitigation measures would be required if impacts are determined significant based on the number of individuals proposed for impacts compared with the regional populations for the species.

7.2.1.2 Sensitive Wildlife Species

Development of the study area would result in the disruption and removal of habitat and the loss and displacement of non-sensitive common wildlife species. A list of wildlife species observed within the study area is included in Appendix A, *Floral and Faunal Compendium*. Due to the limited amount of native habitat to be removed and the high level of existing disturbance from human activity, these impacts would not be expected to reduce the general wildlife populations below self-sustaining levels within the region and impacts to non-sensitive wildlife species do not meet the significance thresholds defined in Section 6.0, *Thresholds of Significance* above. Therefore, impacts to common wildlife species would be considered less than significant impact and no mitigation measures would be required.

Several of the sensitive wildlife species are discussed in Section 4.8.4, *Sensitive Wildlife Species* and Appendix C, *Sensitive Wildlife Species*, but are not expected to occur within the study area due to the lack of suitable habitat, including but not limited to the federally endangered Delhi Sands flower-loving fly, state endangered willow flycatcher (*Empidonax traillii*), the federally and state endangered southwestern willow flycatcher, the federally and state endangered least Bell's vireo. Therefore, no impacts to these sensitive wildlife species would occur and no mitigation measures would be required. Two additional species are not expected to occur due to lack of known occurrences in the study area and limited/poor quality habitat, namely Stephen's kangaroo rat (*Dipodomys stephensi*) and SBKR. No impacts or mitigation measures are anticipated to these species.

Several additional sensitive wildlife species were observed or have a low or moderate potential to occur within the study area. Sensitive wildlife species which were observed within the study area based on the *Final EIR* include loggerhead shrike (*Lanius ludovicianus*) and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*). Additional sensitive wildlife species with low to moderate potential to occur within the study area include red-diamond rattlesnake (*Crotalus ruber*), coast horned lizard (*Phyrynosoma blainvillii*), orange-throated whiptail (*Aspidoscelis hyperythra*), silvery legless lizard (*Anniella pulchra pulchra*), golden eagle, white-tailed kite, northern harrier, Cooper's hawk, sharp-shinned hawk, ferruginous hawk, American peregrine falcon, burrowing owl, grasshopper sparrow (*Ammodramus savannarum*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), Bell's sage sparrow (*Amphispiza belli belli*), coastal California gnatcatcher, tricolored blackbird (*Agelaius tricolor*), western mastiff bat (*Eumops perotis*), pallid bat (*Antrozous pallidus*), Los Angeles pocket mouse (*Perognathus longimembris brevinasus*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), San Diego desert woodrat (*Neotoma lepida intermedia*), and southern grasshopper mouse (*Onychomys torridus ramona*). Apart from golden eagle, white-tailed kite, American peregrine falcon, and coastal California gnatcatcher, all the remaining species are considered Species of Special Concern (SSC) or Watch List (WL) by the CDFW and do not carry a federal or state listing as threatened or endangered. The loss of individuals as a result of the Westgate Specific Plan would not expect to reduce regional population numbers. Therefore, impacts to these sensitive wildlife species are considered adverse but less than significant and no mitigation measures would be required. The exception to this is burrowing owl, for which mitigation is required pursuant to DFG published guidelines (DFG, 2012). In addition, many of the bird species would be protected under the MBTA.

Of the above-listed species, golden eagle, white-tailed kite, and American peregrine falcon are fully protected species, and coastal California gnatcatcher is a federally threatened species. In addition, USFWS mapped critical habitat for SBKR occurs in the northern portion of the study area within the Falcon Ridge Village (**Figure 11**, *Impacts to Critical Habitat*). A discussion of these species is provided below.

Golden Eagle, White-Tailed Kite, and American Peregrine Falcon: As previously discussed in Section 4.8.4, *Sensitive Wildlife Species*, the presence of golden eagle (rare in the vicinity), white-tailed kite and American peregrine falcon would be limited to foraging only. Potential foraging habitat includes 249.72 acres of habitats including Disturbed/Ruderal, Ruderal, Ruderal/Disturbed and Non-native Grassland areas). Based on the disturbed nature and the presence of development surrounding the study area, the quality of foraging habitat is considered to be low. The loss of foraging habitat as a result of the Westgate Specific Plan would not expect to impact the foraging of these species. Therefore, impacts to foraging habitat would be considered adverse but less than significant and no mitigation measures would be required.

Coastal California Gnatcatcher: As previously discussed in Section 4.8.4, *Sensitive Wildlife Species*, coastal California gnatcatcher was determined to have a low potential for occurrence due to limited and poor quality habitat, including RSS, Disturbed RSS, RAFSS/Disturbed, and Disturbed RAFSS. Individual projects under the Westgate Specific Plan would conduct focused surveys for coastal California gnatcatcher within these habitats, if determined warranted by a qualified biologist at the time the project is processed. These habitats are limited to the southern portion of the study area within the proposed Westgate Village. If this species is determined present, consultation with USFWS would be required, in addition to mitigation to reduce impacts to a less than significant level. Mitigation measures are outlined in Section 8.0 below.

San Bernardino Kangaroo Rat: Consultation would be required with USFWS due to the presence of mapped critical habitat (see Figure 11). However, no suitable habitats for SBKR exists within the area mapped as critical habitat within the Falcon Ridge Village portion of the study area, or in other portions of the study area, as determined following an assessment by Dr. Michael O'Farrell (see Appendix D). As such, no mitigation measures would be required.

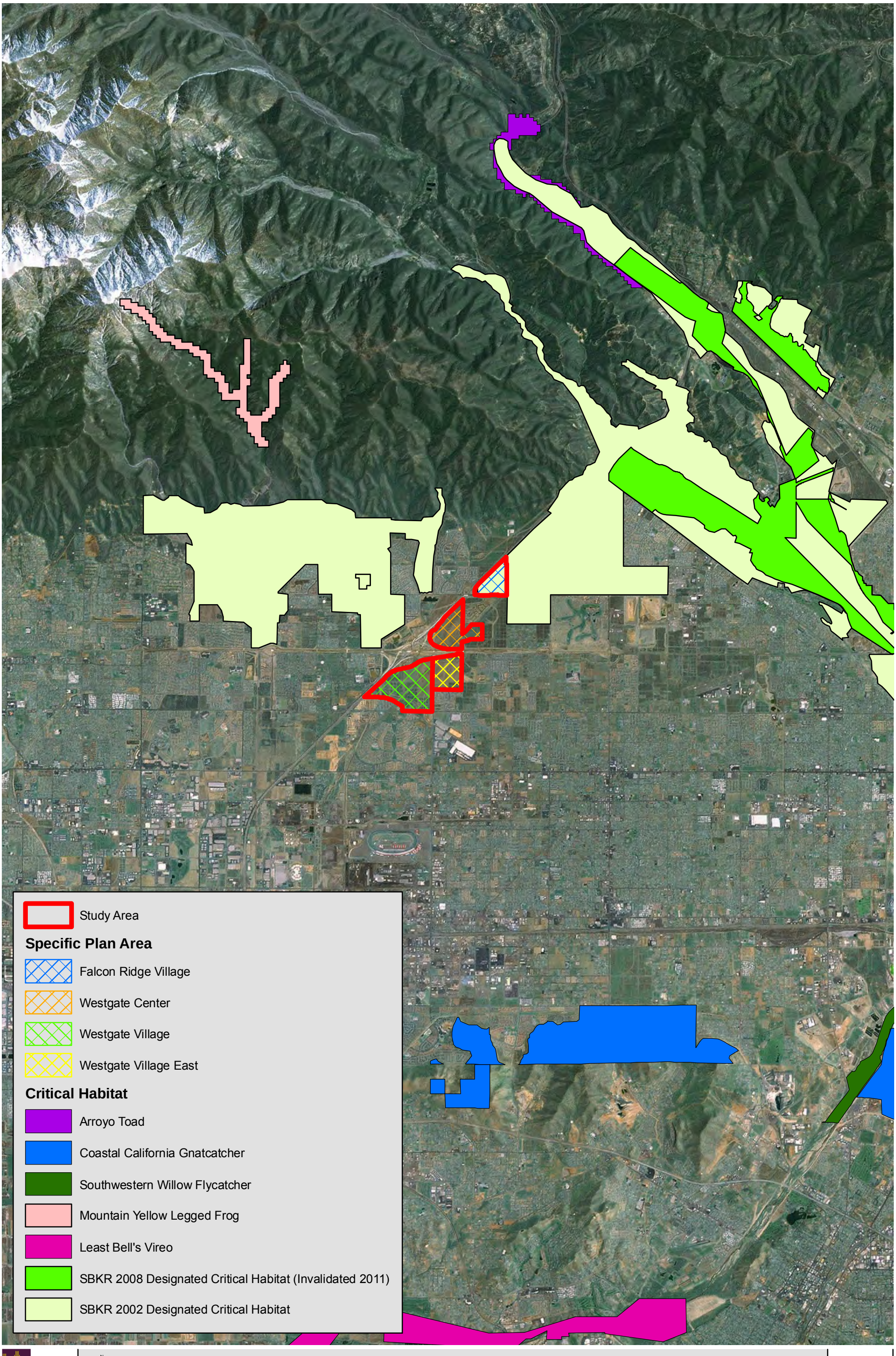
7.2.2 Impacts to Sensitive Plant Communities

Threshold BIO-B: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U. S. Fish and Wildlife Service?

Less than Significant with Mitigation Incorporated

The study area supports two habitats that are considered sensitive natural communities, including RSS (RSS and Disturbed RSS) and RAFSS (RAFSS/Disturbed and Disturbed RAFSS). These communities within the study area are highly disturbed and are of low quality for sensitive plant and wildlife species. As outlined in Table 1, these areas occupy the following acreages within the Westgate Village portion of the study area and have the potential to be impacted by future projects: 23.62 acres of RSS, 0.46 acre of Disturbed RSS, 5.23 acres of RAFSS/Disturbed, and 9.22 acres of Disturbed RAFSS. A figure showing impacts to plant communities is provided as **Figure 12**, *Impacts to Plant Communities*. Impacts to RSS and RAFSS habitats would require mitigation, which is proposed at a minimum 0.5:1 ratio for Disturbed RSS and Disturbed RAFSS based on the high density of non-native species, human disturbance, and remnant nature of the areas, and at a minimum 1:1 ratio for RSS and RAFSS/Disturbed based on the limited and disturbed nature of the areas (unless the habitat is occupied by coastal California gnatcatcher, as discussed under Section 7.2.1 above).

The study area does not support any riparian habitat, but does support drainages that would likely be considered jurisdictional pursuant to CDFW, as shown in **Figure 13**, *Impacts to Jurisdictional Features*. Individual projects that may propose impacts to these drainages under the Westgate Specific Plan would be required to comply with Section 1602 of the California Fish and Game Code, including mitigation subject to approval by CDFW. Compliance with this regulation would reduce impacts to a less than significant level.



PCR

N

0 1.5 3 Miles

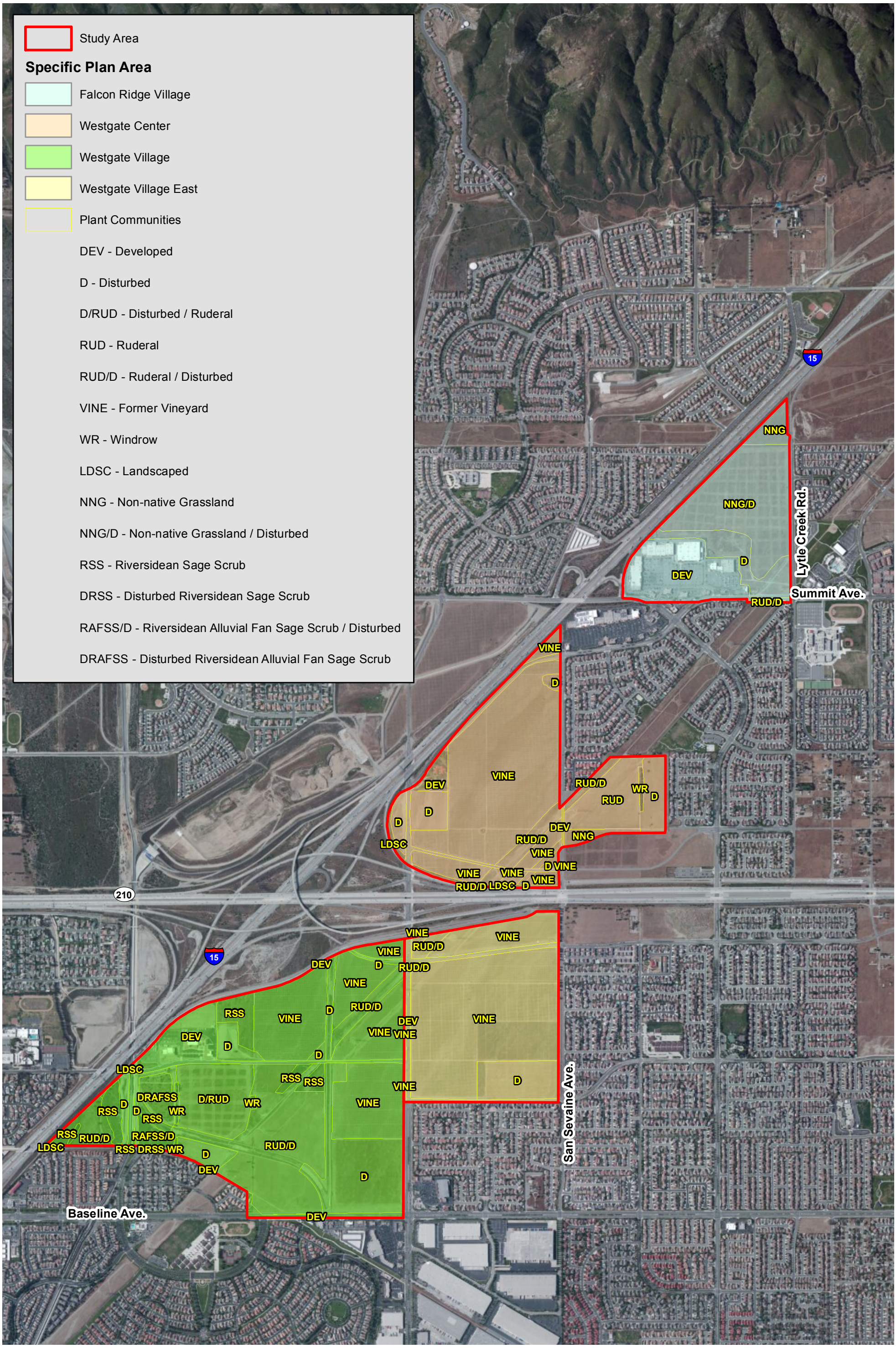
Impacts to Critical Habitat

Westgate Specific Plan

Source: Aerial Express, 2010; Hall & Foreman Inc., 2012; PCR Services Corporation, 2012.

FIGURE

11



PCR

1,500 0 1,500 Feet

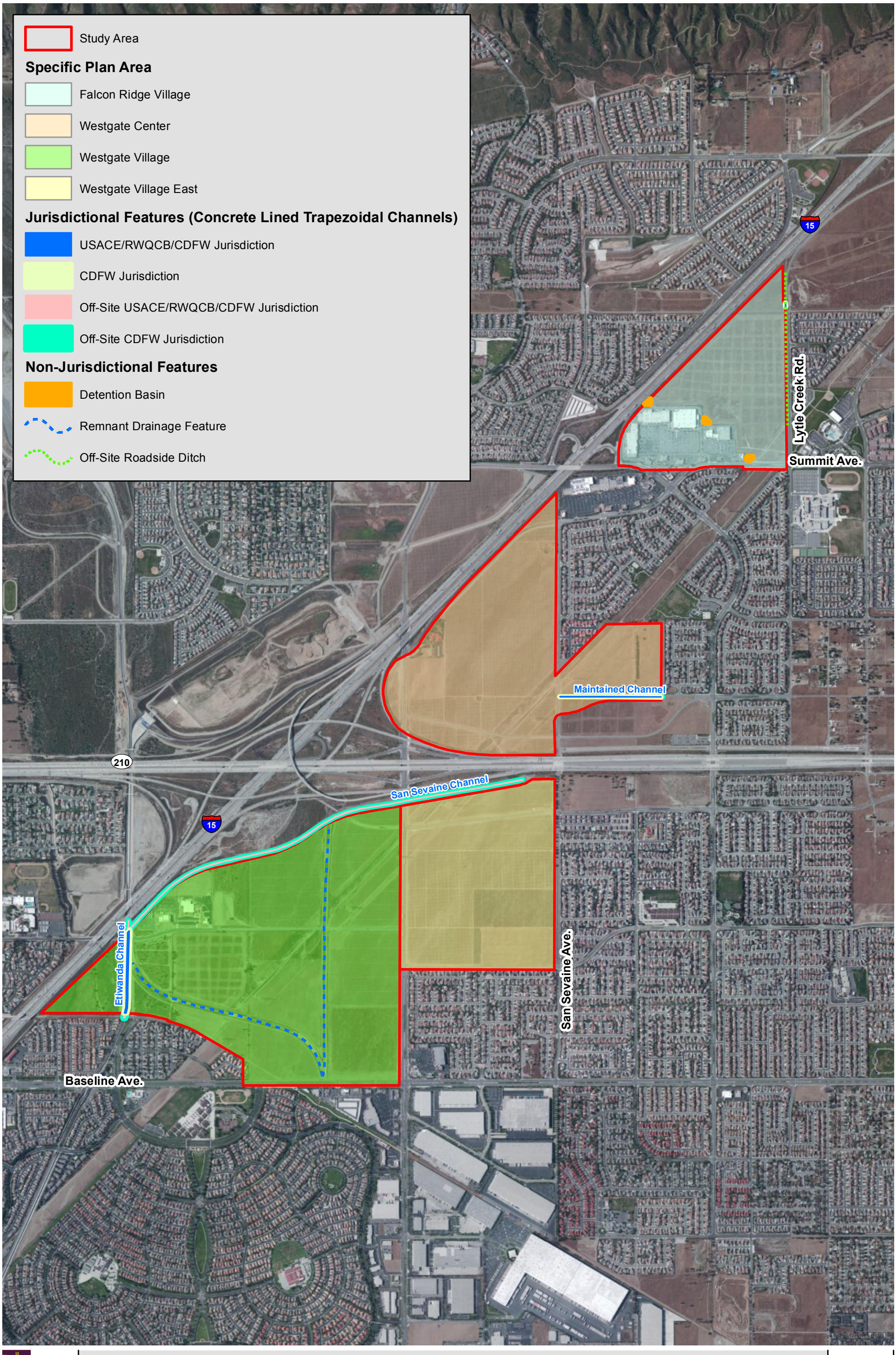
Impacts to Plant Communities

Westgate Specific Plan

Source: Aerial Express, 2010; Hall & Foreman Inc., 2012; PCR Services Corporation, 2014.

FIGURE

12



PCR

N

1,500 0 1,500 Feet

Impacts to Jurisdictional Features

Westgate Specific Plan

Source: Aerial Express, 2010; Hall & Foreman Inc., 2012; PCR Services Corporation, 2014.

FIGURE

13

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7.2.3 Impacts to Wetlands

Threshold BIO-C: Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impacts

No wetlands occur within the Westgate Specific Plan study area based on assessments conducted for this BRA. As such, no impacts to wetlands would occur by future projects within the Westgate Specific Plan.

The study area does support non-wetland drainages that would likely be considered jurisdictional pursuant to USACE/RWQCB, as shown in **Figure 13**, *Impacts to Jurisdictional Features*. Individual projects that may propose impacts to these drainages under the Westgate Specific Plan would be required to comply with Sections 404/401 of the CWA, including mitigation subject to approval by USACE/RWQCB. Compliance with these regulations would reduce impacts to a less than significant level.

7.2.4 Impacts to Wildlife Movement and Migratory Species

Threshold BIO-D: Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery areas?

Less than Significant with Mitigation Incorporated

7.2.4.1 Wildlife Movement

As described in Section 4.5.2 above, the study area supports live-in and movement habitat for species on a local scale (i.e., some limited live-in and at least marginal movement habitat for reptile, bird, and mammal species), but it likely provides little to no function to facilitate wildlife movement for wildlife species on a regional scale, and is not identified as a regionally important dispersal or seasonal migration corridor. Movement on a local scale likely occurs with species adapted to urban environments due to the high level of development in the vicinity of the study area. Although implementation of the Westgate Specific Plan would result in disturbances to local wildlife movement within the study area, those species adapted to urban areas would be expected to persist in the study area following construction. As such, impacts would be less than significant and no mitigation measures would be required. Since the study area does not function as a regional wildlife corridor and is not known to support wildlife nursery area(s), no impacts would occur and no mitigation measures would be required.

7.2.4.2 Migratory Species

The study area has the potential to support both raptor and songbird nests due to the presence of limited trees, in addition to shrubs and ground cover. Nesting activity typically occurs from February 15 to August 31. Disturbing or destroying active nests is a violation of the MBTA (16 U.S.C. 703 et seq.). In addition, nests and eggs are protected under Fish and Game Code Section 3503. The removal of vegetation during the breeding season is considered a potentially significant impact as defined by the thresholds of significance (Threshold BIO-D) in Section 6.0 above. Any potential impacts to raptor and songbird nests would be

considered potentially significant. Compliance with the MBTA would reduce impacts to a less than significant level.

7.2.5 Consistency with Local Policies and Ordinances

Threshold BIO-E: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant with Mitigation Incorporated

The study area supports limited trees within the Windrow and the RAFSS areas. Any potential impacts to regulated trees by future projects under the Westgate Specific Plan could be considered potentially significant. Compliance with the tree ordinance would reduce impacts to a less than significant level.

7.2.6 Consistency with Adopted Natural Community Conservation Plan

Threshold BIO-F: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Less than Significant

The northern portion of the study area is within the proposed North Fontana MSHCP Plan area totaling approximately 7.69 acres. As outlined in the *North Fontana Interim MSHCP Policy*, a tiered development mitigation fee is proposed on new development in North Fontana based on their potential for supporting sensitive species. These tiers include (1) Habitat occupied by SBKR or CAGN; (2) Habitat determined suitable for SBKR and/or CAGN; (3) Disturbed RAFSS habitat considered restorable to habitat suitable for SBKR and/or CAGN; and (4) Habitat that is no longer suitable for SBKR, CAGN or other sensitive species found in RAFSS and RSS plant communities. Habitats within those tiers would be subject to a mitigation fee of $1,440 per acre and mitigation ratios ranging from 5:1 for occupied habitat, to 0.5:1 for unsuitable habitat. However, the 7.69 acres of habitat within the proposed North Fontana MSHCP comprises Non-Native Grassland, which is consistent with mapping provided in the *North Fontana Interim MSHCP Policy*. Since Non-Native Grassland is not within the habitat tiers listed above, no impacts would occur and no mitigation would be required.

8.0 MITIGATION MEASURES AND CONDITIONS OF APPROVAL

8.1 APPROACH

Mitigation measures are recommended for those impacts determined to be significant to sensitive biological resources. Mitigation measures for impacts considered to be "significant" were developed in an effort to reduce such impacts to a level of "insignificance," while at the same time allowing an opportunity to realize development goals under the Westgate Specific Plan. As stated in CEQA Guidelines Section 15370 mitigation includes:

1. Avoiding the impact altogether by not taking a certain action or parts of an action.
2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
3. Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.
4. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
5. Compensating for the impact by replacing or providing substitute resources or environments.

Where compliance with existing regulations and the issuance of permits by regulatory agencies would reduce impacts to a less than significant level, those measures are proposed as conditions of approval.

8.2 MITIGATION MEASURES AND CONDITIONS OF APPROVAL FOR SIGNIFICANT IMPACTS

The following mitigation measures (MM) and conditions of approval (COA) address potentially significant impacts from future projects proposing development within the study area pursuant to the Westgate Specific Plan.

8.2.1 Measures to Mitigate Potentially Significant Impacts to Sensitive Wildlife Species

MM BIO-1 Prior to the issuance of any grading permit for the Westgate Village area or Falcon Ridge Village Area, habitat assessments should be conducted to confirm the presence and extent of suitable habitat for coastal California gnatcatcher and San Bernardino kangaroo rat (SBKR). Specifically, Riversidean Sage Scrub (RSS) and Riversidean Alluvial Fan Sage Scrub (RAFSS) was mapped in the Westgate Village area during 2012 surveys and may be suitable for coastal California gnatcatcher, and USFWS mapped designated critical habitat for SBKR occurs in the Falcon Ridge Village area. If suitable habitat is present, focused protocol surveys should be conducted. The assessments and focused surveys should be conducted by a biologist(s) possessing a valid Endangered Species Act Section 10(a)(1)(A) Recovery Permit (herein referred to as a USFWS permitted biologist) and following the required USFWS survey protocols.

If coastal California gnatcatcher and/or SBKR are found to occupy the site, and/or if suitable habitat within SBKR designated critical habitat is proposed for impacts, the measures outlined below shall be incorporated. The project applicant shall also consult with USFWS pursuant to the Federal Endangered Species Act, either through a Section 7 or a Section 10 consultation to ensure that proposed impacts are not likely to jeopardize the continued existence of the listed species or destroy or adversely modify SBKR designated critical habitat. The proposed measures may be refined during the consultation process.

Coastal California Gnatcatcher

1. Avoid CAGN occupied habitat to the greatest extent feasible and preserve avoided habitat and any mitigation areas in-perpetuity (see 2. and 3. below).

2. Mitigate for any impacts to CAGN occupied habitat at a minimum 2:1 ratio of habitat restoration or creation either on-site and/or off-site on land acquired for the purpose of mitigation, or through the purchase of mitigation credits at an agency approved mitigation bank. Purchase of any mitigation credits should occur prior to any habitat removal. Mitigation on land acquired for mitigation shall include the preservation, creation, restoration, and/or enhancement of similar habitat pursuant to a Habitat Mitigation and Monitoring Plan (HMMP). The HMMP shall be prepared prior to any impacts to the habitat, and shall provide details as to the implementation of the mitigation, maintenance, and future monitoring. The goal of the mitigation shall be to preserve, create, restore, and/or enhance similar habitat with equal or greater function and value than the impacted habitat.

3. Provide long-term management of preserved and/or mitigation habitat.

4. Avoid direct mortality of individual CAGN during construction by:

   a. Removing any vegetation within CAGN occupied habitat outside the breeding season (the breeding season is February 15 to August 31); and

   b. Monitoring by a qualified biologist during vegetation removal to flush out any non-breeding birds away from the clearing activities.

5. Avoid indirect impacts to CAGN including noise impacts during construction and edge effects post-construction, by implementing measures to buffer and avoid human-wildlife conflicts as appropriate. Proposed measures are as follows:

   <u>During Construction</u>

   a. Construction noise shall not exceed 60 dB(A) Leq in avoided occupied coastal California gnatcatcher habitat between February 15 and August 31 unless noise attenuation measures are implemented to reduce noise levels below this level, or the USFWS approves noise levels above this threshold. Noise attenuation measures may include, but are not limited to, establishing construction set-back buffers, equipment noise mufflers, and noise walls, as determined necessary by an

acoustic specialist and in consultation with the project biologist. Monitoring by a qualified biologist should also occur during construction to ensure noise levels are maintained below the threshold. Alternatively, construction noise levels above 60 dB(A) Leq may be approved by USFWS if monitoring by a USFWS permitted biologist for this species determines that the construction noise is not impacting the expected breeding behavior of the birds.

Post Construction

b. Installation of cat-proof fencing at the perimeter of development where it abuts preserved areas.

c. Restricting access to preservation areas for conservation activities only.

d. Direction of all night lighting within development areas away from the preserved areas.

e. Installation of signage to direct human activity away from preserved habitat areas.

f. Prohibition of unleashed dogs within preserved habitat areas.

g. Implementation of an awareness program to educate tenants and/or residents about the conservation values associated with preserved habitat areas.

SBKR

1. Avoid SBKR occupied or suitable habitat within SBKR designated critical habitat to the greatest extent feasible and preserve avoided habitat and any mitigation areas in perpetuity (see 2. and 3. below).

2. Mitigate for any impacts to SBKR occupied or suitable habitat within SBKR designated critical habitat at a minimum 2:1 ratio of habitat restoration or creation either on-site and/or off-site on land acquired for the purpose of mitigation, or through the purchase of mitigation credits at an agency approved mitigation bank. Purchase of any mitigation credits should occur prior to any habitat removal. Mitigation on land acquired for mitigation shall include the preservation, creation, restoration, and/or enhancement of similar habitat pursuant to a Habitat Mitigation and Monitoring Plan (HMMP). The HMMP shall be prepared prior to any impacts to the habitat, and shall provide details as to the implementation of the mitigation, maintenance, and future monitoring. The goal of the mitigation shall be to preserve, create, restore, and/or enhance similar habitat with equal or greater function and value than the impacted habitat.

3. Provide long-term management of preserved and/or mitigation habitat.

4. Avoid direct mortality of individual SBKR during construction by:

a. Installation of exclusionary fencing at the limits of construction within suitable habitat areas; and

b. Live-trapping of SBKR within suitable habitat in construction areas and the relocation of trapped individuals to one or more biologically appropriate receiver sites (defined as suitable habitat that is known to be unoccupied, is below population carrying capacity levels, and/or where scrub vegetation has been restored and colonization by the species has not occurred). Trapping shall be conducted by a USFWS permitted or approved biologist.

5. Avoid indirect impacts to SBKR as a result of edge effects post-construction by implementing measures to buffer and avoid human-wildlife conflicts as appropriate, such as:

   a. Installation of cat-proof fencing at the perimeter of development where it abuts preserved areas.

   b. Restricting access to preservation areas for conservation activities only.

   c. Direction of all night lighting within development areas away from the preserved areas.

   d. Installation of signage to direct human activity away from preserved habitat areas.

   e. Prohibition of unleashed dogs within preserved habitat areas.

   f. Implementation of a homeowner's awareness program to educate residents about the conservation values associated with preserved habitat areas.

MM BIO-2 Focused surveys for burrowing owl shall be conducted during the breeding season prior to vegetation clearing or ground disturbing activities by a qualified biologist with experience conducting surveys for this species. Surveys shall be conducted in suitable habitat as determined by the qualified biologist based on a field assessment of site conditions at the time of the survey, including habitats such as the Ruderal and Non-native Grassland plant communities observed during the 2012 survey. The survey methodology shall follow the protocol provided as Appendix D of the *Staff Report on Burrowing Owl Mitigation* published by Department of Fish and Wildlife (March 7, 2012). Pursuant to this protocol four survey visits are required, including at least one site visit between February 15 and April 15, and a minimum of three survey visits at least three weeks apart between April 15 and July 15 (with at least one visit after June 15). The results of the focused surveys are typically considered valid for one year after completion.

If burrowing owls are determined present following focused surveys, occupied burrows shall be avoided to the greatest extent feasible, following the guidelines in the 2012 *Staff Report on Burrowing Owl Mitigation* including, but not limited to, conducting pre-construction surveys, avoiding occupied burrows during the nesting and non-breeding seasons, implementing a worker awareness program, biological monitoring, establishing

avoidance buffers, and flagging burrows for avoidance with visible markers. If occupied burrows cannot be avoided, acceptable methods may be used to exclude burrowing owl either temporarily or permanently, pursuant to a Burrowing Owl Exclusion Plan that shall be prepared and approved by CDFW. The Burrowing Owl Exclusion Plan shall be prepared in accordance with the guidelines in the *Staff Report on Burrowing Owl Mitigation*.

8.2.2 Measures to Mitigate Potentially Significant Impacts to Sensitive Plants and Plant Communities

MM BIO-3 Prior to the issuance of any grading permit in areas determined to support sensitive species or sensitive plant communities (e.g., RSS and RAFSS) to which significant impacts would occur, a Habitat Mitigation and Monitoring Plan (HMMP) shall be prepared. The HMMP shall offset impacts to the species and/or plant communities, focusing on the creation of equivalent habitats within disturbed habitat areas within the study area and/or off-site. In addition, the HMMP shall provide details as to the implementation of the mitigation, maintenance, and future monitoring. Mitigation for impacts shall be offset by on- or off-site replacement, restoration, or enhancement of each respective sensitive plant species/community within an area dedicated for conservation. Ratios of mitigation to impacts shall occur at no less than 0.5:1 for disturbed, remnant plant populations/communities (e.g. Disturbed RSS and Disturbed RAFSS), and at a minimum 1:1 ratio for less disturbed plant populations/communities (e.g. RSS and RAFSS/Disturbed). Mitigation shall occur in one or more of the following ways, as determined appropriate by a qualified biologist:

1. Transplantation of sensitive plant species (on-site or off- site);
2. Seeding of plant species (on-site or off- site);
3. Planting of container plants (on-site or off- site);
4. Salvage of on-site duff and seed bank and subsequent dispersal (on-site or off- site); and/or
5. Off-site preservation at an established mitigation bank or other area dedicated for conservation.

8.2.3 Measures to Mitigate Potentially Significant Impacts to Jurisdictional Features

COA BIO-1 Prior to the issuance of any grading permit for permanent impacts in the areas designated as jurisdictional features on **Figure 13**, *Impacts to Jurisdictional Features*, the project applicant shall obtain a CWA Section 404 permit from the USACE, a CWA Section 401 permit from the RWQCB, and Streambed Alteration Agreement permit under Section 1602 of the California Fish and Game Code from the CDFW. The following shall be incorporated into the permitting, subject to approval by the regulatory agencies:

1. On- and/or off-site replacement of USACE/RWQCB jurisdictional "waters of the U.S."/"waters of the State" at a ratio no less than 1:1 for permanent impacts, and for temporary impacts to restore the impact area to pre-project conditions (i.e., pre-project contours and revegetate as appropriate). Off-site replacement may include the purchase of mitigation credits at an agency-approved off-site mitigation bank.

2. On- and/or off-site replacement of CDFW jurisdictional streambed and associated riparian habitat at a ratio no less than 2:1 for permanent impacts, and for temporary impacts to restore the impact area to pre-project conditions (i.e., pre-project contours and revegetate as appropriate). Off-site replacement may include the purchase of mitigation credits at an agency-approved off-site mitigation bank.

8.2.4 Measures to Mitigate Potentially Significant Impacts to Migratory or Nesting Birds

MM BIO-4 Prior to the issuance of any grading permit that would all removal of habitat containing raptor and songbird nests, the project applicant shall demonstrate to the satisfaction of the City of Fontana that either of the following have been or will be accomplished.

1. Vegetation removal activities shall be scheduled outside the nesting season (September 1 to February 14 for songbirds; September 1 to January 14 for raptors) to avoid potential impacts to nesting birds.

2. Any construction activities that occur during the nesting season (February 15 to August 31 for songbirds; January 15 to August 31 for raptors) will require that all suitable habitat be thoroughly surveyed for the presence of nesting birds by a qualified biologist before commencement of clearing. If any active nests are detected, a buffer of at least 300 feet (500 feet for raptors) will be delineated, flagged, and avoided until the nesting cycle is complete as determined by the biological monitor to minimize impacts.

8.2.5 Measures to Mitigate Potentially Significant Impacts to Regulated Trees

COA BIO-2 Prior to the issuance of any grading permit that would impact any trees, a City of Fontana permit shall be obtained. The City requires a 1:1 mitigation replacement ratio for all trees that would be removed by a proposed project. Replacement of regulated trees to be removed will be accomplished on-site and/or on public off-site lands at the discretion of the City.

8.2.5 Measures to Mitigate Potentially Significant Impacts to the MSHCP

COA BIO-3 Prior to the issuance of any grading permit for the portion of Falcon Ridge Village within the proposed North Fontana MSHCP, the project applicant shall comply with all of the provisions of the MSHCP as outlined in the *North Fontana Interim MSHCP Policy*, or the final MSHCP plan, if adopted.

9.0 IMPACTS AFTER MITIGATION

9.1 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The proposed Westgate Specific Plan, inclusive of mitigation measures and conditions of approval, would have less than significant impacts to sensitive wildlife species, migratory and/or nesting birds, sensitive plant species and communities, jurisdictional features, and regulated trees.

9.2 CUMULATIVE IMPACTS

Cumulative impacts are defined as the direct and indirect effects of a proposed project which, when considered alone, would not be deemed a substantial impact, but when considered in addition to the impacts of related projects in the area, would be considered significant. "Related projects" refers to past, present, and reasonably foreseeable probable future projects, which would have similar impacts to the proposed project. CEQA deems a cumulative impact analysis to be adequate if a list of "related projects" is included in the EIR or the proposed project is consistent with an adopted general, specific, master, or comparable programmatic plan [Section 15130(b)(1)(B)]. CEQA also states that no further cumulative impact analysis is necessary for impacts of a proposed project consistent with an adopted general, specific, master, or comparable programmatic plan [Section 15130(d)].

The proposed North Fontana MSHCP identifies areas for long-term conservation and management. Once the MSHCP is adopted, cumulative impacts of proposed projects within authorized take lands will have been minimized through the conservation of land. The *North Fontana Interim MSHCP Policy* intends to implement the intent of the MSHCP prior to approval and adoption of the plan, including acquisition of mitigation lands. However, since only a small portion (less than 8 acres) of the study area is within the proposed North Fontana MSHCP, cumulative impacts from the Westgate Specific Plan are addressed below. Since the study area was determined not to function as a regional wildlife movement corridor, cumulative impacts to wildlife movement are not further analyzed in this document.

Cumulative impacts to the following biological resources are considered to be less than significant with implementation of the mitigation measures and conditions of approval outlined above in Section 7.0, *Project Related Impacts* and 8.0, *Mitigation Measures and Conditions of Approval*:

- Sensitive plant communities (e.g., RSS and RAFSS);
- Sensitive wildlife species (e.g., coastal California gnatcatcher and burrowing owl, if found, in addition to raptors, other migratory birds);
- Sensitive plant species (if found);
- Jurisdictional drainages.

The loss of approximately 24.08 acres of RSS and Disturbed RSS, in addition to 14.45 acres of RAFSS/Disturbed and Disturbed RAFSS is not expected to substantially affect these sensitive plant communities to a point where their distribution in the region is threatened. This is based on the fact that these communities within the study area are highly disturbed and occur in remnant patches with no off-site

connectivity to other similar blocks of habitat. Also, in the case of the RAFSS, the habitat is no longer supported by the required hydrological processes, and is therefore expected to transition into a more upland plant community. The proposed mitigation at a minimum 1:1 ratio would result in a no-net-loss of these sensitive plant communities. With the proposed mitigation, impacts would not be considered cumulatively significant.

If coastal California gnatcatcher or any sensitive plant species are observed within the study area following focused surveys conducted on a project-by-project basis, additional mitigation is proposed that would result in a net gain of their habitat (in the case of the coastal California gnatcatcher), and avoidance/minimization of direct impacts (through the permitting process for coastal California gnatcatcher, and through transplanting/seeding for sensitive plant species). Mitigation is also proposed to avoid direct impacts to burrowing owl, raptors and migratory bird species, through compliance with the MBTA and the Burrowing Owl Consortium guidelines. With the proposed mitigation and compliance with existing regulations, impacts would not be considered cumulatively significant.

The loss of approximately 249.72 acres of potential foraging habitat for raptor species (including Disturbed/Ruderal, Ruderal, Ruderal/Disturbed and Non-native Grassland areas) is not expected to substantially affect these species to a point where their survival in the region is threatened. These species are relatively mobile and are expected to locate additional foraging habitat remaining in the region. Furthermore, the study area is currently predominately former vineyards and is surrounded by developed, and therefore, does not serve as optimal foraging habitat for these species. As such, impacts would not be considered cumulatively significant.

Any impacts to jurisdictional features would be subject to permitting with the regulatory agencies, including USACE, RWQCB and/or CDFW. With the proposed mitigation and compliance with existing regulations through the permitting process, impacts would not be considered cumulatively significant.

10.0 REFERENCES

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APPENDIX A: FLORAL AND FAUNAL COMPENDIUM

ANGIOSPERMS (DICOTYLEDONS)

	SCIENTIFIC NAME	COMMON NAME
	Anacardiaceae	**Sumac or Cashew Family**
	Rhus trilobata	skunkbrush (squawbush)
	Asteraceae	**Sunflower Family**
	Ambrosia acanthicarpa	annual bur ragweed
	Ambrosia psilostachya	western ragweed (sandbur)
	Artemisia californica	California sagebrush
	Baccharis pilularis	coyote bush
*	*Centaurea melitensis*	tocalote
*	*Centaurea solstitialis*	yellow star thistle
	Conyza canadensis	horseweed
	Encelia californica	California bush sunflower
	Filago californica	California fluffweed
	Gnaphalium californicum	California everlasting
	Gutierrezia californica	California matchweed
	Helianthus annuus	common sunflower
	Helianthus gracilentus	slender sunflower
	Heterotheca grandiflora	telegraph weed
*	*Lactuca serriola*	prickly lettuce
	Isocoma menziesii	coastal goldenbush
	Lepidospartum squamatum	scale-broom
	Lessingia filaginifolia	California aster
*	*Sonchus oleraceus*	common sow thistle
	Stephanomeria sp.	stephanomeria
	Boraginaceae	**Borage Family**
	Amsinckia menziesii	common fiddleneck
	Brassicaceae	**Mustard Family**
*	*Brassica nigra*	black mustard
*	*Hirshfeldia incana*	short-podded mustard
	Cactaceae	**Cactus Family**
	Opuntia littoralis	coastal prickly pear
	Caprifoliaceae	**Honeysuckle Family**
	Sambucus mexicana	Mexican elderberry
	Chenopodiaceae	**Goosefoot Family**
*	*Chenopodium album*	lamb's quarters
*	*Salsola tragus*	Russian thistle

ANGIOSPERMS (DICOTYLEDONS)

	SCIENTIFIC NAME	COMMON NAME
	Euphorbiaceae	**Spurge Family**
	Croton californicus	California croton
	Eremocarpus setigerus	dove weed
	Euphorbia sp.	spurge
*	*Ricinus communis*	castor bean
	Fabaceae	**Legume Family**
	Lotus scoparius	Deerweed
	Lotus purshianus	Spanish clover
*	*Melilotus indica*	sourclover
*	*Vicia benghalensis*	purple vetch
	Geraniaceae	**Geranium Family**
*	*Erodium cicutarium*	red-stemmed filaree
	Hydrophyllaceae	**Waterleaf Family**
	Eriodictyon trichocalyx	hairy yerba santa
	Lamiaceae	**Mint Family**
*	*Marrubium vulgare*	horehound
	Salvia apiana	white sage
	Salvia mellifera	black sage
	Malvaceae	**Mallow Family**
	Malacothamnus fasciculatus	mesa bushmallow
	Myrtaceae	**Myrtle Family**
*	*Eucalyptus* sp.	eucalyptus
	Nyctaginaceae	**Four-O'Clock Family**
	Mirabilis laevis	wishbone bush
	Oleaceae	**Olive Family**
*	*Olea europaea*	common olive
	Onagraceae	**Evening Primrose Family**
	Camissonia bistorta	suncups
	Epilobium ciliatum	green willow herb
	Platanaceae	**Sycamore Family**
	Platanus racemosa	western sycamore
	Polemoniaceae	**Phlox Family**
	Eriastrum sapphirinum	sapphire eriastrum
	Gilia angelensis	angel gilia
	Polygonaceae	**Buckwheat Family**
	Eriogonum fasciculatum	California buckwheat

ANGIOSPERMS (DICOTYLEDONS)

	SCIENTIFIC NAME	COMMON NAME
	Primulaceae	**Primrose Family**
*	*Anagallis arvensis*	scarlet pimpernel
	Rhamnaceae	**Buckthorn Family**
	Ceanothus leucodermis	chaparral whitethorn
	Rhamnus crocea	spiny redberry
	Rosaceae	**Rose Family**
	Cercocarpus betuloides	birch-leaf mountain-mahogany
	Prunus ilicifolia	holly-leaved cherry
	Salicaceae	**Willow Family**
	Salix goodingii	Gooding's black willow
	Scrophulariaceae	**Figwort Family**
	Penstemon spectabilis	showy penstemon
	Solanaceae	**Nightshade Family**
	Datura wrightii	jimson weed

ANGIOSPERMS (MONOCOTYLEDONS)

	SCIENTIFIC NAME	COMMON NAME
	Liliaceae	**Lily Family**
	Yucca whipplei	Our Lord's candle
	Poaceae	**Grass Family**
*	*Avena barbata*	slender wild oat
*	*Bromus diandrus*	ripgut grass
*	*Bromus hordeaceus*	soft chess
*	*Bromus madritensis* ssp. *rubens*	foxtail chess
*	*Bromus madritensis* ssp. *madritensis*	foxtail chess
*	*Lamarckia aurea*	goldentop
*	*Polypogon monspeliensis*	rabbitfoot grass
*	*Vulpia myuros*	rattail fescue
	Typhaceae	**Cattail Family**
	Typha sp.	cattail

REPTILES

	SCIENTIFIC NAME	COMMON NAME
	Colubridae	**Colubrid Snakes**
	Pituophis melanoleucus	gopher snake
	Phrynosomatidae	**Zebra-tailed, Earless, Fringe-toed, Spiny, Tree,**
	Sceloporus occidentalis	western fence lizard

BIRDS

	SCIENTIFIC NAME	COMMON NAME
	Accipitridae	**Hawks**
?+	*Accipiter cooperii*	Cooper's hawk
	Charadriidae	**Plovers**
	Charadrius vociferus	killdeer
	Columbidae	**Pigeons and Doves**
*	*Columba livia*	rock dove
	Zenaida macroura	mourning dove
	Trochilidae	**Hummingbirds**
	Calypte anna	Anna's hummingbird
	Tyrannidae	**Tyrant Flycatchers**
	Sayornis nigricans	black phoebe
	Hirundinidae	**Swallows**
	Hirundo rustica	barn swallow
	Corvidae	**Jays and Crows**
	Corvus brachyrhynchos	American cow
	Corvus corax	common raven
	Troglodytidae	**Wrens**
	Troglodytes aedon	house wren
	Mimidae	**Thrashers**
	Mimus polyglottos	northern mockingbird
	Laniidae	**Shrikes**
	Lanius ludovicianus	loggerhead shrike
	Sturnidae	**Starlings**
*	*Sturnus vulgaris*	European starling
	Emberizidae	**Emberizids**
	Melospiza melodia	song sparrow
	Fringillidae	**Finches**
	Carpodacus mixicanus	house finch
	Carduelis tristis	American goldfinch

BIRDS

	SCIENTIFIC NAME	COMMON NAME
	Passeridae	**Old World Sparrows**
*	*Passer domesticus*	house sparrow

MAMMALS

SCIENTIFIC NAME	COMMON NAME
Leporidae	**Hares and Rabbits**
Sylvilagus audubonii sanctidiegi	Audubon's cottontail
Sciuridae	**Squirrels**
Spermophilus beecheyi nesioticus	California ground squirrel
Canidae	**Wolves and Foxes**
Canis latrans	coyote
Heteromyidae	**Kangaroo Rats, Pocket Mice and Kangaroo Mice**
Dipodomys simulans	Dulzura kangaroo rat[1]

[1] *Observed by O'Farrell Biological Consulting (2012).*

APPENDIX B: SENSITIVE PLANT SPECIES

VASCULAR PLANTS							
Scientific Name	**Common Name**	**Flowering Period**	**Federal**	**State**	**CRPR List**	**Preferred Habitat**	**Potential for Occurrence**
ANGIOSPERMS (DICOTYLEDONS)							
Asteraceae	**Aster Family**						
Ambrosia monogyra	singlewhorl burrobrush	Aug.-Nov.	NONE	NONE	2.2	Chaparral, coastal scrub, desert dunes/sandy	LOW
Berberidaceae	**Barberry Family**						
Berberis nevinii	Nevin's barberry	Mar.-June	FE	SE	1B.1	Sandy soils in low-gradient washes, alluvial terraces, and canyon bottoms, along gravelly wash margins, or on coarse soils on steep, generally north-facing slopes in alluvial scrub, cismontane (e.g., chamise) chaparral, coastal sage scrub, oak woodland, and/or riparian scrub or woodland.	NONE – No known occurrences in the study area vicinity (USFWS, 2009). RSS and RAFSS is limited, of poor quality, and hydrologically isolated. This is an evergreen species and none were observed during the survey.
Brassicaceae	**Mustard Family**						
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	Jan.-July	NONE	NONE	1B.2	Chaparral and coastal scrub.	LOW
Crassulaceae	**Stonecrop Family**						
Dudleya multicaulis	many-stemmed dudleya	Apr.-July	NONE	NONE	1B.2	Chaparral, coastal scrub, valley and foothill grassland often on clay soils.	LOW
Nyctaginaceae	**Four O'clock Family**						
Abronia villosa var. *aurita*	chaparral sand-verbena	Jan.-Sep.	NONE	NONE	1B.1	Chaparral, coastal scrub, and desert dunes/sandy areas.	LOW

OB = observed; NO = species not observed or not expected to occur within the study area due to the lack of suitable habitat, the negative results of focused surveys, or the study area's location outside of the species' range.

VASCULAR PLANTS							
Scientific Name	**Common Name**	**Flowering Period**	**Federal**	**State**	**CRPR List**	**Preferred Habitat**	**Potential for Occurrence**
Polygonaceae	**Buckwheat Family**						
Chorizanthe parryi var. *parryi*	Parry's spineflower	Apr.-June	NONE	NONE	1B.1	Openings/clearings in coastal or desert sage scrub, chaparral or interface; dry slopes or flat ground; sandy soils.	LOW
Dodecahema leptoceras	slender-horned spineflower	Apr.-June	FE	SE	1B.1	Scrub and chaparral in sandy soils and alluvial fans.	NONE
Polemonaiceae	**Phlox Family**						
Eriastrum densifolium ssp. *sanctorum*	Santa Ana River woollystar	July-Aug.	FE	SE	1B.1	Chaparral, coastal scrub on alluvial fans.	NONE
Rosaceae	**Rose Family**						
Horkelia cuneata ssp. *puberula*	mesa horkelia	Feb.-July (uncommonly Sept.)	NONE	NONE	1B.1	Chaparral, cismontane woodland, coastal scrub/sandy or gravelly.	LOW
ANGIOSPERMS (MONOCOTYLEDONS)							
Liliaceae	**Lily Family**						
Calochortus clavatus var. *gracilis*	slender mariposa lily	Mar.-May	NONE	NONE	1B.2	Chaparral and coastal scrub.	LOW
Calochortus plummerae	Plummer's mariposa lily	May-July	NONE	NONE	1B.2	Chaparral (openings), cismontane woodland, coastal scrub, valley and foothill grassland, granitic/rocky.	LOW
Calochortus weedii var. intermedius	intermediate mariposa lily	May-July	NONE	NONE	1B.2	Coastal scrub, chaparral, valley and foothill grassland on rocky soil.	LOW

OB = observed; NO = species not observed or not expected to occur within the study area due to the lack of suitable habitat, the negative results of focused surveys, or the study area's location outside of the species' range.

VASCULAR PLANTS

Scientific Name	Common Name	Flowering Period	Federal	State	CRPR List	Preferred Habitat	Potential for Occurrence
Poaceae	**Grass Family**						
Imperata brevifolia	California satintail	Sep.-May	NONE	NONE	2.1	Coastal scrub, chaparral, riparian scrub, meadows, seeps, alkaline	LOW

Key to Species Listing Status Codes

FE	*Federally Endangered*	SE	*State Listed as Endangered*
FT	*Federally Threatened*	ST	*State Listed as Threatened*
FPE	*Federally Endangered*	SCE	*State Candidate for Endangered*
FPT	*Federally Proposed as Threatened*	SCT	*State Candidate for Threatened*
FPD	*Federally Proposed for Delisting*	SFP	*State Fully Protected*
		SR	*State Rare*
		SSC	*California Species of Special Concern*

California Native Plant Society (CNPS)

List 1A: Presumed extinct in California.
List 1B: Rare, threatened, or endangered throughout their range.
List 2: Rare, threatened, or endangered in California, but more common in other states.
List 3: Plant species for which additional information is needed before rarity can be determined.
List 4: Species of limited distribution in California (i.e., naturally rare in the wild), but whose existence does not appear to be susceptible to threat.

Source: PCR Services Corporation 2012.

New Threat Code extensions and their meanings:

1 Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
2 Fairly endangered in California (20-80% occurrences threatened)
3 Not very endangered in California (<20% of occurrences threatened or no current threats known)

OB = observed; NO = species not observed or not expected to occur within the study area due to the lack of suitable habitat, the negative results of focused surveys, or the study area's location outside of the species' range.

APPENDIX C: SENSITIVE WILDLIFE SPECIES

Scientific Name	Common Name	Federal	State	Preferred Habitat	Potential for Occurrence in the Study Area
INVERTEBRATES					
Order Diptera	**Flies**				
Rhaphiomidas terminatus abdominalis	Delhi Sands flower-loving fly	FE	NONE	Found in areas of the Delhi Sands formation in southwestern San Bernardino and northwestern Riverside Counties. Requires fine, sandy soils, often with wholly or partly consolidated dunes and sparse vegetation.	NONE – CNDDB occurrence is mapped in the southern portion of Westgate Village. However, no Delhi Sands or dunes occur within the area, which is either developed or actively maintained.
AMPHIBIANS					
Salimandridae	**Newts**				
Taricha torosa	Coast Range newt	NONE	SSCSSC	Terrestrial habitats and will migrate over 1 kilometer to breed in ponds, reservoirs and slow-moving streams	NONE
Pelobatidae	**Spadefoot Toads**				
Spea hammondii	western spadefoot	NONE	SSC	Prefers burrow sites within relatively open areas in lowland grasslands, chaparral, and pine-oak woodlands, areas of sandy or gravelly soil in alluvial fans, washes, and floodplains. Requires temporary pools for reproduction.	NONE

NONE = Species not expected to occur on-site due to the lack of suitable habitat or the study area's location outside of the species' range; LOW = There is a low possibility for this species to occur on-site due to the small amount of habitat and/or poor quality of habitat and/or known range minimizes possibility for species' presence within the study area; MOD = There is a moderate possibility for this species to occur on-site; HIGH = There is a high probability for this species to occur on-site; F = For raptor and bat species: if present, would utilize the site for foraging only; N = For raptor and bat species: if present, would utilize the site for nesting only; FN = For raptor and bat species: if present, would utilize the site for both foraging and nesting.

Scientific Name	Common Name	Federal	State	Preferred Habitat	Potential for Occurrence in the Study Area
Bufonidae	**True Toads**				
Bufo californicus	arroyo toad	FE	SSC	Shallow, exposed streamsides, quiet water stretches, or overflow pools with silt-free sandy or gravelly bottoms. Nearby sandy terraces, dampened in places by capillary action, with some scattered vegetation.	NONE
Ranidae	**True Frogs**				
Rana muscosa	Sierra Madre yellow-legged frog	FE	SSC	Prefers rocky stream courses in the mountains of southern California. Inhabits mid- to upper-elevation, perennial streams, often in locations with bedrock pools. Always encountered within a few feet of water.	NONE
REPTILES					
Phrynosomatidae	**Iguanid Lizard Family**				
Phrynosoma blainvillii	coast horned lizard	NONE	SSC	Prefers sandy riparian and sage scrub habitats but also occurs in valley-foothill hardwood, conifer, , pine-cypress, juniper and annual grassland habitats below 6,000 feet, open country, especially sandy areas, washes, flood plains, and windblown deposits.	LOW – Observed within the vicinity of the North Fontana MSHCP boundaries. RAFSS and RSS habitat is limited and of poor quality.
Teiidae	**Whiptail Family**				
Aspidoscelis hyperythra	orange-throated whiptail	NONE	SSC	Chaparral, non-native grassland, Riversidean sage scrub, and juniper and oak woodlands. Associated with riparian areas and alluvial fan scrub habitats.	LOW – RAFSS and RSS habitat is limited and of poor quality.
Anniellidae	**Legless Lizard Family**				
Anniella pulchra pulchra	silvery legless lizard	NONE	SSC	Frequents sparse vegetation of beaches, chaparral, pine-oak woodland, and streamside growth of sycamores, cottonwoods, and oaks. Needs loose soil for burrowing, moisture, warmth, and plant cover.	LOW – RAFSS and RSS habitat is limited and of poor quality.

NONE = Species not expected to occur on-site due to the lack of suitable habitat or the study area's location outside of the species' range; LOW = There is a low possibility for this species to occur on-site due to the small amount of habitat and/or poor quality of habitat and/or known range minimizes possibility for species' presence within the study area; MOD = There is a moderate possibility for this species to occur on-site; HIGH = There is a high probability for this species to occur on-site; F = For raptor and bat species: if present, would utilize the site for foraging only; N = For raptor and bat species: if present, would utilize the site for nesting only; FN = For raptor and bat species: if present, would utilize the site for both foraging and nesting.

Scientific Name	Common Name	Federal	State	Preferred Habitat	Potential for Occurrence in the Study Area
Colubridae	**Colubrid Snakes**				
Salvadora hexalepis virgultea	coast patch-nosed snake	NONE	SSC	Desert and rocky areas in chaparral covered hillsides and canyons.	NONE
Thamnophis hammondii	two-striped garter snake	NONE	SSC	Coastal California along watercourses with permanent fresh water, and near streams with rocky beds and riparian growth.	NONE
Viperidae	**Vipers**				
Crotalus ruber	red-diamond rattlesnake	NONE	SSC	Chaparral, woodland, grassland, and desert. In rocky areas and dense vegetation.	LOW – RAFSS and RSS habitat is limited and of poor quality. Non-native grassland is actively maintained.
BIRDS					
Accipitridae	**Hawks, Kites, Harriers and Eagle Family**				
Aquila chrysaetos	golden eagle	NONE	SFP	Mountains, deserts, and open country; prefer to forage over grasslands, deserts, savannahs and early successional stages of forest and shrub habitats.	LOW (F) - Observed within the vicinity of the North Fontana MSHCP boundaries. Since the species is an uncommon to rare resident in the San Bernardino Mountains foothills, and some suitable foraging habitat occurs, it may occasionally be present.

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Scientific Name	Common Name	Federal	State	Preferred Habitat	Potential for Occurrence in the Study Area
Elanus leucurus	white-tailed kite	NONE	SFP	Grasslands with scattered trees, near marshes, along highways.	MOD (F) – Suitable foraging habitat is present; this species would be expected during the winter.
Circus cyaneus	northern harrier	NONE	SSC	Coastal salt marshes, freshwater marshes, grasslands, and agricultural fields; occasionally forages over open desert and brushlands.	MOD (F) – Observed within the vicinity of the North Fontana MSHCP boundaries. Suitable foraging habitat is present; this species would be expected during the winter.
Accipiter cooperi	Cooper's hawk	NONE	WL[1]	Fairly common winter visitor in California, but breeding populations have declined due to loss of habitat and human disturbance. Nests primarily in fairly dense oak and riparian woodlands and forages over open lands.	MOD (F) – Observed within the vicinity of the North Fontana MSHCP boundaries. Suitable foraging habitat is present; this species would be expected during the winter.
Accipiter striatus	sharp-shinned hawk	NONE	WL[1]	Fairly common winter visitor and rare summer resident in the southern California mountains. Inhabits riparian and oak woodlands and coniferous forests. Forages in open areas.	MOD (F) –Suitable foraging habitat is present; this species would be expected during migration, with smaller numbers during winter.

[1] *These species were previously listed by CDFG as SSC but have since been removed and designated as WL species. WL species are not typically considered sensitive. However, these species were included since they were previously analyzed in the Final EIR for the Westgate Specific Plan (City of Fontana, 1996).*

NONE = Species not expected to occur on-site due to the lack of suitable habitat or the study area's location outside of the species' range; LOW = There is a low possibility for this species to occur on-site due to the small amount of habitat and/or poor quality of habitat and/or known range minimizes possibility for species' presence within the study area; MOD = There is a moderate possibility for this species to occur on-site; HIGH = There is a high probability for this species to occur on-site; F = For raptor and bat species: if present, would utilize the site for foraging only; N = For raptor and bat species: if present, would utilize the site for nesting only; FN = For raptor and bat species: if present, would utilize the site for both foraging and nesting.

Scientific Name	Common Name	Federal	State	Preferred Habitat	Potential for Occurrence in the Study Area
Buteo regalis	ferruginous hawk	NONE	WL[1]	Locally fairly common winter visitor in grassland and agricultural areas of the arid interior regions of southern California.	MOD (F) –Suitable foraging habitat is present; this species would be expected during winter in small numbers.
Falconidae	**Falcons**				
Falco peregrinus anatum	American peregrine falcon	NONE	SFP	Found in a variety of habitats including mixed conifer, pinyon-juniper, sagebrush, riparian, grassland habitats, agricultural, and urban areas.	MOD (F) –Suitable foraging habitat is present.
Apodidae	**Swifts**				
Chaetura vauxi	Vaux's swift	NONE	SSC	Nests in old growth deciduous or coniferous forests, forages in forests and open areas. Very rare wintering in southern California. Often found foraging over lakes and ponds near or along the coast during migration. Migrants can be found flying over a range of habitats from grasslands, desert scrub and chaparral to mature coniferous forests. Migration is concentrated on the coast, along ridge tops, and along the western foothills of the Sierra Nevada, especially during spring.	NONE
Strigidae	**Owls**				
Athene cunicularia	burrowing owl	NONE	SSC	Dry grasslands, desert habitats, open-pinyon-juniper and ponderosa pine woodlands below 5,300 feet elevation. Prefers berms, ditches, and grasslands adjacent to rivers, agricultural, and scrub areas.	LOW (FN) – Observed within the vicinity of the North Fontana MSHCP boundaries.
Tyrannidae	**Tyrant Flycatchers**				
Empidonax traillii	willow flycatcher	NONE	SE	Low brushy vegetation in wet areas, especially riparian willow thickets.	NONE
Empidonax traillii extimus	southwestern willow flycatcher	FE	SE	Low brushy vegetation in wet areas, especially riparian willow thickets.	NONE

NONE = Species not expected to occur on-site due to the lack of suitable habitat or the study area's location outside of the species' range; LOW = There is a low possibility for this species to occur on-site due to the small amount of habitat and/or poor quality of habitat and/or known range minimizes possibility for species' presence within the study area; MOD = There is a moderate possibility for this species to occur on-site; HIGH = There is a high probability for this species to occur on-site; F = For raptor and bat species: if present, would utilize the site for foraging only; N = For raptor and bat species: if present, would utilize the site for nesting only; FN = For raptor and bat species: if present, would utilize the site for both foraging and nesting.

Scientific Name	Common Name	Federal	State	Preferred Habitat	Potential for Occurrence in the Study Area
Laniidae	**Shrike Family**				
Lanius ludovicianus	loggerhead shrike	NONE	SSC	Open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches.	HIGH (FN) – This species was observed within the vicinity of the North Fontana MSHCP boundaries, and also observed in the study area in 1996.
Emberizidae	**Sparrow Family**				
Ammodramus savannarum	grasshopper sparrow	NONE	SSC	Valley and foothill grassland.	LOW (FN) – grassland habitat is limited and of poor quality.
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	NONE	WL[2]	Occurs west of the deserts, from Ventura County south into Baja California. Typically inhabits rocky slopes with relatively open shrub cover that is intermixed with grassy areas..	LOW – RAFSS and RSS habitat is limited and of poor quality.
Amphispiza belli belli	Bell's sage sparrow	NONE	WL[2]	Occurs along the coast from Trinity County south into Baja California. Generally a resident of fairly dense chaparral and sage scrub	LOW – RAFSS and RSS habitat is limited and of poor quality. Non-native grassland is actively maintained.
Vireonidae	**Vireo Family**				
Vireo bellii pusillus	least Bell's vireo	FE	SE	Found especially in willow and mesquite thickets near water.	NONE

[2] *These species were previously listed by CDFG as SSC but have since been removed and designated as WL species. WL species are not typically considered sensitive. However, these species were included since they were previously analyzed in the Final EIR for the Westgate Specific Plan (City of Fontana, 1996).*

NONE = Species not expected to occur on-site due to the lack of suitable habitat or the study area's location outside of the species' range; LOW = There is a low possibility for this species to occur on-site due to the small amount of habitat and/or poor quality of habitat and/or known range minimizes possibility for species' presence within the study area; MOD = There is a moderate possibility for this species to occur on-site; HIGH = There is a high probability for this species to occur on-site; F = For raptor and bat species: if present, would utilize the site for foraging only; N = For raptor and bat species: if present, would utilize the site for nesting only; FN = For raptor and bat species: if present, would utilize the site for both foraging and nesting.

Scientific Name	Common Name	Federal	State	Preferred Habitat	Potential for Occurrence in the Study Area
Porulidae	**Wood Warblers**				
Dendroica petechia brewsteri	yellow warbler	NONE	SSC	Riparian woodlands, montane chaparral, open ponderosa pine and mixed coniferous habitat with significant brush.	NONE
Icteria virens	yellow-breasted chat	NONE	SSC	In southern California, nest in dense willow woodlands and thickets or other riparian areas with a developed understory.	NONE
Sylviidae	**Old World Warblers, Gnatcatchers**				
Polioptila californica californica	Coastal California gnatcatcher	FT	SSC	Coastal sage scrub vegetation below 2,500 feet elevation in Riverside County and generally below 1,000 feet elevation along the coastal slope; generally avoids steep slopes and dense vegetation for nesting.	LOW (FN) – Not observed within the North Fontana MSHCP Plan area. The nearest known CNDDB and USFWS occurrences are at the base of the San Gabriel Mountains approximately 2 miles northwest of the study area. RAFSS and RSS habitat is limited and of poor quality.
Icteridae	**Blackbird Family**				
Agelaius tricolor	Tricolored blackbird	NONE	SSC	Highly colonial species. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	LOW (F) – Potential foraging habitat may be present within the study area.

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Scientific Name	Common Name	Federal	State	Preferred Habitat	Potential for Occurrence in the Study Area
MAMMALS					
Phyllostomidae	**Leaf-Nosed Bats**				
Macrotus californicus	California leaf-nosed bat	NONE	SSC	Desert scrub. By day, roosts in abandoned mine tunnels. Migrating bat species.	NONE
Molossidae	**Free-tailed Bats**				
Eumops perotis	Western mastiff bat	NONE	SSC	Many open, semi-arid to arid habitats including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	LOW (F) – RAFSS and RSS habitat is limited and of poor quality.
Nyctinomops femorosaccus	pocketed free-tailed bat	NONE	SSC	More arid habitat such as pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis. Roosts in rock crevices, caverns, or buildings.	NONE
Vespertilionidae	**Evening Bats**				
Antrozous pallidus	pallid bat	NONE	SSC	Wide variety of habitats but most common in open, dry habitats with rocky areas for roosting.	LOW (F) – RAFSS and RSS habitat is limited and of poor quality.
Lasiurus xanthinus	western yellow bat	NONE	SSC	Desert wash	NONE
Leporidae	**Hares and Rabbit Family**				
Lepus californicus bennettii	San Diego black-tailed jackrabbit	NONE	SSC	Open brushlands and scrub habitats between sea level and 4,000 feet elevation.	HIGH - Observed within the vicinity of the North Fontana MSHCP Plan area. Also observed on-site in 1996.
Heteromyidae	**Pocket Mice and Kangaroo Rat Family**				

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Scientific Name	Common Name	Federal	State	Preferred Habitat	Potential for Occurrence in the Study Area
Perognathus longimembris brevinasus	Los Angeles pocket mouse	NONE	SSC	Coastal sage scrub, and grasslands, desert cactus, creosote bush and sagebrush habitats.	LOW – Trapped within the vicinity of the North Fontana MSHCP Plan area. RAFSS, RSS and grassland habitats are limited and of poor quality.
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	NONE	SSC	Chaparral, coastal sage scrub (Riversidean and Diegan), desert scrub, grassland, juniper woodland and scrub, and Riversidean alluvial fan sage scrub	LOW – Trapped within the vicinity of the North Fontana MSHCP Plan area. RAFSS, RSS and grassland habitats are limited and of poor quality.
Dipodomys merriami parvus	San Bernardino kangaroo rat	FE	SSC	Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains	NE – Trapped within the North Fontana MSHCP Plan area in 2002, but in very low numbers and scattered locations on the Fontana Fan only. None were trapped in 2004. The nearest known CNDDB and USFWS occurrences are less than 0.5 northwest of the study area on the other side of the I-15 freeway associated with flood control basins. No suitable habitat determined

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Scientific Name	Common Name	Federal	State	Preferred Habitat	Potential for Occurrence in the Study Area
					present on-site.
Dipodomys stephensi	Stephen's kangaroo rat	FE	ST	Coastal scrub, valley and foothill grassland	NE – Not trapped within the North Fontana MSHCP Plan area, and no known occurrences in vicinity of study area. RAFSS, RSS and grassland habitats are limited and of poor quality.
Muridae	**Mice, Rats, and Vole Family**				
Neotoma lepida intermedia	San Diego desert woodrat	NONE	SSC	Variety of habitats, often in the vicinity of rocky outcrops; prefer moderate to dense canopies.	LOW – Trapped within the North Fontana MSHCP Plan area. RAFSS and RSS habitats are limited and of poor quality.
Onychomys torridus ramona	southern grasshopper mouse	NONE	SSC	Grasslands, desert areas, especially scrub with friable soils.	LOW – Not trapped within the North Fontana MSHCP Plan area. RAFSS and RSS habitats are limited and of poor quality.

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Scientific Name	Common Name	Federal	State	Preferred Habitat	Potential for Occurrence in the Study Area
Mustelidae	**Weasels, Skunks, and Otters Family**				
Taxidea taxus	American badger	NONE	SSC	Drier, open stages of shrubland, forest, and herbaceous habitats with friable soils.	NONE

FE	*Federally Listed as Endangered*	SE	*State Listed as Endangered*
FT	*Federally Listed as Threatened*	ST	*State Listed as Threatened*
FPE	*Federally Proposed as Endangered*	SCE	*State Candidate for Endangered*
FPT	*Federally Proposed as Threatened*	SCT	*State Candidate for Threatened*
FPD	*Federally Proposed for Delisting*	SFP	*State Fully Protected*
		SSC	*California Species of Special Concern*
		WL	*CDFG Watch List*

Source: PCR Services Corporation 2012.

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O'FARRELL BIOLOGICAL CONSULTING

5 August 2012

Ceri Williams-Dodd
PCR Services Corporation
1 Venture, Suite 150
Irvine, CA 92618

RE: Westgate Specific Plan Project, San Bernardino Co., CA

Dear Ceri:

As per your request, O'Farrell Biological Consulting conducted an assessment survey for San Bernardino kangaroo rat (SBKR), *Dipodomys merriami brevinasus*, for the Westgate Specific Plan project site in San Bernardino Co., CA on 5 August 2012. The project site is adjacent to the east side of the I-15 both north and south of the 210 freeway. The entire site has been disturbed in the past by adjacent road construction, utility alignment activities, active vineyard, some building development, and broad patches of ruderal fields. Vegetation mapping provided by PCR was accurate and reveals only small discrete patches of disturbed sage scrub. Ground cover within much of the sage scrub consisted of dense, introduced grasses. All the disturbed areas are periodically disked. The entire site was visually examined by two observers (M. J. O'Farrell and T. Bailey) to allow a thorough examination of the site and determine presence of diagnostic sign and/or likelihood of SBKR occupation. Temperature was approximately 20°C, wind from 1-3 mph, and the sky was clear.

As expected, no diagnostic sign of SBKR was found on or adjacent to the property. The continual disking of the majority of the site precludes the opportunity for SBKR occupation. The entire area is surrounded by heavy development negating the possibility of colonization from off site. The existing discrete patches of sage scrub habitat demonstrate severe surface disturbance sometime in the past. Portions are densely vegetated accounting for 100% surface cover. Areas with dense grass cover present conditions that fully exclude SBKR occupation. There are no resident SBKR on or adjacent to the project site. The larger Dulzura kangaroo rat, D. simulans, was found over much of the site although numbers appear to be small consistent with the degradation of the habitat. Implementation of the project will not result in take of SBKR.

7320 HEGGIE AVENUE. • LAS VEGAS, NV • 89131
PHONE: (702) 658-5222 • FAX: (702) 645-5688 E-MAIL: mike@mammalogist.org

If you need further information, please notify me.

Sincerely,

Michael J. O'Farrell, Ph.D.

Principal/Terrestrial Ecologist

Appendix D - Cultural Resources Assessment

CULTURAL RESOURCES ASSESSMENT FOR
THE WESTGATE SPECIFIC PLAN PROJECT,
CITY OF FONTANA, SAN BERNARDINO COUNTY, CALIFORNIA

Report Prepared For:

CITY OF FONTANA
8353 Sierra Avenue
Fontana, California 92335
Phone: (909) 350-7608
Contact: DiTanyon Johnson, Associate Planner

Report Prepared By:

PCR SERVICES CORPORATION
1 Venture, Suite 150
Irvine, California 92618
Phone: (949) 753-7001

Authors:
Kyle Garcia, *Senior Archaeologist I*
Matthew Gonzalez*, Associate Archaeologist/Paleontologist*
Jon Wilson, M. Arch, M.A., *Senior Architectural Historian I*
Margarita J. Wuellner, Ph.D., *Director of Historic Resources*

964 Acres
Cucamonga Peak, Devore, Fontana, and Guasti, CA USGS 7.5' Quadrangles

April 2014

Resources: CA-SBR-6901H, -7324H, -9368H, and P-36-20,137, P-36-15,497/CPHI-SBR-12, Water Tank, and Vineyards

EXECUTIVE SUMMARY

Unitex Management Corporation (the Applicant) is proposing to replace the existing Westgate Specific Plan, which was adopted by the City of Fontana (the City) in 1996. The new Westgate Specific Plan (the Plan) encompasses 964 acres (the Study Area) in the northwestern part of the City in western San Bernardino County, California. The Plan provides a broad range of uses including residential, school, retail, office, business and open space uses.

PCR Services Corporation (PCR) conducted a program-level cultural and paleontological resources assessment of the Plan to identify potential impacts to cultural resources and to develop mitigation measures to avoid, reduce, or mitigate potential impacts to cultural resources for the purpose of complying with the California Environmental Quality Act (CEQA) and the City's General Plan. The recommendations and projects included in the Plan are conceptual in nature and are therefore evaluated by PCR at a program-level, recognizing that subsequent more focused environmental review would occur as future project-specific development proposals are initiated under the Plan.

Archaeological Resources

Components of the Plan that do not require excavation activities (such as grading, trenching, or boring) will not have a significant impact on archaeological resources. Therefore, no additional analyses or mitigation is necessary for project components of this type. However, components of the Plan that include excavation into native soils may require additional analyses to identify potential for archaeological impacts. The results of the cultural resources records search revealed that there are multiple previously recorded archaeological resources within the Plan area and surrounding vicinity. PCR recommends additional work to further identify and evaluate these resources for eligibility (if the future project will include excavations into native soil), and, if found eligible, to mitigate impacts that future projects could have on these resources. It is also recommended that Plan areas that have not been surveyed be surveyed to identify any potential new resources that have yet to be discovered. Mitigation measures are recommended at the end of this report to reduce impacts to archaeological resources to a less than significant level.

Historical Resources

Results of the cultural resources records search and the pedestrian survey indicated that the nearest recorded historic resource is the Hippard Ranch, which is located approximately one-half mile west of the Study Area. The Rancho Cucamonga Historic Preservation Commission surveyed the property in 1987 and determined the property eligible for local listing. The Hippard Ranch is on the west side of I-15 and is not visible from the Study Area and therefore indirect impacts to the historic resource from any proposed project associated with the Plan is highly unlikely.

Baseline Avenue (P-36-15,497/CPHI-SBR-12) is located outside but immediately adjacent to the southern boundary of the Study Area and currently exists as a paved six-lane public right-of-way with shoulders, pedestrian sidewalks, and a landscaped center median. No remnants of the original road that was built by Hunt in the 1850s exists today. The Plan will not cause a substantial adverse change to the significance of Baseline Avenue since it is located outside the Study Area and; therefore, will not be directly impacted by any future development. In addition, the setting of Baseline Avenue has already been altered by existing

residential and commercial uses in the area; therefore, no indirect impacts associated with the Plan will occur.

Based on historical research and the apparent age and location of the existing vineyards in the Study Area, it appears the vineyard may be part of the Jose Lopez Vineyard, planted in 1918, and an adjacent farmstead (CA-SBR-7324H) owned by Frank R. Roe who also cultivated grape vines. In particular, the existing vines in the northern portion of the study area appear to be of sufficient age and of the type historically associated with the Lopez Vineyard, which is listed in the Registry of Historic Vineyards (http://historicvineyardsociety.org/lopez/). It appears the existing vineyards may meet the significance threshold as a historically significant agricultural resource or cultural landscape. In addition, the pre-1938 water tank, agricultural water system and the site of a former farmstead (CA-SBR-7324H) are contributing components that may be associated with the historic vineyards and may contribute to the significance of the potential historic agricultural landscape. Therefore, the existing vineyards in the Study Area, the 1938 water tank, the agricultural water system and the former farmstead site are conservatively considered eligible as a historical resource, specifically an early twentieth-century historic agricultural landscape. The identified historic agricultural landscape and its component features are conservatively considered eligible as a historical resource, pursuant to CEQA 15064.5. Historic vineyards are rapidly becoming a rare property type in the Cucamonga Valley. For the purposes of this investigation, the historic agricultural landscape is conservatively considered eligible for listing in the California Register as an individual resource and as a contributor to a California Register eligible district of historic vineyards in the area.

Under the Project, grading and redevelopment of the historic agricultural landscape would substantially change the resource such that it would lose its eligibility for listing in the California Register. Thus, the Project would result in a potentially significant unavoidable impact to historical resources. Mitigation measures to reduce potentially significant impacts to historical resources are provided at the end of this report. With implementation of applicable mitigation measures, impacts to historical resources would be less than significant.

Paleontological Resources

Review of records and geologic maps at the San Bernardino County Museum indicates that the Plan area and its immediate vicinity have no history of fossil resources largely because the majority of the Study Area consists of Holocene and possibly late Pleistocene fan alluvium, including deposits derived from Etiwanda and Lytle Creeks with the remainder of the area consisting of boulder gravel, which are not conducive to retaining paleontological resources. However, these sediments may overlie older Pleistocene alluvium that has a high potential to yield fossil remains. Fossils recovered from these older Pleistocene sediments have included mammoths, mastodons, ground sloths, dire wolves, saber-toothed cats, large and small horses, large and small camels, and bison. Specifically, the fossil remains of a wood rat and pocket gopher were encountered approximately one half-mile west of the Plan area and fossil mammoth remains approximately 10 miles southwest of the Plan area at about 20 feet below the surface from older Pleistocene sediments. As a result, there is a low to moderate potential to encounter paleontological resources within the proposed Project and mitigation measures are recommended at the end of this report to reduce impacts to paleontological resources to a less than significant level.

1.0 INTRODUCTION AND PROJECT DESCRIPTION

1.1 PROPOSED PROJECT AND LOCATION

Unitex Management Corporation is proposing to replace the existing Westgate Specific Plan, which was adopted by the City of Fontana in 1996 and included a total area of 957.9 acres in the northwestern portion of the City. The proposed Westgate Specific Plan (the Plan) is an amendment to the approved 1996 Westgate Specific Plan, which encompasses a area within the same planning area as the original 1996 Specific Plan. The amended Specific Plan will supersede the previously approved Westgate Specific Plan in its entirety. The Plan provides a broad range of uses including residential, school, retail, office, business and open space uses. It encompasses 964 acres (the Study Area) in the northwestern part of the City within a gently sloping alluvial plain of the nearby San Gabriel Mountains in western San Bernardino County, California (**Figure 1**, *Regional Map)*. The Plan area is depicted in numerous sections of the Cucamonga Peak, Guasti, Fontana, and Devore, CA, United States Geological Survey 7.5-minute topographic quadrangle maps (**Figure 2**, *Vicinity Map*). It is located on the east side of Interstate 15 (I-15) and extends north from Baseline Avenue to Lytle Creek Road (**Figure 3**, *Aerial Photograph*).

1.2 SCOPE OF STUDY AND PERSONNEL

PCR Services Corporation (PCR) conducted a program-level cultural and paleontological resources assessment of the Plan to identify potential impacts to cultural resources and to develop mitigation measures to avoid, reduce, or mitigate potential impacts to cultural resources for the purpose of complying with CEQA and the City's General Plan. The recommendations and projects included in the Specific Plan are conceptual in nature and are therefore evaluated by PCR at a program-level, recognizing that subsequent more focused environmental review would occur as future project-specific development proposals are initiated under the Plans.

The scope of work for this assessment included a cultural resources records search through the California Historical Resources Information System-San Bernardino Archaeological Information Center (CHRIS-SBAIC), a Sacred Lands File (SLF) search through the California Native American Heritage Commission (NAHC) and follow-up Native American consultation (including initiation of consultation pursuant to Senate Bill 18), and a paleontological records search through the San Bernardino County Museum (SBCM).

Personnel involved in this assessment included PCR archaeologists, Mr. Kyle Garcia and Mr. Matthew Gonzalez, and PCR architectural historians, Dr. Margarita Wuellner, Ph. D., and Mr. Jon Wilson, M. Arch., M. A. Mr. Gonzalez conducted the record searches. Mr. Garcia, Mr. Gonzalez and Mr. Wilson compiled this report. Project management was overseen by Mr. Garcia and Dr. Wuellner. Personnel qualifications of key personnel are provided in Appendix A of this report.

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PCR

Regional Map

Westgate Specific Plan

Source: ESRI Street Map, 2009; PCR Services Corporation, 2012.

FIGURE

1

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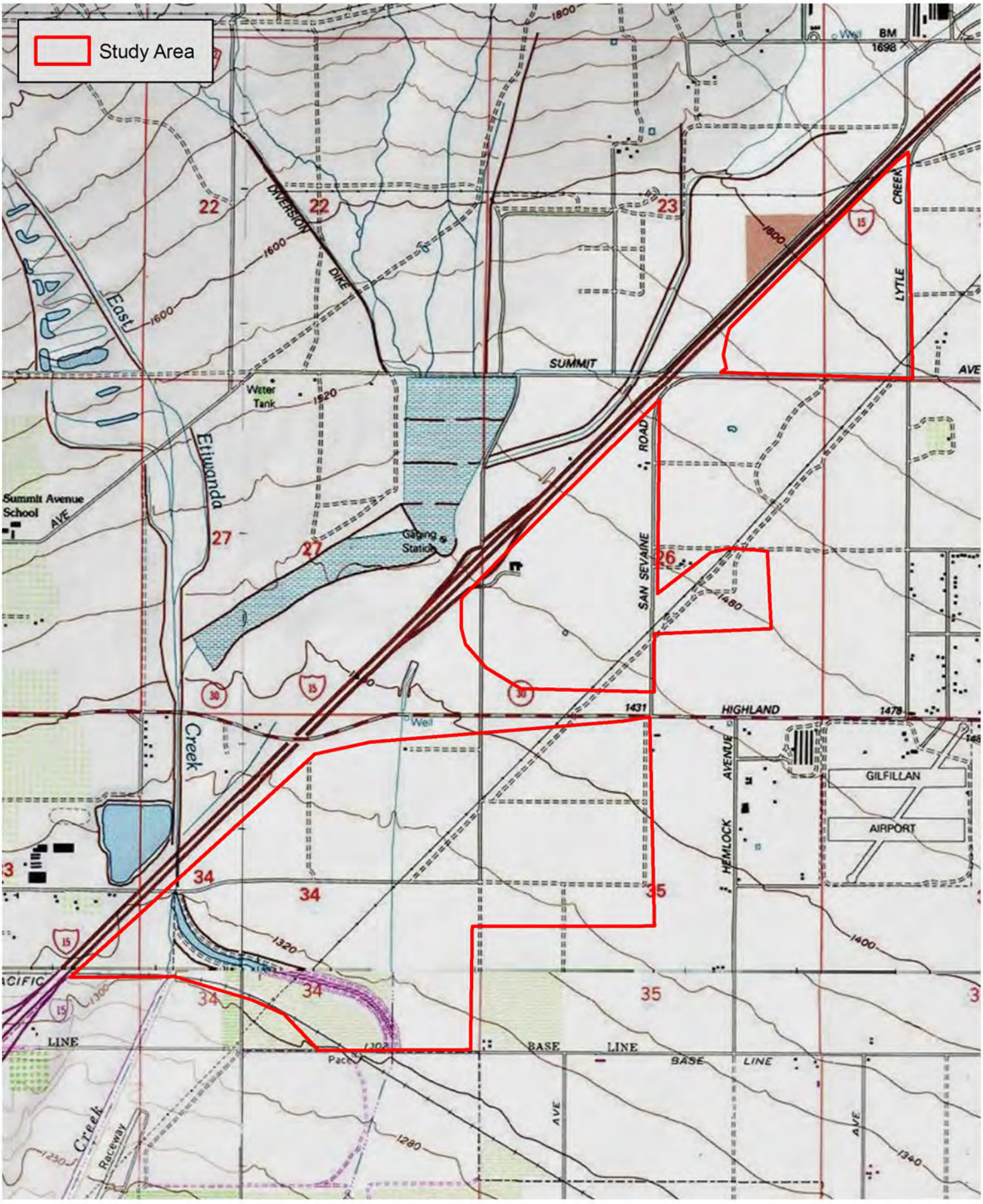

PCR

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Vicinity Map

Westgate Specific Plan

Source: USGS Topographic Series (Cucamonga Peak, Devore, Guasti, Fontana, CA); PCR Services Corporation, 2012.

FIGURE

2

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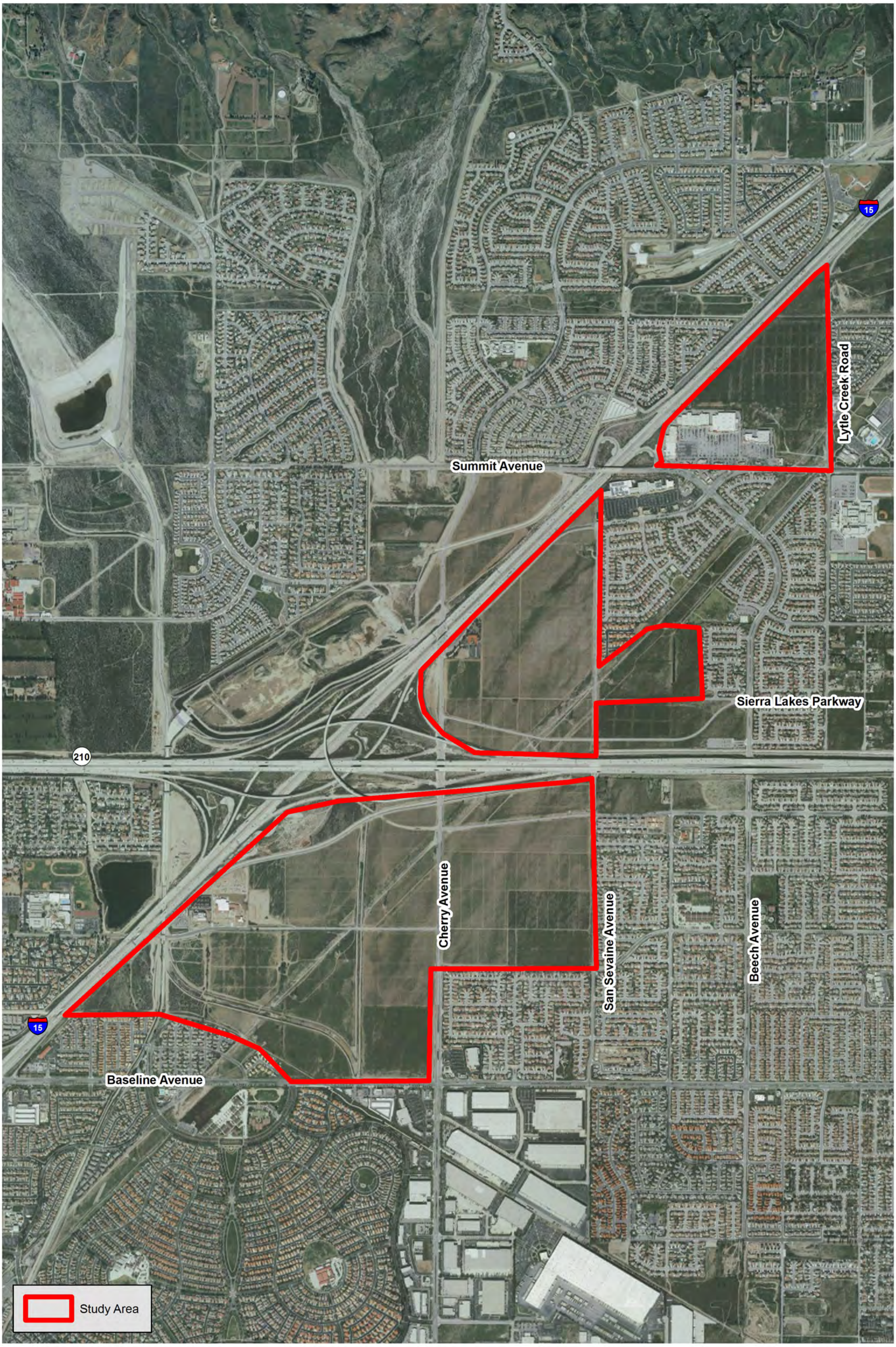

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Aerial Photograph

Westgate Specific Plan

Source: Aerial Express, 2010; PCR Services Corporation, 2012.

FIGURE

3

2.0 REGULATORY SETTING

Numerous laws and regulations require state and local agencies to consider the effects of a proposed project on cultural resources. These laws and regulations establish a process for compliance, define the responsibilities of the various agencies proposing the action, and prescribe the relationship among other involved agencies (e.g., State Historic Preservation Office and the Advisory Council on Historic Preservation). CEQA and the California Register of Historical Resources (California Register), Public Resources Code (PRC) 5024, are the primary state laws governing and affecting preservation of cultural resources of national, state, regional, and local significance. Other relevant regulations at the local level include the City's General Plan. A description of the applicable laws and regulations is provided in the following paragraphs.

2.1 STATE LEVEL

2.1.1 California Register of Historical Resources

The California Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The OHP also maintains the California Historic Resources Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the State's jurisdictions.

Created by Assembly Bill 2881, which was signed into law on September 27, 1992, the California Register is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change."[1] The criteria for eligibility for the California Register are based upon National Register criteria.[2] Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register of Historic Places.[3]

To be eligible for the California Register, a prehistoric or historic property must be significant at the local, state, and/or federal level under one or more of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

2. Is associated with the lives of persons important in our past;

3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

4. Has yielded, or may be likely to yield, information important in prehistory or history.

---

[1] *California Public Resources Code § 5024.1(a).*

[2] *California Public Resources Code § 5024.1(b).*

A resource eligible for the California Register must meet one of the criteria of significance described above and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.

Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register and those formally Determined Eligible for the National Register.
- California Registered Historical Landmarks from No. 770 onward.
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5.[4]
- Individual historical resources.
- Historical resources contributing to historic districts.
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

2.1.2 California Environmental Quality Act

CEQA is the principal statute governing environmental review of projects occurring in the State. CEQA requires lead agencies to determine if a proposed project would have a significant effect on archaeological resources (PRC Sections 21000 *et seq*.). As defined in Section 21083.2 of the PRC a "unique" archaeological resource is an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

[3] *California Public Resources Code § 5024.1(d).*

[4] *Those properties identified as eligible for listing in the National Register, the California Register, and/or a local jurisdiction register.*

In addition, CEQA Guidelines section 15064.5 broadens the approach to CEQA by using the term "historical resource" instead of "unique archaeological resource." The CEQA Guidelines recognize that certain historical resources may also have significance. The CEQA Guidelines recognize that a historical resource includes: (1) a resource in the California Register of Historical Resources; (2) a resource included in a local register of historical resources, as defined in PRC section 5020.1 (k) or identified as significant in a historical resource survey meeting the requirements of PRC section 5024.1 (g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

If a lead agency determines that an archaeological site is a historical resource, the provisions of section 21084.1 of the PRC and section 15064.5 of the CEQA Guidelines apply. If an archaeological site does not meet the criteria for a historical resource contained in the CEQA Guidelines, then the site is to be treated in accordance with the provisions of PRC section 21083, which is a unique archaeological resource. The CEQA Guidelines note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. (CEQA Guidelines §15064.5(c)(4)).

2.1.3 Paleontological Resources

Paleontological resources are also afforded protection under CEQA. Appendix G (part V) of the CEQA Guidelines provides guidance relative to significant impacts on paleontological resources, which states, "a project will normally result in a significant impact on the environment if it will …disrupt or adversely affect a paleontological resource or site or unique geologic feature, except as part of a scientific study." .

2.2 LOCAL LEVEL

2.2.1 City of Fontana General Plan

Archaeological and Historical Resources

According to the Open Space and Conservation Element (Element) of the City's General Plan (see City of Fontana 2003), the City Council may designate any improvement, natural feature or site as an historical resource and any area within the City as an historic overlay district if it meets the criteria for listing on the National Register of Historic Places or the following:

- It has a special historical, archeological, cultural, architectural, community or aesthetic value;
- It is identified with persons, a business use or events significant in local, state or national history;
- It embodies distinctive characteristics of a style, type, period or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship;
- It has a unique location or singular physical characteristic that represents an established and familiar visible feature of a neighborhood or community or the city;
- Its integrity as a natural environment or feature strongly contributes to the well-being of residents or a neighborhood of the city; or

- It is a geographically definable area possessing a concentration of sites, buildings, structures or objects that are unified by past events or are unified aesthetically by plan or physical development. (§5-355, Fontana City Code: Historical Resources Designation Criteria).

Any property that meets one or more of the criteria listed above, falls under the protection of National Historic Preservation Act and/or CEQA. Depending on the nature, significance, integrity, and current condition of the property, the proper form of protection may range from on-site preservation to project effect mitigation, such as in-depth documentation for historic buildings and data recovery excavation for archaeological sites.

The Element provides the following goals, policies, and actions regarding archaeological and historical resources:

Goal 4.1: The City will seek to identify and inventory all historical and archaeological resources within the City boundaries and its sphere of influence.

Policies:

1. The City will adopt the necessary means to identify cultural resources within its jurisdiction.

2. The City will consider the identification of cultural resources an integral part of the planning process.

Actions:

1. Maintain and expand as necessary the existing local historical resources register to provide a comprehensive and up-to-date inventory of known cultural resources.

2. Establish and maintain channels of routine consultation with the Archaeological Information Center at the San Bernardino County Museum and the Fontana Historical Society during the planning process.

3. Take advantage of opportunities provided by the statute-compliance procedures, including Article XIII of the Fontana City Code, the California Environmental Quality Act, and Section 106 of the National Historic Preservation Act, when applicable.

Goal 4.2: The City will encourage and support the preservation, rehabilitation, and/or restoration of historical and archaeological resources within the City boundaries and its sphere of influence.

Policies:

1. The City will make all reasonable efforts to protect cultural resources under its control.

2. The City will support incentives, assistance, and opportunities for historic preservation available through federal, state, or City programs.

3. The City will use its regulatory power to ensure the proper protection of cultural resources and avoid or minimize adverse effects on such resources from private projects that require discretionary City actions.

Actions:

1. Adopt a proactive approach to historic preservation in all City-sponsored or assisted projects and programs to ensure the proper protection of cultural resources.

2. Develop the necessary procedures to implement federal or state incentive programs, such as property tax reduction, income tax credit, transfer of development rights/density bonus, and the various grant programs.

3. Amend the City's zoning laws to reflect historic preservation regulations and incentives.

4. Modify development standards, including parking, setback, landscaping, and road/driveway width, to accommodate the preservation of historic buildings and districts.

5. Require all proposed project sites to be surveyed by a qualified archaeologist, historian, and/or architectural historian, as appropriate, to identify any potential cultural resources that may be affected, unless the preponderance of the evidence demonstrates that such survey is unnecessary.

6. Establish policies and procedures in code enforcement to prevent deterioration of historic buildings, structures, and districts.

Goal 4.3: The City will seek to integrate preservation of historical and archaeological resources into economic development strategy.

Policies:

1. The City will use its historic preservation programs to stimulate community revitalization, redevelopment, job creation, and investment in the community.

2. Promote the preservation and rehabilitation of the City's older residential neighborhoods to provide affordable housing.

3. Apply incentives to encourage compatible development and redevelopment projects in existing residential neighborhoods and commercial districts without sacrificing the integrity of cultural resources.

Actions:

1. Consider historic preservation strategies as part of a specific plan to be developed to stimulate revitalization of the downtown area.

2. Develop and distribute materials promoting historic preservation as a means to stabilize and enhance property values in the City.

Paleontological Resources

The City's General Plan does not specifically address paleontological resource goals, objectives, or policies.

3.0 ENVIRONMENTAL SETTING

The Study Area is characterized by relatively flat topography throughout and is made up primarily of agricultural fields with small areas of development and open space. The area immediately adjacent to the Study Area is developed with residential communities, commercial uses, and associated landscaping and paved parking lots and roads (see Figure 3). Elevation of the Study Area ranges from approximately 1290 to 1665 feet above mean sea level (amsl). The soil within the Study Area and surrounding vicinity has consists of sandy wash alluvium from the Etiwanda and Lytle Creek floodplain with the remainder of the Study Area consisting of boulder gravel.

The Study Area is located on a gently sloping alluvial plain with slopes ranging from 1.5 to 2.5 percent grade. The property contains no significant topographical features, and portions of the site were previously utilized for agricultural purposes. The Falcon Ridge Town Center, with approximately 415,000 square feet of commercial retail uses, has been completed within the Specific Plan boundaries directly north of Summit Avenue. One multi-tenant office building also exists on the Study Area and is located along Cherry Avenue just north of SR-210. Between Baseline Avenue and the SR-210, the California Department of Transportation has recently occupied a new 124,000-square-foot Transportation Management Facility and Southern Regional Lab. A Southern California Edison Company utility corridor diagonally traverses the Study Area in a southwesterly direction. Additionally, a Metropolitan Water District main trunk line and right-of-way is located parallel to and along the north side of the SCE corridor, while a Southern California Gas Company main line and right-of-way, as well as a San Gabriel Valley Municipal Water District pipeline, occur on the south side and parallel to the SCE corridor. Further, a San Bernardino Association of Governments right-of-way occurs contiguous to the southwest boundary of the site. Formerly the location of a railroad line, this corridor is now part of a regional trail system with the capability for a future commuter train line. Along the southerly portion of the Study Area just east of the I-15 freeway, a County of San Bernardino Flood Control District dual box concrete channel collects seasonal storm flows from the Etiwanda and San Sevaine Creeks to the north. An open earthen channel remains just east of the dual concrete channel that formerly collected the storm flows prior to the completion of the dual concrete channels and the Highland channel.

4.0 CULTURAL SETTING

4.1 PREHISTORIC CONTEXT

Prehistory is most easily discussed chronologically, in terms of environmental change and recognized cultural developments. Several chronologies have been proposed for inland Southern California, the most widely accepted of which is Wallace's four-part Horizon format (1955), which was later updated and revised by Claude Warren (1968). The advantages and weaknesses of southern California chronological sequences are reviewed by Warren (in Moratto 1984), Chartkoff and Chartkoff (1984), and Heizer (1978). The following discussion is based on Warren's (1968) sequence, but the time frames have been adjusted to reflect more recent archaeological findings, interpretations, and advances in radiocarbon dating.

4.1.1 Paleo-Indian Period (ca. 13,000-11,000 years before present [YBP])

Little is known of Paleo-Indian peoples in inland southern California, and the cultural history of this period follows that of North America in general. Recent discoveries in the Americas have challenged the theory that the first Americans migrated from Siberia, following a route from the Bering Strait into Canada and the Northwest Coast sometime after the Wisconsin Ice Sheet receded (ca. 14,000 YBP), and before the Bering Land Bridge was submerged (ca. 12,000 YBP). A coastal migration route somewhat before that time is also possible. The timing, manner, and location of this crossing are a matter of debate among archaeologists, but the initial migration probably occurred as the Laurentide Ice Sheet melted along the Alaskan Coast and interior Yukon. The earliest radiocarbon dates from the Paleo-Indian Period in North America come from the Arlington Springs Woman site on Santa Rosa Island. These human remains date to approximately 13,000 YBP (Johnson et al. 2002). Other early Paleo-Indian sites include the Monte Verde Creek site in Chile (Meltzer et al. 1997) and the controversial Meadowcroft Rockshelter in Pennsylvania. Both sites have early levels dated roughly at 12,000 YBP. Life during the Paleo-Indian Period was characterized by highly mobile hunting and gathering. Prey included megafauna such as mammoth and technology included a distinctive flaked stone toolkit that has been identified across much of North America and into Central America. They likely used some plant foods, but the Paleo-Indian toolkit recovered archaeologically does not include many tools that can be identified as designed specifically for plant processing.

The megafauna that appear to have been the focus of Paleo-Indian life went extinct during a warming trend that began approximately 10,000 years ago, and both the extinction and climatic change (which included warmer temperatures in desert valleys and reduced precipitation in mountain areas) were factors in widespread cultural change. Subsistence and social practices continued to be organized around hunting and gathering, but the resource base was expanded to include a wider range of plant and game resources. Technological traditions also became more localized and included tools specifically for the processing of plants and other materials. This constellation of characteristics has been given the name "Archaic" and it was the most enduring of cultural adaptations to the North American environment.

4.1.2 Archaic Period (ca. 11,000-3,500 YBP)

The earliest Archaic Period life in inland southern California has been given the name San Dieguito tradition, after the San Diego area where it was first identified and studied (Warren 1968). Characteristic artifacts include stemmed projectile points, crescents and leaf-shaped knives, which suggest a continued subsistence,

focus on large game, although not megafauna of the earlier Paleo-Indian period. Milling equipment appears in the archaeological record at approximately 7,500 years ago (Moratto 1984:158). Artifact assemblages with this equipment include basin milling stones and unshaped manos, projectile points, flexed burials under cairns, and cogged stones, and have been given the name La Jolla Complex (7,500–3,000 YBP). The transition from San Dieguito life to La Jolla life appears to have been an adaptation to drying of the climate after 8,000 YBP, which may have stimulated movements of desert peoples to the coastal regions, bringing milling stone technology with them. Groups in the coastal regions focused on mollusks, while inland groups relied on wild-seed gathering and acorn collecting.

4.1.3 Late Prehistoric Period (ca. 3,500 YBP-A.D. 1769)

Cultural responses to environmental changes around 4,000–3,000 YBP included a shift to more land-based gathering practices. This period was characterized by the increasing importance of acorn processing, which supplemented the resources from hunting and gathering. Meighan (1954) identified the period after A.D. 1400 as the San Luis Rey complex. San Luis Rey I (A.D. 1400–1750) is associated with bedrock mortars and milling stones, cremations, small triangular projectile points with concave bases and Olivella beads. The San Luis Rey II (A.D. 1750–1850) period is marked by the addition of pottery, red and black pictographs, cremation urns, steatite arrow straighteners and non-aboriginal materials (Meighan 1954:223, Keller and McCarthy 1989:6). Work at Cole Canyon and other sites in southern California suggests that this complex, and the ethnographically described life of the native people of the region, were well established by at least 1,000 YBP (Keller and McCarthy 1989:80).

4.1.4 Ethnographic Context

The Study Area is located along the fringes of territories traditionally affiliated to the Serrano and Gabrielino ethnographic groups at European contact. A brief review of the ethnography of these groups is provided below.

Serrano

Historically, the Study Area also appears to be located within Serrano territory. Altschul et al. (1984) have provided a useful overview of the ethnographic land-use patterns, social organization, and early ethnohistorical interactions in Serrano territory; pertinent aspects of this overview, along with ethnographic information obtained primarily from Strong (1929), Gifford (1918), Kroeber (1925), Bean and Smith (1978), and Harrington (Bean et al. 1981) are presented below.

The Serrano occupied the territory of the San Bernardino Mountains east to Mount San Gorgonio, the San Gabriel Mountains west to Mount San Antonio, and portions of the desert to the north and the fringe of San Bernardino Valley to the south (Kroeber 1925:615-616). Numbering no more than perhaps 1,500 people, the Serrano were scattered over a rugged, expansive landscape. The Serrano's most intensive cultural contacts were with the Pass Cahuilla, who occupied the territory to the southeast, and the Gabrielino, who occupied the lands westward to the Pacific coast.

Serrano clans were politically autonomous, although linked by ceremonial ties to other clans and peoples of other tribal groupings (i.e., the Cahuilla and Gabrielino). Each Serrano clan had a hereditary leader, or *kika*, and an assistant who was a ceremonial leader, or *paha* (Strong 1929:17-18). These individuals were central

to the ritual life of the Serrano, providing leadership during yearly ceremonial periods. Kroeber (1925:617) indicates that villages were generally located where streams emerged from the foothills. Bean et al. (1981:85-86) are considerably more precise in their descriptions of Serrano village and camp locations. Groups of lineages lived in villages at the valley margins in the winter and in smaller encampments at higher elevations in the summer. Proximity to water sources and adequate arrays of resources predictably dictated settlement location choices. Localities rich in oaks, pinyon, yucca, agave, or seasonal migratory fowl, for example, were favored for population convergence at peak "harvest" times. Streamside areas canyon mouths by alluvial fans, and flats near springs or lakes were frequently chosen as prime locations, with avoidance of wind and floods, and adequate defensive position also of considerable concern. Bean et al. (1981:85) note also that individual homes were quite scattered across the landscape in order to ensure privacy, to the extent that some "villages" covered up to five square miles. This clearly has important implications for archaeological interpretations of occupation sites.

Serrano residences were circular, domed, willow-and-tule thatch structures. The home of the *kika* also served as a large ceremonial house, and large, semi-subterranean, earth-covered sweathouses were found immediately adjacent to streams in most villages (Bean and Smith 1978). Subsistence during winter months consisted mostly of reliance on stored foods (acorns, pinyon nuts, mesquite beans) and some fresh meats and greens. In the spring, agave, cacti, greens, and a mix of game provided the bulk of the food resources. Many fruits and seeds became available during the summer months, but perhaps the richest season was autumn when major harvests of acorns, pinyon nuts, mesquite beans, and screwbeans occurred, and when communal rabbit hunts took place in the context of much feasting and ritual activity (Bean et al. 1981:86-87). In addition to occupation sites and food procurement sites, rock cairns ("offering" places along trials), cupule petroglyph sites, hot springs (sacred areas), sources of lithic materials suitable for the production of stone tools and other artifacts, and trails represent important land uses by the Serrano.

Serrano technology was very similar to neighboring cultural groups, particularly the Cahuilla. Bows and arrows were used commonly for the hunting of large game, and curved throwing sticks, traps, snares, and deadfalls were used for obtaining smaller game and birds. Primary food processing utensils included stone knives, stone or bone scrapers, pottery trays and bowls, baskets, horn and bone spoons, and stirrers, as well as mortars (of stone or wood), pestles, manos, and metates. Shells, wood, bone, stone, and plant fibers were used in making a variety of technomic and non-technomic items, including decorated blankets, rabbit skin blankets, awls, arrow straighteners, sinew-backed bows, arrows, fire drills, stone pipes, musical instruments (rattles of turtle or tortoise shell, deer-hoof rattles, wood rasps, bone whistles, bull-roarers, flutes), feathered costumes, mats (for floor and wall coverings), bags and storage pouches, cordage (usually of yucca fiber), and nets (Bean 1962-1972; Benedict 1924; Drucker 1937; Strong 1929).

Gabrielino

The Gabrielino territory included the Los Angeles Basin, the coast of Aliso Creek in Orange County to the south, and Topanga Canyon in the north, the four southern Channel Islands, and watersheds of the Los Angeles, San Gabriel, and Santa Ana Rivers. Their name is derived from their association with Mission San Gabriel (Bean and Smith 1978). The Gabrielino were not the first inhabitants of the Los Angeles Basin, but arrived around 500 B.C. The language of the Gabrielino people has been identified as a Cupan language within the Takic family, which is part of the larger Uto-Aztecan language family. Uto-Aztecan speakers arrived in southern California in what is known as the Shoshonean migration, which current archaeological and linguistic evidence suggests originated in the Great Basin and displaced the already established Hokan

speakers. The Gabrielino were advanced in their culture, social organization, religious beliefs, and art and material production. Class differentiation, inherited chieftainship, and intervillage alliances were all components of Gabrielino society. At the time of European contact, the Gabrielino were actively involved in trade using shell and beads as currency. The Gabrielino were known for excellent artisanship in the form of pipes, ornaments, cooking implements, inlay work, and basketry. The Gabrielinos evolved an effective economic system which managed food reserves (storage and processing), exchanged goods, and disturbed resources. Data collected and presented by Kroeber (1925) indicate that homes were made of tule mats on a framework of poles, but size and shape have not been recorded. Basketry and steatite vessels were used rather than ceramics; ceramics became common only toward the end of the mission period in the nineteenth century. The Gabrielino held some practices in common with other neighboring groups in southern California, such as the use of jimsonweed in ceremonies as did the Luiseño and Juaneño, but details of the practices and the nature of cultural interaction between the Gabrielino and other groups in southern California are currently unknown.

4.2 HISTORIC CONTEXT

4.2.1 Development of the Cucamonga Valley

The Cucamonga Valley has a long history of settlement due in part to its landscape of plentiful small streams and open grasslands. Although Spain had claimed California as part of their colony since the sixteenth century, the first Spaniard to travel to the area of the site was Pedro Fages in 1772. Spanish soldiers and missionaries continued to travel through the area on their way to visit various missions and outposts in the vicinity. In the beginning of the nineteenth century, some Spaniards who had worked at the missions began to set up what would later be known as the "Ranchos." The Rancho era in California history was a period when much of the prime agricultural land in the state was divided into large parcels equaling thousands of acres apiece. These large estates were ruled over in a semi-feudal manner by men who had been deeded the land by first the Spanish crown, and later the Mexican government. In 1821, Mexico won independence from Spain and began to dismantle the mission system in California. As the missions began to secularize, they were transformed into small towns. It was during this time that "Americans" began to enter California. Many of the American Californians married into the Rancho families, a development that would transform land ownership in Mexican California.

The early history of the area surrounding the Study Area was centered on growing vineyards and producing wine. The Cucamonga Valley wine growing area includes parts of Rancho Cucamonga, Rialto, Fontana, and Ontario. In Rancho Cucamonga, located just west of the Study Area, Tiburco Tapia planted the first vineyard in the area in 1839. Tapia was deeded the property from the Mexican Governor Juan Batista Alvarado and the original adobe is still extant housing the Joseph Filippi Winery. The winery is the oldest in the state still in use.[5] In 1871, leading Los Angeles banker Isias W. Hellman with two partners bought five thousand acres of Rancho Cucamonga producing the famed "angelica" wine and his vineyards were the largest in the state for many years. When the railroad arrived forty years later, others began planting vineyards in the sandy soils just below the Cajon Pass, where water was plentiful. Many smaller vineyards created irrigation districts where irrigation troughs would run through multiple properties and water rights were shared collectively. Furthermore, Italian immigrant Secondo Guasti, on a trip to the Cucamonga Valley noticed that water flowed from the San Gabriel Mountains and ended suddenly at the Cucamonga Desert. Guasti believed

[5] *Wine Country California, (Menlo Park: Lane Publishing Company) 1987, 173.*

that the water must be beneath the desert ground and he dug down to discover the water was there, roughly 25 feet below the surface. Guasti purchased eight square miles of the Cucamonga desert and planted it with over 100 varieties of grapes. Guasti built the city of "Guasti" and hired whole families from wine growing regions of Italy to work his vineyards.[6] Between the late nineteenth century and the end of prohibition, the Cucamonga Valley was the largest wine growing region in the country with over 20,000 acres of vineyards planted, making it larger than Napa and Sonoma Counties combined. In the 1940s, the Cucamonga Valley had 60 wineries and over 35,000 acres of vine. Other historically important wine growing companies in the Cucamonga Valley during the late nineteenth and early twentieth century included the J. Filippi Vintage Company, Galleano Winery and Thomas Vineyards.

Today, most of the vineyard acreage has been lost to industrial and residential development and the urban expansion of nearby Los Angeles and Orange Counties. Today, less than 1,000 vineyard acres remain. The loss of vineyard land continues and some of the nation's oldest vines are threatened. While Cucamonga Valley was largely know for making inexpensive sweet fortified wines, many of the remaining wineries produce red wines, derived mainly from old vines including Alicante Bouschet, Carignane, Cinsault, Grenache, Mission, Mourvedre and Zinfandel.

The Study Area is not located in a former Rancho, and therefore, was first populated by homesteaders during the last two decades of the nineteenth century. Several of the first homesteaders appeared to be originally associated with the Mormon Colony located in the current area of San Bernardino.[7] The Study Area was located just southwest of Grapeland, which was a once a small town created in the 1890s centered on grape-growing and wine-making. The Grapeland Irrigation District was designed around a system of internal canals for the transfer of irrigation water from Lytle Creek. Based on historic maps, there were around 16 farms located in the Grapeland and within the Study Area. By the mid 1890s, the entire Study Area was part of the Grapeland Irrigation District and was irrigated through the canal system originating in Lytle Creek. The Grapeland Irrigation District lost its water rights in 1900, and the town was abandoned[8]. None of the early farms once located in the Study Area are extant. However, it is likely that the land was continuously used for viticulture.

Assessor record research previously conducted for CA-SBR-7324H in the Study Area (5916 San Savaine Road; parcel 226-121-7) shows that the property was first assessed in 1915 ($400) while under the ownership of Frank R. Roe, who owned the property up until at least 1942. Trees and vines were first assessed on the property in 1918 ($150), and improvements were first assessed the following year in 1919 ($125). Land assessments increased to $600 in 1923, decreased to $480 in 1933, increased to $720 in 1936. Assessments for vines increased until the late twenties ($750), declined during the early 30s (1930: $500, 1932: $400, 1933:$32), increased in the late thirties (1936, 1937: $480), and decreased in the early 1940s ($210). Assessments for improvements were stable at $120-$125 but doubled to $300 in 1931, and increased to $450 from 1936 to 1942 (McKenna 1995).

It appears that at least part of the Study Area might have been part of or directly adjacent to the existing Jose Lopez Vineyard. The Jose Lopez Vineyard was planted in 1918 for "packing grapes" to ship to home winemakers in Chicago and the east. These old Zinfandel vines grow in under harsh conditions; with rocky-

[6] *Leon D. Adams, The Wines of America, (New York: McGraw-Hill) 1985, 399.*

[7] *Jeanette A. Mckenna, A Cultural Resources Reconnaissance Survey of the Westgate Property In the City of Fontana, 1995, 7.*

[8] *Ibid, 8.*

sandy soil that holds very little water. After nine decades, they have only grown to about 18 inches tall, and have just a few tiny fist-sized clusters on each vine. Don Galleano's of Galleano Winery manages the land and in 2004 had the vineyard organically certified under the CCOF. The Old Vine Zinfandel grapes from the Lopez Vineyard currently are used to make Carol Shelton's award winning Monga Zin.[9]

[9] *http://www.carolshelton.com/2008-monga-zin (accessed July 26, 2012).*

5.0 METHODS

5.1 CULTURAL RESOURCES RECORDS SEARCH

On April 18, 2012, PCR archaeologist, Mr. Matthew Gonzalez, conducted a cultural resource records search at the CHRIS-SBAIC at the SBCM in Redlands, California. The records search included a review of all recorded historical resources and archaeological sites within a half-mile radius of the Study Area as well as a review of cultural resource reports and historic topographic maps on file. In addition, PCR reviewed the California Points of Historical Interest (CPHI), the California Historical Landmarks (CHL), the California Register of Historical Resources (California Register), the National Register of Historic Places (National Register), and the California State Historic Resources Inventory (HRI) listings. The purpose of the records search is to determine whether or not there are previously recorded archaeological or historical resources within the Study Area that require evaluation and inclusion in the impact analysis. The results also provide a basis for assessing the sensitivity of the Study Area for additional and buried resources.

5.1.1 Additional Methods for Historical Resources

The historical resources investigation included records searches and review of local histories to determine: (i) if known historical resources have previously been recorded within a half-mile radius of the Study Area (ii) if the Study Area has been systematically surveyed by historians prior to the initiation of the study; and/or (iii) whether there is other information that would indicate whether or not the Study Area is historically sensitive or whether potential projects within the Study Area might pose indirect impacts to adjacent historic resources. PCR also consulted the CPHI, CHL, California Register, National Register, California and HRI listings to determine previously identified historical resources within a half-mile radius of the Study Area.

5.2 SACRED LANDS FILE SEARCH AND SB 18 NATIVE AMERICAN CONSULTATION

On May 23, 2012, Mr. Gonzalez commissioned a SLF records search and requested a Senate Bill (SB) 18 consultation list from the NAHC. On June 18, 2012, PCR subsequently initiated SB 18 consultation with the Native American groups identified by the NAHC as having affiliation with the project vicinity on behalf of and in coordination with the City. Initial consultation was in the form of a "request to consult" letter sent via certified mail that indicated the Study Area, briefly described the nature of the Plan, and provided contact information for personnel at the City for consultation inquiries. Results of the SLF search will provide information as to the nature and location of additional prehistoric or Native American resources to be incorporated in the impact analysis whose records may not be available at the CHRIS-SBAIC. The SB 18 consultation will provide the Native American community an opportunity to express their comments on the Plan to the City.

5.3 PALEONTOLOGICAL RESOURCES RECORDS SEARCH

On April 23, 2012, PCR commissioned a paleontological resources records search of the Vertebrate Paleontology files from the SBCM. This records search entailed an examination of current geologic maps and known fossil localities inside and within the general vicinity of the Study Area. The purpose of the records

search is to determine whether or not there are previously recorded paleontological resources or fossiliferous geologic formations within the Study Area that require evaluation and inclusion in the impacts analysis. The results also provide a basis for assessing the sensitivity of the Study Area for additional and buried resources.

5.4 PEDESTRIAN SURVEY

On May 15, 2012, Mr. Gonzalez conducted a spot-check pedestrian survey of the Study Area to examine the existing conditions. A full coverage archaeological and paleontological survey was not conducted recognizing that subsequent more focused environmental review, including full-coverage surveys, would occur as future project-specific development proposals are initiated under the Plan. In addition, PCR revisited known resources within the Study Area to examine their current condition and content. For areas that were surveyed, the ground surface was examined for archaeological and paleontological resources. A Trimble® GeoXT™ sub-meter Global Positioning System (GPS) unit was used for navigation and documenting distribution of Study Area conditions. Detailed notes and digital photographs were also taken of the Study Area and surrounding vicinity.

In July 2011 and June 12, 2012, Mr. Jon Wilson surveyed the Study Area for potential historical resources, which might include historic buildings and infrastructure, cultural landscapes, and historic agricultural landscapes. Mr. Wilson revisited known historical resources within the Study Area to examine their current condition and content.

6.0 RESULTS

6.1 CULTURAL RESOURCES RECORDS SEARCH

Results of the cultural resources records search indicate that 25 cultural resource studies have been conducted within a one-half mile radius of the Study Area. These studies were conducted from 1990 to 2010 and collectively encompass approximately 35 percent of the one-half mile radius. According to the records search results, approximately 20 percent of the Study Area has been previously surveyed by an archaeologist. Of the 25 studies, seven encompass approximately 20 percent of the Study Area. These studies included a monitoring report and six phase I cultural resource assessments.

According to records obtained from the CHRIS-SBAIC, no prehistoric archaeological resources and four historic period resources have been previously recorded within the Study Area while one historic period resource has been recorded adjacent to the southern boundary of the Study Area. No prehistoric archaeological resources and 23 historic period resources have been recorded within a half-mile radius of the Study Area. The resources that were recorded within the Study Area and immediate vicinity are summarized in **Table 1**, *Cultural Resources Located within or in the Immediate Vicinity of the Study Area*. These resources include historic period resources such as buildings, water transportation features, water storage features, historic roads, and railroads that date to the late 19th century and early 20th century. The density of historic period resources is higher just outside the one-half mile records search radius where numerous historic districts are located. There are also numerous prehistoric archaeological resources located in the foothills and mountain areas to the north and south of the one-half mile search radius. The five resources (CA-SBR-6901H, CA-SBR-7324H, CA-SBR-9368H, P-36-15,497, P-36-20,137) that have been recorded within the Study Area and immediate vicinity are described in detail below and are shown on **Figure 4**, *Resources Map*.[10]

CA-SBR-6901H

CA-SBR-6901H is described as a trapezoidal ditch with cement walls and a large aggregate concrete base. The ditch runs east-west adjacent to and north of Summit Avenue, east of Lytle Creek Road, from at least the Hawker Crawford extending approximately one-mile to about the San Sevain Basins. Based on review of historical maps, aerial photography, and construction technology, the ditch is estimated to date to the first half of the twentieth century (Sutton 1991).

CA-SBR-7342H

CA-SBR-7324H is described as a farmstead located on the west side of San Sevaine Road, north of Highland Avenue, and just south of Summit Avenue. The resource consists of a farmhouse, a garage, a shed, vineyard, trucks, and many other associated features and artifacts. The property appears on a 1938 aerial photograph dating the property to at least the early 1900's (Sutton 1992). Trees and vines were first assessed on the property in 1918, and improvements were first recorded the following year (McKenna et al. 1995).

[10] *Future pedestrian surveys will also be required to identify if any additional previously unknown resources are located within the Study Area.*

Table 1

Cultural Resources Located Within or In the Immediate Vicinity of the Study Area

Resource Designation	Description	Location*
P-1072-8H	Farmstead complex including a house, barn, sheds, and corrals	100 meters north of the Study Area
CA-SBR-6901H	Water transportation feature (concrete ditch)	Within Study Area
CA-SBR-7324H	Farmstead complex including a farmhouse, garage, shed, landscaped vegetation, trucks, and other associated artifacts and features.	Within Study Area
CA-SBR-7325H	Residential/Commercial site including several structural foundations, small cobblestone reservoir (fish pond?), driveway with cobble-concrete pillars, a rock alignment, tree ladder, landscape vegetation, and sparse scatter of artifacts	300 meters eat of Study Area
CA-SBR-9367H	Reservoir and linear feature (aqueduct?), both made of granite river cobble and concrete mortar	300 meters east of Study Area
CA-SBR-9368H	Residential-sized reservoir made of granite river cobble and concrete mortar	Within Study Area
CA-SBR-9369H	Two residential structural foundations	150 meters east of Study Area
CA-SBR-9370H	Rectangular tree line with a few concrete and granite river cobble wall remnants	100 meters south of Study Area
P-36-14190	Large, square reservoir with rounded corners	375 meters east of Study Area
P-36-15497/ CPHI-012	Baseline Road	Outside but Adjacent to Study Area
P-36-20137	3.25-mile single track section of the overall 22-mile Pacific Electric San Bernardino Line	Within Study Area
P-36-20148	Homestead including a single family property, detached garage, laundry room, two sheds, and animal pens	225 meters east of Study Area

* *Location of resource relative to the Study Area*

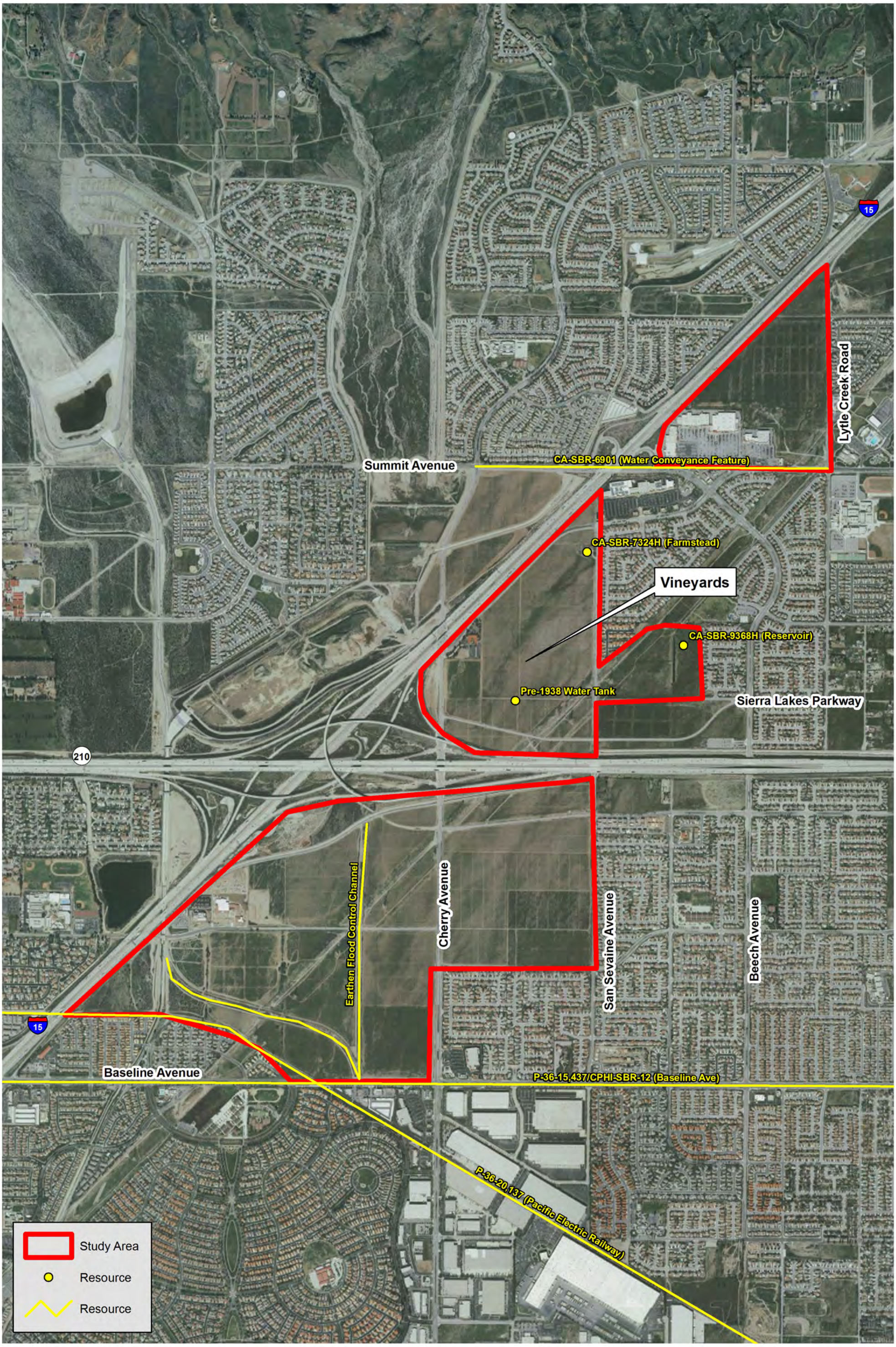
Source: PCR Services Corporation and CHRIS-SBAIC, 2012

CA-SBR-9368H

CA-SBR-9368H is described as a residential-sized reservoir located just south of Curtis Road (dirt extension). The reservoir is of pre-1900 construction style and made of granite river cobbles and finished concrete mortar (Shepard 1996).

P-36-15,497 (CPHI-SBR-12)

P-36-15,497 (CPHI-SBR-12) is Baseline Avenue, which is a street running parallel to and between Highland Avenue and Foothill Boulevard extending from Highland in San Bernardino County to as far west as Azusa in Los Angeles County. It is located outside of the Study Area but adjacent to its southern boundary. The highway was constructed on the Southern California Base Line (which later became known as the San



PCR

Resources Map

Westgate Specific Plan

Source: Aerial Express, 2010; PCR Services Corporation, 2012.

FIGURE

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Bernardino Base Line) that was surveyed by Col. Henry Washington in 1853. A monument was erected on the summit of Mount San Bernardino, and a line was laid out going east to west from this point. This line became the basis for land titles being established by California courts (Kaiser 1973). The history of this resource is described in greater detail in Chapter 7 of this report.

P-36-20,137

P-36-20,137 is described as a 3.25-mile single track section of the Pacific Electric Railway San Bernardino Line (22 miles overall). This portion of the line lies between Haven Avenue on the west to a point 1,320 feet east of Etiwanda Avenue and was opened in 1914. Currently, all the rails and ties have been removed from the rail-bed with the exception of those rails which cross Rochester and Haven Avenues (White 2004).

Historic Map Review

Other than the resources mentioned above, no resources listed in the CPHI, CHL, California Register, National Register, or the HRI, were identified within the Study Area. Review of the San Bernardino and Ontario, CA USGS 15-minute topographic quadrangle map from 1954 revealed that there are areas of heavy development within the one-half mile radius and surrounding vicinity when the maps were published. These findings reveal the presence of historic occupation within the immediate area beginning in the early to mid 1900s.

Other Resources – Hippard Ranch

Record search results indicate that one potentially eligible historic resource located is located approximately one-half mile west of the Study Area. The Hippard Ranch property located at 13181 Victoria Street in Rancho Cucamonga and was designed by Berkeley California Architect, Carr Jones, who is significant in architectural history for his regional variation of the Craftsman Style. The residence is his only southern California project and was constructed largely with materials found on the site. The stone residence has thick arroyo stone walls and thick wood posts. The residence is associated with the surrounding vineyard. The Rancho Cucamonga Historic Preservation Commission surveyed the property in 1987 and determined the property eligible for local listing. The Hippard Ranch is on the west side of I-15 and is not visible from the Study Area and therefore will not be impacted by the Plan.

6.2 SACRED LANDS FILE SEARCH AND SB 18 NATIVE AMERICAN CONSULTATION

Results of the SLF search through the NAHC *did not* indicate any known Native American cultural resources from the NAHC archives within the Study Area. In compliance with SB 18 and on behalf of the City, PCR submitted follow-up "request to consult" letters via certified mail on June 18, 2012 to the seven (7) Native American individuals and organizations (including Serrano and Gabrielino contacts) identified by the NAHC as being affiliated with the vicinity of the Study Area to request any additional information or concerns they may have about Native American cultural resources that may be affected by the Plan.

As of July 25, 2012, PCR has received no responses from the Native American community. PCR will keep the City apprised with this ongoing Native American consultation. The NAHC SLF records search results letter, the Native American contact list, and other Native American consultation documentation is provided in Appendix B of this report.

6.3 PALEONTOLOGICAL RESOURCES RECORDS SEARCH

Review of records and geologic maps at the SBCM indicate that the Study Area and its immediate vicinity have no history of fossil resources largely because the majority of the Study Area consists of Holocene and possibly late Pleistocene fan alluvium, including deposits derived from Etiwanda and Lytle Creeks. The remainder of the Study Area consists of boulder gravel, which is not conducive to retaining paleontological resources (Scott 2012). However, according to Scott (2012), these sediments may overlie older Pleistocene alluvium that may have high potential to yield significant fossil remains. Fossils recovered from these older Pleistocene sediments have included mammoths, mastodons, ground sloths, dire wolves, saber-toothed cats, large and small horses, large and small camels, and bison. In particular, SBCM 5.1.13 was encountered approximately one-half mile west of the Study Area that produced possible fossil remains of wood rat and pocket gopher. SBCM 5.1.8 is the nearest "*bone fide*" paleontological resource from older Pleistocene sediments that is located approximately 10 miles southwest of the Study Area that produced fossil mammoth remains at about 20 feet below the surface (Scott 2012). The paleontological resources records search results letter is provided in Appendix C of this report.

6.4 PEDESTRIAN SURVEY

No archaeological or paleontological resources were encountered during the spot-check survey. A full coverage archaeological and paleontological survey was not conducted recognizing that subsequent more focused environmental review, including full-coverage surveys, would occur as future project-specific development proposals are initiated under the Plan.

PCR attempted to revisit the four known historic resources (CA-SBR-6901H, CA-SBR-7324H, CA-SBR-9368H, and P-36-20,137) within the Study Area and one known historic resource adjacent to the Study Area (P-36-15,497) and discovered that all of the resources except one (Baseline Avenue, P-36-15,497/CPHI-SBR-12) have been destroyed, removed, and/or built over (**Figure 5**, *Study Area Photographs*). The majority of the Study Area has been disturbed by modern development (i.e. paved roads, residential development, commercial uses, etc.) and recent disking and plowing associated with past and current agricultural activities (**Figure 6**, *Study Area Photographs*). The ground surface visibility varied from zero to 100 percent throughout the Study Area (see Figures 3 through 7).

During the survey, three new historic period resources were identified that have not been formally recorded. These resources included an abandoned water tank, an earthen flood control channel, and the existing vineyards (see Figure 4 and **Figure 7**, *Study Area Photographs*). The resources are described in detail, below.

6.4.1 Water Tank

The water tank is located in the central portion of the Study Area in the center of the vineyards parcel bounded on the south by N. Frontage Road, on the east by San Sevaine Road, on the west by Cherry Avenue and on the north by E. Summit Avenue. The water tank measures approximately 40 feet in diameter and 20 feet high with 8-inch thick concrete walls. Approximately 10 to 15 feet of the tank walls are sub-grade. Much of the tank floor is obstructed by scattered debris and the interior walls are cracked in many locations and exhibit modern graffiti throughout (see Figure 7). This suggests that the water tank has not been in operation for several years. It is likely that the tank once had a roof or cover that no longer exists today. A water tank is depicted on an aerial photograph from 1938 in the same location which suggests that the

Overview of former location of CA-SBR-6901H.

Overview of former location of CA-SBR-7324H.

Overview of Study Area along south boundary showing P-36-15,497 (Baseline Avenue), view west.

Overview of former location of P-36-20,137 in southern portion of Study Area, view northwest.

P C R

Study Area Photographs

Westgate Specific Plan
Source: PCR Services Corporation, 2012.

FIGURE
5

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Overview of Study Area, view northeast.

Overview of Study Area, view northeast.

PCR

Study Area Photographs

Westgate Specific Plan
Source: PCR Services Corporation, 2012.

FIGURE
6

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Overview of Water Tank, view east.

Close-up of Water Tank, view west.

Overview of Earthen Flood Control Channel, view north.

Overview of Vineyards.

P C R

Study Area Photographs

Westgate Specific Plan
Source: PCR Services Corporation, 2012.

FIGURE
7

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current tank was constructed prior to this date.[11] It is likely that the water tank was associated with a water system and that once supported cultivation of the vineyards in this area.

6.4.2 Earthen Flood Control Channel

An open earthen channel was identified along the southerly portion of the Study Area that formerly collected storm flows prior to the completion of the dual concrete channels and the Highland channel immediately to the west. The duel concrete channel is operated by the County of San Bernardino Flood Control District and collects seasonal storm flows from the Etiwanda and San Sevaine Creeks to the north. Based on review of historical aerial photographs and topographic maps, the earthen channel was constructed between 1974 and 1980[12] and it has not been utilized for flood control since the construction of the County's duel concrete channel. The earthen channel is currently overgrown with vegetation and measures from 50 to 100 feet wide and traverses approximately 1.5 miles across the southern portion of the Study Area.

6.4.3 Vineyards

Based on historical research and the apparent age and location of the existing vineyards in the Study Area, it appears the vineyards may be part of the Jose Lopez Vineyard, planted in 1918, and an adjacent farmstead (CA-SBR-7324H) owned by Frank R. Roe who also cultivated grape vines (see discussion in Chapter 4.2 of this report). Assessor records indicate grape vines continued to be cultivated within the Study Area through the 1940s. Survey and research results indicate the vineyards continued in cultivation through the twentieth century to today. Therefore, the existing vineyards and associated water tank, water system and former farmstead site (CA-SBR-7324H) may meet the significance threshold as a historically significant agricultural resource or cultural landscape, and may also contribute to a potential cultural landscape district of historic vineyards in the area.

6.4.4 Conclusion

While much of the Study Area remained planted with vineyards as it historically was, the associated farm buildings and infrastructure were largely removed. Other than the resources mentioned above, PCR found no extant farm buildings and limited farm infrastructure.

[11] *Historicaerials.com; 1938 Aerial Photograph*

[12] *Historicalaerials.com; 1974 Aerial Photograph, 1980 USGS 7.5' Topographical Quadrangle Map, Fontana, California*

7.0 ELIGIBILITY EVALUATION

7.1 APPROACH

Evaluation of cultural resources is determined by conducting an "evaluation" of a resource's eligibility for listing in the California Register; determining whether it qualifies as a "unique archaeological resource"; and determining whether the resource retains integrity. This is achieved by applying the California Register criteria (including criteria for a "unique archaeological resource") to the resources set out in the Regulatory Setting section of this report (see Chapter 2).

7.2 DESCRIPTION OF RESOURCES WITHIN STUDY AREA AND IMMEDIATE VICINITY

PCR identified three resources within the Study Area and one resource adjacent to the Study Area that may potentially be impacted by the Plan. These resources include three built-environment historical resources (P-36-15,497/CPHI-SBR-12 - Baseline Avenue; the water tank; and the earthen flood control channel) and one rural agricultural resource (the early 20th century vineyards). The earthen flood control channel can be ruled out as a potentially eligible resource because it was built between 1974 and 1980[13] and therefore does not meet the 45-year age threshold to be considered an eligible resource.

The water tank meets the age threshold to be considered an eligible resource; however, the structure does not meet any of the significance thresholds to be considered a potential individual historic resource on the California Register. However, the water tank may be a contributor to a potentially eligible agricultural landscape due to its use as a likely water source for cultivation of the early 20th century vineyards, as discussed below

7.2.1 Early Twentieth-Century Vineyards

Based on historical research and the apparent age and location of the existing vineyard in the north portion of the Study Area, it appears the vineyard may be part of the Jose Lopez Vineyard, planted in 1918, and an adjacent farmstead (CA-SBR-7324H) owned by Frank R. Roe who also cultivated grape vines (see discussion in Chapter 4.2 of this report). Assessor records indicate grape vines continued to be cultivated within the Study Area through the 1940s. Survey and research results indicate the vineyards continued in cultivation through the twentieth century to today. The vineyards, water tank, agricultural water system and former farmstead site (CA-SBR-7324H) in the Study Area are physically and historically associated components and may be contributing features of a potential historic agricultural landscape.

7.2.1.1 Application of California Register Criteria

The identified historic agricultural landscape and its component features are conservatively considered eligible as a historical resource, pursuant to CEQA 15064.5. The period of significance for the historic agricultural resource is from 1918 when grape vine cultivation is first recorded in the Study Area through 1964, the 50-year age threshold for listing in the National Register. Historic vineyards are rapidly becoming

[13] *Historicalaerials.com; 1974 Aerial Photograph, 1980 USGS 7.5' Topographical Quadrangle Map, Fontana, California*

a rare property type in the Cucamonga Valley. For the purposes of this investigation, the historic agricultural landscape is conservatively considered eligible under California Register Criterion 1 for its association with the early twentieth-century development of viticulture in the Cucamonga Valley wine growing area, and is assigned a California Historical Resources Status Code of "3CB," appears eligible for listing in the California Register as an individual resource and as a contributor to a California Register eligible district of historic vineyards in the area through a survey evaluation.

7.2.2 Baseline Avenue (P-36-15,497/CPHI-SBR-12)

Baseline Avenue (P-36-15,497/CPHI-SBR-12) is located outside but immediately adjacent to the southern boundary of the Study Area. It is a paved road that was constructed on the original Southern California Base Line (which later became known as the San Bernardino Base Line) that traverses east-west from the Initial Point marker that was established by Col. Henry Washington in 1853 near the summit of Mount San Bernardino. A monument currently exists at the original location of the Initial Point marker near the summit of Mount San Bernardino approximately 23 miles east of the Study Area. In 1853, several years after California became the 31st state, a line was laid out going east to west, known today as the San Bernardino Base Line, and north to south, known today as the San Bernardino Meridian, from this point. These lines became the basis for delineating the new state into a grid system of townships, ranges, and sections. According to Holt (1960):

> *By running guide meridians and standard parallels at intervals of approximately twenty-four miles, an enormous checkerboard of imaginary lines would be superimposed over the state. Each of these squares would then be subdivided into sixteen six-mile-square townships and the townships, in turn, divided into thirty-six one-mile sections, each of which contained 640 acres. Until this could be accomplished, the purchase of land and the assurance of title was risky. (Holt 1960:30)*

As noted by Holt, this grid system would be utilized to determine boundaries of land titles (including the early California Ranchos) that were being established by the courts in early California.

In 1856, Captain Jefferson Hunt, an early Mormon pioneer from San Bernardino, recognized the economic benefits of establishing a more direct route to Los Angeles from San Bernardino. Specifically, Hunt recognized that his wagon freighting business would benefit by supplying wheat, flour, and lumber to the growing population of Los Angeles more efficiently with a more direct route. Prior to the 1850s, the area below the foothills of the San Gabriel Mountains was covered with a dense and impenetrable growth of chaparral. As a result, early travelers, including Hunt's wagons, would choose between a northern and southern route that were both time-consuming. Soon thereafter, Hunt had a road built (that is currently known as Baseline Avenue) as far as Cucamonga where it joined an existing road. Other pioneers of the San Bernardino Valley, including Joseph Hancock, John Mayfield, and the seven Bemis brothers, participated in the project. The road became less popular after the arrival of the Southern Pacific Railroad in 1874 (Haenszel 1979).

The segment of Baseline Avenue adjacent to the southern boundary of the Study Area currently exists as a paved six-lane public right-of-way with shoulders, pedestrian sidewalks, and a landscaped center median. No remnants of the original road that was built by Hunt in the 1850s exists today.

7.2.2.1 Application of California Register Criteria

Baseline Avenue (P-36-15,497) was designated as a CPHI in 1973 (as CPHI-SBR-12, see Kaiser 1973) and is recommended as eligible for listing in the California Register under Criterion 1 for its association with early California land use decisions and property rights that are still in effect today. Baseline Avenue is also recommended as eligible for listing under Criterion 2 for its association with Captain Jefferson Hunt, an early Mormon pioneer who contributed to the early development of the San Bernardino Valley in the 1850s and who played a pivotal role in the development of the original road. As a result, Baseline Avenue is considered a "historical resource" pursuant to CEQA.

Baseline Avenue is not recommended eligible for Criterion 3 and 4 since the original road does not exist today and therefore the resource does not embody the distinctive characteristics of a type, period, or method of construction nor does it yield or have the potential to yield information important to history or prehistory.

8.0 IMPACT ANALYSIS

8.1 CEQA SIGNIFICANE THRESHOLDS

The current CEQA Guidelines state that a project will have a significant impact on the environment if it causes a substantial adverse change to a historical resource[14] or damage to a "unique archaeological resource." A substantial adverse change is caused when one or more of the following occurs:

- Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.

- The significance of a historical resource is materially impaired when a project:

  a. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or

  b. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Code or its identification in a historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

  c. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

The *Secretary of the Interior's Standards for Rehabilitation* (Standards) are codified at 36 Code of Federal Regulations (CFR) Section 67.7. In most circumstances, the Standards are relevant in assessing whether there is a substantial adverse change under CEQA. Section 15064.5b(3) of the CEQA Guidelines states in part that ". . . a project that follows the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* or the *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (1995), Weeks and Grimmer, shall be considered as mitigated to a level of less than a significant impact on the historic resource," and therefore may be considered categorically exempt.

[14] *A historical resources can be an archaeological object, site or district that is listed in or determined eligible for the California Register*

8.2 POTENTIAL IMPACTS

8.2.1 Archaeological Resources

Results of the cultural resources records search indicated that there are no recorded archaeological resources within the Study Area. PCR performed a limited-coverage pedestrian survey of the Study Area and did not identify any previously unrecorded archaeological resources. Before an adequate project-level impact analysis can be performed, new comprehensive pedestrian surveys that examine the entirety of the Study Area will be required to identify any previously unknown archaeological resources and to determine whether there is enough potential to encounter a buried historic archaeological deposit at the former location of CA-SBR-7324H that would warrant subsurface test excavations to identify its nature and extent. These recommendations are included as mitigation measures that are provided in the following chapter.

The Plan could potentially include significant ground-disturbing activities and could therefore have a significant impact on both existing and unidentified archaeological resources within the Study Area. Relatively limited surface grading would be needed for parking lots, parks, and other improvements requiring low-intensity construction. For the majority of improvements and development, however, such as residential and commercial development, schools, and their associated utilities, deeper and more extensive ground disturbance would be required for construction.

Components of the Plan that do not require excavation activities such as grading, trenching, or boring will result in no impacts to archaeological resources and therefore no additional analyses or mitigation is necessary. These projects would include areas where an existing grade will be utilized or raised to a higher grade. Other Plan components that include excavations into heavily disturbed soils or fill would also result in no impact to archaeological resources as resources have likely been displaced from previous disturbances and there is nearly no potential to encounter resources in fill soils.

However, all components of the Plan that include excavations into native soils will require additional analyses to identify any potential impacts to archaeological resources. The results of the cultural resources records search through the CHRIS-SBAIC revealed that there are numerous archaeological resources located outside the Study Area but within the foothills and mountain areas to the north and south of the one-half mile search radius. These findings confirm prehistoric occupation in the vicinity of the project and suggest that prehistoric archaeological resource may exist within the Study Area on the surface or subsurface.

Given the positive results of the records search, the Plan has a moderate potential to impact archaeological resources. Future archaeological sensitivity assessments will be performed on a project-by-project basis and will take into account previous land use/disturbances, project impacts (direct and indirect), and location of known resources in the vicinity.

8.2.2 Historical Resources

Results of the cultural resources records search and the pedestrian survey indicated that the nearest recorded historic resource is the Hippard Ranch, which is located approximately one-half mile west of the Study Area. The Rancho Cucamonga Historic Preservation Commission surveyed the property in 1987 and determined the property eligible for local listing. The Hippard Ranch is on the west side of I-15 and is not

visible from the Study Area and therefore indirect impacts to the historic resource from any proposed project associated with the Plan is highly unlikely.

Baseline Avenue (P-36-15,497/CPHI-SBR-12) is located outside but immediately adjacent to the southern boundary of the Study Area and currently exists as a paved six-lane public right-of-way with shoulders, pedestrian sidewalks, and a landscaped center median. No remnants of the original road that was built by Hunt in the 1850s exists today. The Plan will not cause a substantial adverse change to the significance of Baseline Avenue since it is located outside the Study Area and; therefore, will not be directly impacted by any future development. In addition, the setting of Baseline Avenue has already been altered by existing residential and commercial uses in the area; therefore, no indirect impacts associated with the Plan will occur.

Based on historical research and the apparent age and location of the existing vineyards in the Study Area, it appears the vineyards may be part of the Jose Lopez Vineyard, planted in 1918, and an adjacent farmstead (CA-SBR-7324H) owned by Frank R. Roe who also cultivated grape vines. The vineyards and associated water tank, water system and a former farmstead site (CA-SBR-7324H) are physically and historically associated components and may be contributing features of a potential cultural landscape. Therefore, the existing vineyard may meet the significance threshold as a historically significant agricultural resource or cultural landscape. Potentially significant impacts may occur as a result of the Project. Mitigation measures are provided in the following chapter.

8.2.3 Paleontological Resources

Results of the paleontological resources records search through the SBCM indicated that there are no recorded fossil localities within the Study Area or within the surrounding vicinity. The nearest paleontological resource from older Pleistocene sediments is located approximately 10 miles southwest of the Study Area. It is unlikely that shallow excavations associated with the Plan will encounter these fossiliferous paleontological deposits. However, there is a moderate to high potential to encounter these deposits during deeper excavations. As a result, mitigation measures are recommended in the following chapter to reduce impacts to paleontological resources encountered during construction to a less than significant level.

9.0 RECOMMENDED MITIGATION

PCR recommends these measures to identify and mitigate impacts to cultural and paleontological resources. It is recommended that subsequent more focused environmental review shall occur which may result in more specific mitigation.

9.1 ARCHAEOLOGICAL RESOURCES

For the proposed areas of the Plan that require future excavation activity (e.g. grading, trenching or boring) into native soil, the following mitigation measures are recommended:

CULT-1: The City shall conduct a Phase I Cultural Resources Assessment of the Project to identify any archaeological resources within the area of a proposed project component. The Phase I assessment shall include cultural resources records searches through the San Bernardino Archaeological Information Center (as needed), a Sacred Lands File search through the Native American Heritage Commission and follow-up Native American consultation (as needed), and a comprehensive pedestrian survey of the Study Area. As part of this assessment, the City shall also determine whether there is enough potential to encounter a buried historic archaeological deposit at the former location of CA-SBR-7324H that would warrant subsurface test excavations to identify its nature and extent.

- If resources are identified during the Phase I assessment, then a Phase II assessment shall be required, as described in CULT-2.

- If no resources are identified as part of the assessment, no further analyses or mitigation shall be warranted, unless it can be determined that the project has a high potential to encounter buried archaeological resources. This discussion will be included in a technical report and the Cultural Resources Initial Study or EIR Section.

- If it is determined that there is a moderate or high potential to encounter buried archaeological resources, appropriate mitigation shall be developed and implemented. Appropriate mitigation may include, redesign of the proposed project to avoid the sensitive area, in which case no additional mitigation would be required. If avoidance is not possible, appropriate mitigation may include but not be limited to the following:

Archaeological Monitoring During Construction: A qualified archaeologist shall be retained by the City prior to the commencement of the Project. The archaeologist shall monitor all ground-disturbing activities and excavations within the Project area. The purpose of the monitoring is to inspect sidewalls and spoils piles of exposed excavation trenches and pits for the presence or absence of archaeological resources and to determine whether native soils are present at depth. The frequency of monitoring shall be determined by PCR in coordination with the City and shall be based on the results of the soil conditions and resource yields during construction. Such factors that will determine monitoring frequency include rate of excavation and grading activities, the

materials being excavated (fill or native soils), the depth of excavation, and if found, the abundance and type of archaeological resources encountered. In addition, PCR shall recommend appropriate treatment measures (i.e., avoidance, removal, or preservation in place) to reduce or avoid impacts to buried resources, if encountered. If archaeological resources are encountered during implementation of the Project, ground-disturbing activities shall temporarily be redirected from the vicinity of the find. The archaeologist shall be allowed to temporarily divert or redirect grading or excavation activities in the vicinity in order to make an evaluation of the find and determine appropriate treatment that may include the development and implementation of a testing/data recovery investigation or preservation in place. Upon completion of the monitoring services, the archaeologist shall prepare a final report about the find and the monitoring services to be filed with the City to show satisfactory compliance with the archaeological mitigation measures for a given project. The report shall include documentation and interpretation of resources recovered. Interpretation will include full evaluation of the eligibility with respect to the California Register of Historical Resources. The landowner, in consultation with the City and archaeologist, shall designate repositories to curate any material in the event that resources are recovered during construction.

CULT-2: If resources are identified during the Phase I assessment (see CULT-1, above), a Phase II Cultural Resources Assessment may be warranted if improvements or development is proposed in the vicinity of such resource, or if an alternate alignment or plan is not selected. The Phase II assessment shall evaluate the resource(s) for listing in the California Register of Historical Resources and to determine whether the resource qualifies as a "unique archaeological resource" pursuant to CEQA. If enough data is obtained from the Phase I assessment to conduct a proper evaluation, a Phase II assessment may not be necessary. Methodologies for evaluating a resource can include, but are not limited to: subsurface archaeological excavations, additional background research, and coordination with interested individuals in the community. The methods and results of a Phase II assessment shall be described in a technical report that will support the Initial Study or EIR Section of the CEQA environmental document.

CULT-3: If, as a result of the Phase II assessment, resources are determined eligible for listing in the California Register or are considered "unique archaeological resources," potential impacts to the resources shall be analyzed and if impacts are significant and cannot be avoided, mitigation measures shall be developed and implemented to reduce impacts to the resources to a level that is less than significant. If avoidance, resource "capping" (capping resource with a layer of fill soils before building on resource), or incorporating resource into a park plan or open space is deemed not feasible, then a Phase III archaeological and paleontological assessment shall be implemented. Phase III assessments typically include additional subsurface archaeological excavations (i.e., data recovery) that serve to recover significant archaeological resources before they are damaged or destroyed by the proposed improvement. These assessments are typically recommended as a mitigation measure in the CEQA environmental document and are typically implemented after the CEQA environmental document has been certified and prior to issuance of grading or building permits. The methods and results of a Phase III assessment shall be described in a technical report that shall be submitted to the City to show satisfactory compliance with the archaeological mitigation measures for a given project.

The following mitigation measures apply to all components of the Plan:

CULT-4: If archaeological resources (including historic and prehistoric resources) are encountered during implementation of the Project, ground-disturbing activities should temporarily be redirected from the vicinity of the find. The City shall immediately notify a qualified archaeologist of the find. The archaeologist should coordinate with the City as to the immediate treatment of the find until a proper site visit and evaluation is made by the archaeologist. Treatment may include the implementation of an archaeological testing or salvage program. All archaeological resources recovered will be documented on California Department of Parks and Recreation Site Forms to be filed with the CHRIS-SBAIC. The archaeologist shall prepare a final report about the find to be filed with the City and the CHRIS-SBAIC, as required by the California Office of Historic Preservation. The report shall include documentation and interpretation of resources recovered. Interpretation will include full evaluation of the eligibility with respect to the California Register of Historical Resources. The landowner, in consultation with the City and the archaeologist, shall designate repositories to curate any material in the event that resources are recovered during construction. The archaeologist shall also determine the need for archaeological monitoring for any ground-disturbing activities in the area of the find thereafter.

CULT-5: If human remains are encountered unexpectedly during implementation of the proposed project, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the person(s) thought to be the Most Likely Descendent (MLD). The MLD may, with the permission of the land owner, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The MLD shall complete their inspection and make their recommendation within 48 hours of being granted access by the land owner to inspect the discovery. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Upon the discovery of the Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this mitigation measure, with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.

Whenever the NAHC is unable to identify a MLD, or the MLD identified fails to make a recommendation, or the landowner or his or her authorized representative rejects the recommendation of the descendants and the mediation provided for in Subdivision (k) of Section 5097.94, if invoked, fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall inter the human remains and items associated with Native American human remains with appropriate dignity on the property in a location not subject to further and future subsurface disturbance.

With the implementation of the mitigation measure above, the Plan impacts to archaeological resources will be reduced to a less than significant level.

9.2 HISTORICAL RESOURCES

For the purposes of this investigation, the historic agricultural landscape comprised of the vineyards, water tank, water system, and CA-SBR-7324H is conservatively considered eligible under California Register Criterion 1, for its association with the early twentieth-century development of viticulture in the Cucamonga Valley wine growing area, and is assigned a California Historical Resources Status Code of "3CB," appears eligible for listing in the California Register as an individual resource and as a contributor to a California Register eligible district of historic vineyards in the area. For the proposed areas of the Plan that will result in future impacts to the vineyards, water tank, water system, and CA-SBR-7324H, the following mitigation measure is recommended:

CULT-6: If a future project component of the Plan would cause a substantial adverse change in the significance of the historic agricultural resource or any of its component features, then the City shall develop mitigation measures to reduce, avoid, or mitigate impacts to the resource to a level that is less than significant. Mitigation measures may include plan reviews for conformance with the Secretary of the Interior's Standards by a qualified preservation consultant, and preservation design consultation to avoid or reduce potential impacts to historical resources. Prior to commencement of construction, the historic agricultural landscape would be recorded in a Historic American Landscape Survey (HALS) report which would document the vineyards, water tank, water system and former farmstead site, in accordance with the National Park Service's requirements. The HALS would be completed by a qualified historian or architectural historian and a professional HALS-qualified photographer. If portions of the vineyards are to be removed, the applicant shall preserve a portion of the remaining vineyard within the project boundaries as a historic feature for interpretive purposes. If the former farmstead site CA-SBR-7324H would be physically impacted by future ground disturbing activities, the site would be mitigated through archaeological excavation and recordation by a qualified archaeologist prior to commencement of construction activities.

With the implementation of the mitigation measure above, the Plan impacts to historical resources will be reduced to a less than significant level.

9.3 PALEONTOLOGICAL RESOURCES

The below mitigation measure applies to all components of the Plan:

CULT-7: If construction excavations will reach depths of five feet or greater, a qualified paleontologist shall attend a pre-grading/excavation meeting and develop a paleontological monitoring program for excavations into older Pleistocene-aged Quaternary Alluvium deposits. A qualified paleontologist is defined as a paleontologist meeting the criteria established by the Society for Vertebrate Paleontology. The qualified paleontologist shall supervise a paleontological monitor who shall be present at such times as required by the paleontologist during construction excavations below five feet or greater into older Pleistocene-aged Quaternary Alluvium deposits. Monitoring shall

consist of visually inspecting fresh exposures of rock for larger fossil remains and, where appropriate, collecting wet or dry screened sediment samples of promising horizons for smaller fossil remains. The frequency of monitoring inspections shall be determined by the paleontologist and shall be based on the rate of excavation and grading activities, the materials being excavated, and the depth of excavation, and if found, the abundance and type of fossils encountered.

CULT-8: If a potential fossil is found, the paleontological monitor shall be allowed to temporarily divert or redirect grading and excavation activities in the area of the exposed fossil to facilitate evaluation and, if necessary, salvage. At the Paleontologist's discretion and to reduce any construction delay, the grading and excavation contractor shall assist in removing rock samples for initial processing. Any fossils encountered and recovered shall be prepared to the point of identification and catalogued before they are donated to their final repository. Any fossils collected shall be donated to a public, non-profit institution with a research interest in the materials, such as the San Bernardino County Museum or the Natural History Museum of Los Angeles County. Accompanying notes, maps, and photographs shall also be filed at the repository.

CULT-9: The paleontologist shall prepare a report summarizing the results of the monitoring and salvaging efforts, the methodology used in these efforts, as well as a description of the fossils collected and their significance. The report shall be submitted by the Applicant to the lead agency, the San Bernardino County Museum, the Natural History Museum of Los Angeles County, and other appropriate or concerned agencies to signify the satisfactory completion of the Project and required mitigation measures.

With the implementation of the mitigation measure above, the Plan impacts to paleontological resources will be reduced to a less than significant level.

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APPENDIX A – Personnel Qualifications

Kyle Garcia, SENIOR ARCHAEOLOGIST

Education

- B.A., Physical Anthropology, University of California, Santa Barbara, California, 2004

Registrations/Certifications

- Riverside County Registered Archaeologist #202
- 40-Hour HAZWOPER Training, 2010

Continuing Education

- Cultural Resources Orientation & Pro-Seminar, County of Riverside, 2011
- Introduction to Professional Practice under Section 106 of the National Historic Preservation Act (NHPA), 2009
- Cultural Resources Protection Under CEQA and Other Legislative Mandates, UCLA Extension, 2008
- Riverside County Archaeology and Cultural Sensitivity Training Program, 2007

Professional Affiliations

- Society for American Archaeology
- Society for California Archaeology
- Pacific Coast Archaeological Society
- Orange County Natural History Museum

Summary

Kyle Garcia has over nine years of professional experience in the archaeology and prehistory of California. Mr. Garcia is knowledgeable about archaeological resources in coastal, interior, and island settings. He specializes in faunal analysis and has worked in faunal laboratories at UCSB and the Santa Barbara Museum of Natural History.

Mr. Garcia has evaluated historic and prehistoric archaeological resources for listing in the National Register of Historic Places and the California Register of Historical Resources, conducted agency and Native American consultation, conducted and supervised all aspects of archaeological fieldwork and laboratory processing, conducted numerous record searches at the regional Information Centers across the State, and prepared many technical documents and sections in support of Environmental Impact Reports/Statements and Initial Studies/Environmental Assessments.

Experience

Mr. Garcia has contributed his services and archaeological expertise to over 300 projects at PCR subject to requirements of the California Environmental Quality Act (CEQA), Section 106 of the NHPA, the National Environmental Policy Act (NEPA), and other federal, State, and local regulations. These projects included energy, infrastructure, utility, residential, commercial, mixed-use, schools, parks, trail systems, and urban redevelopment serving a variety of public and private sector clients throughout California and Arizona. In addition to his archaeological work, Mr. Garcia has been cross-trained in paleontological mitigation monitoring and assisted in the excavations of a Miocene whale fossil near Irvine, California.

Peer Reviews: Mr. Garcia is often sought after to conduct Peer Review services of controversial projects across southern California. These reviews include environmental documentation for the Needles Highway Safety Realignment Project for the County of San Bernardino Department of Public Works and various infrastructure projects for Caltrans/San Bernardino Associated Governments.

General Project Experience: Mr. Garcia has extensive experience in dealing with projects with a large number of archaeological resources. His large-scale surveys include a pedestrian survey and site recordation of more than 200 historic and prehistoric archaeological resources as part of a Class III Inventory on an approximately 11,000-acre portion of the La Osa Ranch Project site in Pinal County, Arizona; and he directed the 1,400-acre field survey and the successful site recordation of over 150 prehistoric and historic archaeological resources per the Section 106 Process for a confidential project in Riverside County. He also served as Deputy Project Manager for the approximately 240-acre Archaeological Treatment & Restoration Plan for The Cove project that was subject to Section 106, where he performed the field survey, Native American consultation, prepared the final report, and supervised the thorough recordation and documentation of over 350 significant artifacts which included artifact photography and illustrations.

Energy Projects: He is well-versed in the potential effects of energy production projects on California Archaeology through his service as an on-call consultant to Southern California Edison (SCE) where he has served as the Project Director and Manager for over 100 SCE projects and managed SCE purchase order contracts in excess of $1.5M. These projects were subject to requirements of CEQA, Section 106 of the NHPA, and other local ordinances. These projects included deteriorated pole replacements, conduit and vault installations, distribution circuit installations, and emergency on-call archaeological survey and monitoring services for SCE property during recent southern California wildfires. Mr. Garcia not only managed the budgets and supervised the work but he also conducted most of the record searches, surveys, report writing, site recordation, and client/agency coordination for these projects. These projects also entailed rapid response services including close-interval surveys, construction monitoring, and sensitivity assessments for SCE property in areas damaged by the wildfires.

Presentations: Mr. Garcia presented a paper at the 72nd Annual Meeting for the Society of American Archaeology Conference in Austin, Texas in 2007. The paper focused on prehistoric 'yoni' features encountered on a project site proposed to be developed in western Riverside County, California.

Geographic Information Systems (GIS): Mr. Garcia has also gained valuable experience with recording historic and prehistoric archaeological sites with Garmin, Magellan, and sub-meter Trimble GeoXT Global Positioning System (GPS) units. He has worked with GIS software such as ArcPad, ArcGIS, and ArcView, and developed methods for using these products to accurately and efficiently record archaeological sites.

Margarita J. Wuellner, Ph.D., DIRECTOR OF HISTORIC RESOURCES

Education

- Ph.D., Art History, University of California, Los Angeles, 2005
- M.A., Architectural History, and Certificate of Historic Preservation University of Virginia, Charlottesville, Virginia, 1991
- B.A., Art History, Oberlin College, Oberlin, Ohio, 1983

Professional Affiliations

- Santa Monica Conservancy
- Los Angeles Conservancy
- California Preservation Foundation
- Society of Architectural Historians, Life Member
- National Trust for Historic Preservation
- American Institute of Architects (AIA), National Allied Member
- American Architectural Foundation

Summary

Margarita J. Wuellner, Ph.D., has extensive educational background, professional training and substantial professional experience in the evaluation and conservation of art, archaeology and architecture, and her qualifications and experience meet and exceed the Secretary of the Interior's Professional Qualification Standards in History, Archaeology, and Architectural History.

Dr. Wuellner has over 23 years of professional experience in the practice of historic preservation and cultural resources management in California and the United States. She has over 17 years of experience as a principal investigator, project manager, and technical lead for international, national and regional firms, including PCR Services Corporation, Inc., (2006-present); EDAW, Inc. (AECOM) (2004-2006); and Parsons Engineering Science, Inc. (Parsons) (1995-2004). Her early experience in historic preservation was with John Milner Associates, Inc., Alexandria, Virginia, (1991-1995); and Land and Community Associates in Charlottesville, Virginia, (1989-1992).

Dr. Wuellner has a substantial academic background in the study of European and American art and architecture and is a specialist in visual culture, Modernism, urbanism, and cultural landscape. She is a recipient of the Samuel H. Kress Foundation Fellowship in Art History; American Council of Learned Societies Fellowship in East European Studies; Edward A. Dickson Graduate Fellowship in Art History, UCLA; and the Thomas Jefferson, Dupont and Governor's State Graduate Fellowships in Architectural History, School of Architecture, University of Virginia.

Experience

Over the past six years Dr. Wuellner has strengthened and expanded the services and range of PCR's historic preservation practice. She has managed and conducted hundreds of historic resources investigations throughout California, in Texas and Canada, assisting clients with due diligence, planning and design, review and approval, mitigation and preservation treatment. Redevelopment, urban design and master planning projects are of primary interest to Dr. Wuellner. Author of hundreds of technical reports for incorporation into CEQA/NEPA environmental review documents (EIRs/EAs/EISs) she is highly experienced in addressing and reducing impacts to historic resources in support of project goals. With a broad national resume, Dr. Wuellner has extensive experience in the evaluation, management and treatment of historic properties for compliance with Sections 106 and 110 of the National Historic Preservation Act (NHPA), National Environmental Protection Act (NEPA), Section 4(f) of the Department of Transportation Act, the California Environmental Quality Act (CEQA), and local codes and ordinances. Highly experienced in the assessment of projects for conformance with the Secretary of the Interior's Standards, she frequently assists both government and private clients with adaptive reuse and rehabilitation projects by providing technical consultation services, agency coordination and legally defensible documentation.

As manager of PCR's on-call preservation services contract with the City of Santa Monica (2002-present), Dr. Wuellner manages and directs PCR staff and is responsible for maintaining and ensuring the high quality of PCR deliverables. She presently also manages additional on-call preservation consulting contracts with the County of San Bernardino Department of Public Works, City of Hermosa Beach, and Los Angeles Unified School District, and she has previously managed preservation consulting services contracts under master agreements with the Los Angeles Redevelopment Agency, and the City of Long Beach.

Dr. Wuellner has managed hundreds of projects throughout Southern California for public agencies and private clients including three large historic resources surveys for the Community Redevelopment Agency of the City of Los Angeles (CRA/LA) for the Wilshire Center/Koreatown Recovery Redevelopment Project Area (2009), Adelante Eastside (2008), and the Normandie 5 Redevelopment Project Area (2010). Education related project experience includes a district-wide survey for the Santa Monica Unified School District (SMMUSD), a California Register nomination for the UCLA Faculty Center, historic resources analyses for the USC Master Plan Project, and a HABS report for the former Schoenburg Institute, USC. Conservation experience includes exterior preservation of the San Bernardino Santa Fe Depot, preservation services for the Santa Monica City Hall Seismic and Jail Retrofit Project, Rehabilitation of the Dunbar Hotel, and a Conservation Management Plan for the RMS Queen Mary for the City of Long Beach. Cultural landscape projects include the Palisades Park Landmark Nomination, the Santa Monica City Hall Landscape Analysis, and historic resources documentation and analysis for the Huntington Education and Visitor Center Project EIR, San Marino, California.

Matthew Gonzalez, ASSOCIATE ARCHAEOLOGIST/PALEONTOLOGIST

Education

- B.A., Classical Archaeology, University of California, Santa Barbara, California, 2005

Continuing Education

- 40-Hour HAZWOPER Training (Update), 2010
- Cultural Resources Protection Under CEQA and Other Legislative Mandates, UCLA Extension, 2008
- Riverside County Archaeology and Cultural Sensitivity Training Program, 2007

Professional Affiliations

- Society for American Archaeology

Summary

Matthew Gonzalez has seven years of experience in archaeological and paleontological investigations including identification of historic and pre-historic archaeological resources. Cross-trained as an archaeologist and paleontologist, Mr. Gonzalez has performed archaeological and paleontological surveys on a number of projects throughout Southern California and Arizona. His dual specialization enables him to perform surveys and monitoring for both disciplines, thereby providing time- and cost-efficient services to his clients. Mr. Gonzalez has led field crews on site investigations and participated in surveying, mapping, excavating, wet/dry screening, site recording, laboratory experience, and soil analysis. Mr. Gonzalez has considerable experience in both surface reconnaissance and subsurface investigations, marine fossil identification, as well as artifact analysis and classifications, specifically faunal and lithic analysis.

Experience

Archaeology: Mr. Gonzalez prepares letter, Phase I, Section 106, and CEQA-Plus reports; Initial Study and Environmental Impact Report (EIR) sections; and Native American letters. He is also skilled in client coordination, SB 18 Consultation, and Phase I and II data recovery. Mr. Gonzalez is also skilled in the application of Geographic Information Systems (GIS)/Global Positioning Systems (GPS) to facilitate field investigations and record searches, using ArcView and Google Earth to develop field maps useful to plot artifacts and survey sites.

He assisted in the archaeological surveys, site recording, and excavation for two large-scale projects including the 3,000-acre Heritage Fields [Orange County] Great Park in Irvine, California and for approximately 10,000 acres of the 19,000-acre La Osa Ranch in Pinal County, Arizona. He conducted archaeological surveys, recording, excavations, artifact processing, and construction monitoring to achieve mitigation compliance for a controversial KB Home residential development in Riverside County, California. He also conducted archaeological surveys for the 136-acre Trabuco Canyon 119 site in Orange County; Rosamond recycled water pipeline project in Kern County; various projects for the San Bernardino Associated Governments; LAX Master Plan; Cesar Chavez Roundabout Improvement Project in Los Angeles; the 175-acre Oasis Date Garden project in Riverside County; the Lytle Creek and Nuevo Road developments in San Bernardino and Riverside counties, respectively; and the 1,200-acre Skyline Ranch Project in Santa Clarita Valley; and over 75 Southern California Edison (SCE) projects including the Tea and Station Fires emergency response projects

Mr. Gonzalez has also conducted mitigation and construction monitoring for several projects. He provided archaeological monitoring for the Heritage Fields Great Park in addition to his survey work, for Building 319 of the Second Harvest Food Bank on the former El Toro Marine Corps Air Station; a John Laing Homes Newland Street development in Huntington Beach; the 16-acre Rossmore development in Redlands; and a number of SCE projects.

Paleontology: Mr. Gonzalez is experienced in all facets of paleontological resources consulting – surveying, fossil salvaging and analysis, sediment sampling, laboratory analysis, monitoring, and report writing. Mr. Gonzalez has performed any combination of these services on over 40 projects subject to State, federal, or local jurisdiction over the last five years.

Mr. Gonzalez surveyed, salvaged fossils, took sediment samples, performed laboratory analysis and construction monitoring, and assisted with report preparation associated with the 3,000-acre Heritage Fields [Orange County] Great Park. During the project, Mr. Gonzalez and the PCR team discovered a Miocene whale skeleton in the project study area. Mr. Gonzalez also performed the full spectrum of paleontological services for the Del Mar Hilton Gardens Inn in San Diego County. He has performed lab analysis, including processing, cleaning, sorting, cataloging archiving/preserving, and fossil analysis, for the Steven S. Wise Temple and Diamond Bar Site D project in Los Angeles County, and the 2nd Harvest Food Bank and Newland Street project for John Laing Homes in Orange County. He has performed surveys and/or prepared reports for projects throughout Southern California including the LAX Master Plan monitoring; SCE's Presidential Substation in Simi Valley; two recycled water projects; the 1,200-acre Skyline ranch development in Santa Clarita Valley; and the 3,000-acre Lytle Creek Specific Plan in San Bernardino County. In addition to his field work, Mr. Gonzalez has prepared sections for 20 CEQA documents for projects throughout California.

Jon L. Wilson, M. Arch., LEED AP, SENIOR ARCHITECTURAL HISTORIAN II

Education

- M. Arch., School of Architecture, Tulane University, New Orleans, Louisiana, 2005
- M.A., American Architectural History, University of Mississippi, Oxford, Mississippi, 2000
- B.A., Early American History, Occidental College, Los Angeles, California, 1996
- Graduate Study, Architecture, Southern California Institute of Architecture, Los Angeles, California, 2003
- Graduate Study, Historic Preservation, Graduate School of Architecture, Planning & Preservation, Columbia University, New York, New York, 2002

Continuing Education

- LEED Workshop, U.S. Green Building Council
- Evaluating Historical Resources in the Los Angeles Area, Association of Environmental Professionals

Professional Affiliations

- The American Institute of Architects
- LEED Accredited Professional, U.S. Green Building Council
- Los Angeles Conservancy
- Santa Monica Conservancy
- American Farmland Trust

Awards and Fellowships

Sally Kress Tompkins Fellowship, Society of Architectural Historians, 2000

Summary

Jon Lamar Wilson has over eight years of professional and academic experience in the practice of architecture, historic preservation, and architectural history. He has a wide-ranging knowledge of nineteenth and twentieth-century American Architecture, with a specific focus on Central and Southern California and the American South. In particular, Mr. Wilson is an expert in both urban and rural housing types and how they relate to their larger context. His qualifications and experience exceeds those of the Secretary of the Interior's Professional Qualification Standards in History, Architectural History, and Historic Architecture.

Experience

Mr. Wilson has a broad training and professional experience in the practice of Historic Preservation and Cultural Resource Management. Most recently He has extensive experience consulting clients on projects for compliance of Sections 106 of the National Historic Preservation Act (NHPA), the California Environmental Quality Act (CEQA), and local preservation ordinances. Mr. Wilson is experienced in the assessment of projects for conformance with the Secretary of the Interior's Standards for the Rehabilitation of Historic Buildings, and has assisted clients with Historic American Buildings Survey (HABS) documentation, Historic Structure Reports (HSR), National Register of Historic Places nominations, California Register of Historical Resources nominations, local historic designation nominations, Historic Preservation Federal Tax Credit applications, preservation design, and feasibility reports.

HABS: Mr. Wilson worked professionally as an employee and a private contractor for the HABS, a historic building documentation department within the National Park Service. His relationship with HABS began after he won the Sally Kress Tompkins Fellowship, an academic research grant jointly awarded by HABS and the Society of Architectural Historians (SAH).

Mr. Wilson was the team leader for the historic resources surveys of the Wilshire Center/KoreaTown, Normandie 5, and Adelante Eastside Redevelopment Area Surveys for the CRA/LA. His qualifications meet the Secretary of the Interior's Standards in history, architectural history, and historic architecture. Mr. Wilson served as Senior Architectural Historian for the completion of the district-wide survey and evaluation of the Santa Monica-Malibu Unified Schools. Since 2007, he has acted as Senior Architectural Historian for PCR's on-call contract to provide preservation consultant services to the City of Santa Monica and has completed numerous projects under this task order including preliminary assessments, Landmark Assessments, plan reviews for conformance to the Secretary of the Interior's Standards and the local preservation ordinances, design consultation services for adaptive reuse projects, and Historic American Building Survey (HABS) recordation. He has conducted historic assessments and plan reviews for conformance to the Secretary of the Interior's Standards and the local preservation ordinance for numerous PCR projects in Laguna Beach, including recent projects for 154 Pearl, the oldest house in Laguna Beach, and 229 Arch Street, the home of renowned landscape painter William Wendt. He has conducted historical and cultural resources surveys for specific plans in Placentia and Santa Ana in Orange County, California, and in Whittier, California. Mr. Wilson conducted a survey of contributing "puestos" to the El Pueblo de Los Angeles Historic Monument and many other documents related to historic preservation and cultural resource management. In Riverside, Mr. Wilson helped produce the Historic Structures Report (HSR) for the National Historic Landmark Harada House and worked as a preservation consultant on the Fox Riverside Theater.

APPENDIX B – NAHC SLF Search Results, SB 18 Native American Contact List, and Native American Consultation Documentation

October 23, 2013

Mr. Anthony Morales
Chairperson
GABRIELINO/TONGVA TRIBAL COUNCIL
P.O. Box 693
San Gabriel, CA 91778

Re: SB 18 CONSULTATION REQUEST: PROPOSED WESTGATE SPECIFIC PLAN PROJECT; CITY OF FONTANA, CALIFORNIA

Dear Mr. Morales:

PCR Services Corporation (**PCR**) is preparing environmental documentation for the proposed Westgate Specific Plan Project in the City of Fontana (City), California. The Westgate Specific Plan is a new specific plan that replaces an existing specific plan that was approved in 1996. As proposed, the Westgate Specific Plan is comprised of four villages on 964 total acres, all of the land uses within which are incorporated into 83 development areas, designated as "Planning Areas" (PAs). Altogether, these PAs include a total of 5,410 residential units, 50.9 acres of Commercial Retail, 179.9 acres of business park and professional office uses, 71.6 acres of warehouse/distribution uses, 47.8 acres of Open Space/Public Parks, 9.15 acres of Open Space/Private Parks, 1.4 acres of Open Space/Landscape, 96.1 acres of Open Space/Utility Corridor, 24 acres for an Elementary School, 60 acres for a High School, and 89.35 acres of major street rights-of-way. The existing plan was approved for 2,338 dwelling units (all single family detached units), approximately 294.9 acres of commercial/light industrial, 106 acres of open space, and one (1) elementary school site on 10 acres for a total SP area of 957.9 acres. A network of pedestrian trails, a pedestrian bridge over Baseline Avenue and bikeways will connect the various parks and the regional trail on the Southern California Edison/Southern California Gas Company easement. The proposed developments will include on-site infrastructure improvements, such as, water, sewer, power, gas, telephone and cable line extensions both on and off-site, as well as roadway extensions and improvements.

In addition, the applicant proposes to amend three (3) Elements of the City's General Plan. As part of this effort and on behalf of the City of Fontana, we are requesting to consult with you regarding the identification of traditional tribal "cultural places" within the proposed project site and vicinity pursuant to Senate Bill (SB) 18. The City is the lead agency for the project and Mr. Charles D. Fahie, Senior Planner, 8353 Sierra Avenue, Fontana, CA, 92335; (909) 350-7608; cfahie@fontana.org), is the government contact at the City for SB 18 consultation. Please contact Mr. Fahie directly if you decide not to consult with PCR. Per SB 18 guidelines, please send Mr. Fahie or PCR your response to this request to consult within 90 days of your receipt of this letter.

The Westgate Specific Plan project site is illustrated on the Cucamonga Peak, Guasti, Fontana, and Devore topographic quadrangle maps in Township 1 North, Range 6 West as shown in **Figure 1**, *Records Search Map*, attached. Thank you for your assistance with our efforts to address possible Native American concerns that may be affected by the proposed project. If you have any questions or need additional information, please contact me at (949) 753-7001 or via email at k.garcia@pcrnet.com.

Sincerely,
PCR SERVICES CORPORATION

Kyle Garcia
Senior Archaeologist I

October 23, 2013

Mr. Robert Martin
Chairperson
MORONGO BAND OF MISSION INDIANS
12700 Pumarra Road
Cahuilla, CA 92220

Re: SB 18 CONSULTATION REQUEST: PROPOSED WESTGATE SPECIFIC PLAN PROJECT; CITY OF FONTANA, CALIFORNIA

Dear Mr. Martin:

PCR Services Corporation (**PCR**) is preparing environmental documentation for the proposed Westgate Specific Plan Project in the City of Fontana (City), California. The Westgate Specific Plan is a new specific plan that replaces an existing specific plan that was approved in 1996. As proposed, the Westgate Specific Plan is comprised of four villages on 964 total acres, all of the land uses within which are incorporated into 83 development areas, designated as "Planning Areas" (PAs). Altogether, these PAs include a total of 5,410 residential units, 50.9 acres of Commercial Retail, 179.9 acres of business park and professional office uses, 71.6 acres of warehouse/distribution uses, 47.8 acres of Open Space/Public Parks, 9.15 acres of Open Space/Private Parks, 1.4 acres of Open Space/Landscape, 96.1 acres of Open Space/Utility Corridor, 24 acres for an Elementary School, 60 acres for a High School, and 89.35 acres of major street rights-of-way. The existing plan was approved for 2,338 dwelling units (all single family detached units), approximately 294.9 acres of commercial/light industrial, 106 acres of open space, and one (1) elementary school site on 10 acres for a total SP area of 957.9 acres. A network of pedestrian trails, a pedestrian bridge over Baseline Avenue and bikeways will connect the various parks and the regional trail on the Southern California Edison/Southern California Gas Company easement. The proposed developments will include on-site infrastructure improvements, such as, water, sewer, power, gas, telephone and cable line extensions both on and off-site, as well as roadway extensions and improvements.

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Sincerely,
PCR SERVICES CORPORATION

Kyle Garcia
Senior Archaeologist I

October 23, 2013

Mr. Joseph Hamilton
Chairman
RAMONA BAND OF CAHUILLA MISSION INDIANS
PO Box 391670
Anza, CA 92539

Re: SB 18 CONSULTATION REQUEST: PROPOSED WESTGATE SPECIFIC PLAN PROJECT; CITY OF FONTANA, CALIFORNIA

Dear Mr. Hamilton:

PCR Services Corporation (**PCR**) is preparing environmental documentation for the proposed Westgate Specific Plan Project in the City of Fontana (City), California. The Westgate Specific Plan is a new specific plan that replaces an existing specific plan that was approved in 1996. As proposed, the Westgate Specific Plan is comprised of four villages on 964 total acres, all of the land uses within which are incorporated into 83 development areas, designated as "Planning Areas" (PAs). Altogether, these PAs include a total of 5,410 residential units, 50.9 acres of Commercial Retail, 179.9 acres of business park and professional office uses, 71.6 acres of warehouse/distribution uses, 47.8 acres of Open Space/Public Parks, 9.15 acres of Open Space/Private Parks, 1.4 acres of Open Space/Landscape, 96.1 acres of Open Space/Utility Corridor, 24 acres for an Elementary School, 60 acres for a High School, and 89.35 acres of major street rights-of-way. The existing plan was approved for 2,338 dwelling units (all single family detached units), approximately 294.9 acres of commercial/light industrial, 106 acres of open space, and one (1) elementary school site on 10 acres for a total SP area of 957.9 acres. A network of pedestrian trails, a pedestrian bridge over Baseline Avenue and bikeways will connect the various parks and the regional trail on the Southern California Edison/Southern California Gas Company easement. The proposed developments will include on-site infrastructure improvements, such as, water, sewer, power, gas, telephone and cable line extensions both on and off-site, as well as roadway extensions and improvements.

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Sincerely,
PCR SERVICES CORPORATION

Kyle Garcia
Senior Archaeologist I

October 23, 2013

Ms. Carla Rodriquez
Chairwoman
SAN MANUEL BAND OF MISSION INDIANS
26569 Community Center Drive
Highland, CA 92346

Re: SB 18 CONSULTATION REQUEST: PROPOSED WESTGATE SPECIFIC PLAN PROJECT; CITY OF FONTANA, CALIFORNIA

Dear Ms. Rodriquez:

PCR Services Corporation (**PCR**) is preparing environmental documentation for the proposed Westgate Specific Plan Project in the City of Fontana (City), California. The Westgate Specific Plan is a new specific plan that replaces an existing specific plan that was approved in 1996. As proposed, the Westgate Specific Plan is comprised of four villages on 964 total acres, all of the land uses within which are incorporated into 83 development areas, designated as "Planning Areas" (PAs). Altogether, these PAs include a total of 5,410 residential units, 50.9 acres of Commercial Retail, 179.9 acres of business park and professional office uses, 71.6 acres of warehouse/distribution uses, 47.8 acres of Open Space/Public Parks, 9.15 acres of Open Space/Private Parks, 1.4 acres of Open Space/Landscape, 96.1 acres of Open Space/Utility Corridor, 24 acres for an Elementary School, 60 acres for a High School, and 89.35 acres of major street rights-of-way. The existing plan was approved for 2,338 dwelling units (all single family detached units), approximately 294.9 acres of commercial/light industrial, 106 acres of open space, and one (1) elementary school site on 10 acres for a total SP area of 957.9 acres. A network of pedestrian trails, a pedestrian bridge over Baseline Avenue and bikeways will connect the various parks and the regional trail on the Southern California Edison/Southern California Gas Company easement. The proposed developments will include on-site infrastructure improvements, such as, water, sewer, power, gas, telephone and cable line extensions both on and off-site, as well as roadway extensions and improvements.

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Sincerely,
PCR SERVICES CORPORATION

Kyle Garcia
Senior Archaeologist I

October 23, 2013

Ms. Goldie Walker
SERRANO BAND OF INDIANS
P.O. Box 343
Serrano, CA 92369

Re: SB 18 CONSULTATION REQUEST: PROPOSED WESTGATE SPECIFIC PLAN PROJECT; CITY OF FONTANA, CALIFORNIA

Dear Ms. Walker:

PCR Services Corporation (**PCR**) is preparing environmental documentation for the proposed Westgate Specific Plan Project in the City of Fontana (City), California. The Westgate Specific Plan is a new specific plan that replaces an existing specific plan that was approved in 1996. As proposed, the Westgate Specific Plan is comprised of four villages on 964 total acres, all of the land uses within which are incorporated into 83 development areas, designated as "Planning Areas" (PAs). Altogether, these PAs include a total of 5,410 residential units, 50.9 acres of Commercial Retail, 179.9 acres of business park and professional office uses, 71.6 acres of warehouse/distribution uses, 47.8 acres of Open Space/Public Parks, 9.15 acres of Open Space/Private Parks, 1.4 acres of Open Space/Landscape, 96.1 acres of Open Space/Utility Corridor, 24 acres for an Elementary School, 60 acres for a High School, and 89.35 acres of major street rights-of-way. The existing plan was approved for 2,338 dwelling units (all single family detached units), approximately 294.9 acres of commercial/light industrial, 106 acres of open space, and one (1) elementary school site on 10 acres for a total SP area of 957.9 acres. A network of pedestrian trails, a pedestrian bridge over Baseline Avenue and bikeways will connect the various parks and the regional trail on the Southern California Edison/Southern California Gas Company easement. The proposed developments will include on-site infrastructure improvements, such as, water, sewer, power, gas, telephone and cable line extensions both on and off-site, as well as roadway extensions and improvements.

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Sincerely,
PCR SERVICES CORPORATION

Kyle Garcia
Senior Archaeologist I

October 23, 2013

Ms. Rosemary Morillo
Chairperson
SOBOBA BAND OF MISSION INDIANS
Attn: Carrie Garcia
San Jacinto, CA 92581

Re: SB 18 CONSULTATION REQUEST: PROPOSED WESTGATE SPECIFIC PLAN PROJECT; CITY OF FONTANA, CALIFORNIA

Dear Ms. Morillo:

PCR Services Corporation (**PCR**) is preparing environmental documentation for the proposed Westgate Specific Plan Project in the City of Fontana (City), California. The Westgate Specific Plan is a new specific plan that replaces an existing specific plan that was approved in 1996. As proposed, the Westgate Specific Plan is comprised of four villages on 964 total acres, all of the land uses within which are incorporated into 83 development areas, designated as "Planning Areas" (PAs). Altogether, these PAs include a total of 5,410 residential units, 50.9 acres of Commercial Retail, 179.9 acres of business park and professional office uses, 71.6 acres of warehouse/distribution uses, 47.8 acres of Open Space/Public Parks, 9.15 acres of Open Space/Private Parks, 1.4 acres of Open Space/Landscape, 96.1 acres of Open Space/Utility Corridor, 24 acres for an Elementary School, 60 acres for a High School, and 89.35 acres of major street rights-of-way. The existing plan was approved for 2,338 dwelling units (all single family detached units), approximately 294.9 acres of commercial/light industrial, 106 acres of open space, and one (1) elementary school site on 10 acres for a total SP area of 957.9 acres. A network of pedestrian trails, a pedestrian bridge over Baseline Avenue and bikeways will connect the various parks and the regional trail on the Southern California Edison/Southern California Gas Company easement. The proposed developments will include on-site infrastructure improvements, such as, water, sewer, power, gas, telephone and cable line extensions both on and off-site, as well as roadway extensions and improvements.

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Sincerely,
PCR SERVICES CORPORATION

Kyle Garcia
Senior Archaeologist I

October 23, 2013

Mr. Samuel H. Dunlap
Chairperson
GABRIELINO TONGVA NATION
PO Box 86908
Los Angeles, CA 90086

Re: SB 18 CONSULTATION REQUEST: PROPOSED WESTGATE SPECIFIC PLAN PROJECT; CITY OF FONTANA, CALIFORNIA

Dear Mr. Dunlap:

PCR Services Corporation (**PCR**) is preparing environmental documentation for the proposed Westgate Specific Plan Project in the City of Fontana (City), California. The Westgate Specific Plan is a new specific plan that replaces an existing specific plan that was approved in 1996. As proposed, the Westgate Specific Plan is comprised of four villages on 964 total acres, all of the land uses within which are incorporated into 83 development areas, designated as "Planning Areas" (PAs). Altogether, these PAs include a total of 5,410 residential units, 50.9 acres of Commercial Retail, 179.9 acres of business park and professional office uses, 71.6 acres of warehouse/distribution uses, 47.8 acres of Open Space/Public Parks, 9.15 acres of Open Space/Private Parks, 1.4 acres of Open Space/Landscape, 96.1 acres of Open Space/Utility Corridor, 24 acres for an Elementary School, 60 acres for a High School, and 89.35 acres of major street rights-of-way. The existing plan was approved for 2,338 dwelling units (all single family detached units), approximately 294.9 acres of commercial/light industrial, 106 acres of open space, and one (1) elementary school site on 10 acres for a total SP area of 957.9 acres. A network of pedestrian trails, a pedestrian bridge over Baseline Avenue and bikeways will connect the various parks and the regional trail on the Southern California Edison/Southern California Gas Company easement. The proposed developments will include on-site infrastructure improvements, such as, water, sewer, power, gas, telephone and cable line extensions both on and off-site, as well as roadway extensions and improvements.

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Sincerely,
PCR SERVICES CORPORATION

Kyle Garcia
Senior Archaeologist I

STATE OF CALIFORNIA

Edmund G. Brown, Jr.Governor

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Boulevard, Suite 100
West Sacramento, CA 95691
(916) 373-3715
Fax (916) 373-5471
Web Site www.nahc.ca.gov
Ds_nahc@pacbell.net

July 22, 2013

Mr. Charles Fahie, Project Planner
City of Fontana
8353 Sierra Avenue
Fontana, CA 92335

Sent by U.S. Mail
No. of Pages: 3

RE: Native American Consultation pursuant to California Government Code Sections 6540.2, 65092, 65351, 65352.3,, 65352.4, 65562.5 *et seq.* for the proposed **"West Gate Specific Plan Amendment (SPA) (State Clearinghouse No. 1995052002 CEQA NOP DEIR);"** located in the City of Fontana; San Bernardino County, California.

Dear Mr. Fahie

Government Code Sections 65351, 65352.3, 65562.5, *et seq.* requires local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of protecting and/or mitigating impacts to cultural places. The Native American Heritage Commission (NAHC) is the state 'agency with responsibilities for Native American cultural resources.

In the 1985 Appellate Court decision (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 to Native American burial sites. Note that the NAHC does NOT APPROVE General or Specific Plan; rather, it provides a list of tribal governments with which local jurisdictions must consult concerning any proposed impact to cultural resources as a result of the proposed action.

An NAHC Sacred Lands File search was not conducted. As part of the consultation process, the NAHC recommends that local governments and project developers contact the tribal governments and individuals to determine if any cultural places might be impacted by the proposed action. Also, the absence of specific site information in the sacred lands file

does not preclude their existence. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a consultation list of tribal governments with traditional lands or cultural places located in the vicinity of the Project Area (APE). The tribal entities on the list are for your guidance for **government-to-government consultation** purposes.

A Native American tribe or individual may be the only source of the presence of traditional cultural places. For that reason, a list of Native American Contacts is enclosed as they may have knowledge of cultural resources and about potential impact, if any, of the proposed project.

If you have any questions, please contact me at (916) 373-3715.

Best regards,

Dave Singleton
Program Analyst

Attachment

x**Native American Tribal Government Consultation**
San Bernardino County
July 22, 2013

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

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

San Manuel Band of Mission Indians
Carla Rodriguez, Chairwoman
26569 Community Center Drive Serrano
Highland , CA 92346
(909) 864-8933
(909) 864-3724 - FAX

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

(909) 528-9027 or
(909) 528-9032

Soboba Band of Mission Indians
Rosemary Morillo, Chairperson; Attn: Carrie Garcia
P.O. Box 487 Luiseno
San Jacinto , CA 92581
carrieg@soboba-nsn.gov
(951) 654-2765

Gabrieleno/Tongva San Gabriel Band of Mission
Anthony Morales, Chairperson
PO Box 693 Gabrielino Tongva
San Gabriel , CA 91778
GTTribalcouncil@aol.com
(626) 286-1632
(626) 286-1758 - Home
(626) 483--3564 cell

Gabrielino Tongva Nation
Sam Dunlap, Cultural Resources Director
P.O. Box 86908 Gabrielino Tongva
Los Angeles , CA 90086
samdunlap@earthlink.net

(909) 262-9351 - cell

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

Distribution of this list does not relieve any person of 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 only for consultation with Native American tribes under Government Code Section 65352.3. and 65362.4. et seq.

APPENDIX C – Paleontological Resources Record Search Results Letter

SAN BERNARDINO COUNTY MUSEUM

COUNTY OF SAN BERNARDINO

2024 Orange Tree Lane • Redlands, California USA 92374-4560
(909) 307-2669 • Fax (909) 307-0539 • www.sbcountymuseum.org
TDD (909) 792-1462

ROBERT L. McKERNAN
Director

25 April 2012

PCR Services Corporation
attn: Matthew Gonzalez, Associate Archaeologist/Paleontologist
One Venture, Suite #150
Irvine, CA 92618

re: **PALEONTOLOGY LITERATURE / RECORDS REVIEW, WESTGATE SPECIFIC PLAN PROJECT, CITY OF FONTANA, SAN BERNARDINO COUNTY, CALIFORNIA**

Dear Mr. Gonzalez,

The Division of Geological Sciences of the San Bernardino County Museum (SBCM) has completed a literature review and records search for the above-named property in the City of Fontana, San Bernardino County, California. The proposed study area is subdivided onto three separate portions, which collectively are located in portions of sections 23, 24, 26, 27, 33, 34, and 35, Township 1 North, Range 6 West, San Bernardino Base and Meridian, as seen on the following United States Geological Survey 7.5' topographic quadrangle maps: Cucamonga Peak, California (1966 edition, photorevised 1981); Devore, California (1966 edition, photorevised 1988); Fontana, California (1967 edition, photorevised 1980); and Guasti, California (1966 edition, photorevised 1980).

Previous geologic mapping (Bortugno and Spittler, 1986; Morton and Matti, 2001a,b; Morton, 2003; Morton and Miller, 2003) indicates that the proposed study area is located upon Holocene fan alluvium (= units $\mathbf{Qyf_5}$, $\mathbf{Qf_b}$), including deposits derived from Etiwanda and Lytle Creeks (= $\mathbf{Qyf_e}$, $\mathbf{Qyf_1}$) as well as early Holocene and possibly late Pleistocene fan alluvium (= $\mathbf{Qyf_b}$). Towards the northwestern portion of the proposed study area, Morton and Matti (2001) describe these sediments as a boulder gravel. These sediments have low potential to contain fossil resources, and so are assigned low paleontologic sensitivity. However, these sediments may potentially overlie older Pleistocene alluvium present in the subsurface. Depending upon their lithology, such subsurface Pleistocene sediments might have high potential to contain fossil resources. Pleistocene alluvium elsewhere throughout inland San Bernardino and Riverside Counties and the Inland Empire has been repeatedly demonstrated to have high paleontologic sensitivity (Jefferson, 1991; Reynolds and Reynolds, 1991; Anderson and others, 2002; Scott and Cox, 2008; Springer and others, 2009, 2010; Scott, 2010). Fossils recovered from these Pleistocene sediments represent extinct taxa including mammoths, mastodons, ground sloths, dire wolves, sabre-toothed cats, large and small horses, large and small camels, and bison (Jefferson, 1991; Reynolds and Reynolds, 1991; Scott and Cox, 2008; Springer and others, 2009, 2010; Scott, 2010).

GREGORY C. DEVEREAUX
Chief Executive Officer

Board of Supervisors
BRAD MITZELFELT, Vice Chair . . . First District
JANICE RUTHERFORD . . . . . Second District
JOSIE GONZALES, Chair . . . . . Fifth District
NEIL DERRY . . . . . Third District
GARY C. OVITT . . . . . Fourth District

For this review, I conducted a search of the Regional Paleontologic Locality Inventory (RPLI) at the SBCM. The results of this search indicate that no previously-recorded paleontologic resource localities are present within the boundaries of the proposed development property. However, locality SBCM 5.1.13 is situated approximately ½ mile west of the southern portion of the study area; this locality yielded skeletal elements of pocket gopher (*Thomomys* sp. cf. *T. bottae*) and wood rat (*Neotoma* sp. cf. *N. lepida*). None of these presumed fossils are from time-diagnostic taxa, however, and both of these species are known locally in present and historic times. A Pleistocene age of these fossils therefore cannot be confirmed. The nearest recorded *bona fide* paleontologic resource locality to have yielded vertebrate fossils from Pleistocene older alluvium is SBCM 5.1.8, situated approximately 10 miles southwest of the proposed project property. This locality yielded fossil remains of extinct mammoth, *Mammuthus*, from depths of ~20' below the original ground surface.

Recommendations

The results of the literature review and the check of the RPLI at the SBCM demonstrate that excavation in surface and subsurface Holocene alluvium within the boundaries of the proposed development site, including that derived from Etiwanda and Lytle Creeks, has low potential to adversely impact significant nonrenewable paleontologic resources. These sediments have low paleontologic sensitivity. *No program to mitigate adverse impacts to fossil resources is recommended for these sediments on this property at this time.*

However, in the event that any sediments of Pleistocene alluvium having a lithology conducive to the preservation of significant paleontologic resources are exposed, or if fossils are encountered at any time during development-related excavation in this area, a qualified vertebrate paleontologist must develop a program to mitigate impacts to nonrenewable paleontologic resources, including full curation of recovered resources (see Scott and others, 2004). This mitigation program must be consistent with the provisions of the California Environmental Quality Act (Scott and Springer, 2003), as well as with regulations currently implemented by the County of San Bernardino.

The County of San Bernardino (Development Code §82.20.040) defines a qualified vertebrate paleontologist as meeting the following criteria:

Education: An advanced degree (Masters or higher) in geology, paleontology, biology or related disciplines (exclusive of archaeology).

Professional experience: At least five years professional experience with paleontologic (not including cultural) resources, including the collection, identification and curation of the resources.

The County of San Bernardino (Development Code §82.20.030) requires that paleontologic mitigation programs include, but not be limited to:

(a) Field survey before grading. In areas of potential but unknown sensitivity, field surveys before grading shall be required to establish the need for paleontologic monitoring.

(b) Monitoring during grading. A project that requires grading plans and is located in an area of known fossil occurrence, or that has been demonstrated to have fossils present in a field survey, shall have all grading monitored by trained paleontologic crews working under the direction of a qualified professional, so that fossils exposed during grading can be recovered and preserved. Paleontologic monitors shall be equipped to salvage fossils as they are unearthed, to avoid construction delays, and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors shall be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring is not necessary if the potentially-fossiliferous units described for the property in question are not present, or if present are determined upon exposure and examination by qualified paleontologic personnel to have low potential to contain fossil resources.

(c) Recovered specimens. Qualified paleontologic personnel shall prepare recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Preparation and stabilization of all recovered fossils is essential in order to fully mitigate adverse impacts to the resources.

(d) Identification and curation of specimens. Qualified paleontologic personnel shall identify and curate specimens into the collections of the Division of Geological Sciences, San Bernardino County Museum, an established, accredited museum repository with permanent retrievable paleontologic storage. These procedures are also essential steps in effective paleontologic mitigation and CEQA compliance. The paleontologist must have a written repository agreement in hand prior to the initiation of mitigation activities. Mitigation of adverse impacts to significant paleontologic resources is not considered complete until curation into an established museum repository has been fully completed and documented.

(e) Report of findings. Qualified paleontologic personnel shall prepare a report of findings with an appended itemized of specimens. A preliminary report shall be submitted and approved before granting of building permits, and a final report shall be submitted and approved before granting of occupancy permits. The report and inventory, when submitted to the appropriate Lead Agency along with confirmation of the curation of recovered specimens into the collections of the San Bernardino County Museum, will signify completion of the program to mitigate impacts to paleontologic resources.

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Please do not hesitate to contact us with any further questions you may have.

Sincerely,

Eric Scott, Curator of Paleontology
Division of Geological Sciences
San Bernardino County Museum

Appendix E - Preliminary Geotechnical Evaluation

PRELIMINARY GEOTECHNICAL EVALUATION
WESTGATE SPECIFIC PLAN
FONTANA, CALIFORNIA

PREPARED FOR:
PCR Services Corporation
One Ventura, Suite 150
Irvine, California 92618

PREPARED BY:
Ninyo & Moore
Geotechnical and Environmental Sciences Consultants
475 Goddard, Suite 200
Irvine, California 92618

May 21, 2012
Project No. 208578002

May 21, 2012
Project No. 208578002

Mr. David Crook
PCR Services Corporation.
One Ventura, Suite 150
Irvine, California 92618

Subject: Preliminary Geotechnical Evaluation
Westgate Specific Plan
Fontana, California

Dear Mr. Crook:

In accordance with your request and authorization, Ninyo & Moore has performed a preliminary geotechnical evaluation for the Westgate Specific Plan project near the intersection of Interstate 15 and State Route 210 in Fontana, California. Our evaluation was conducted in general accordance with the scope of services presented in our Proposal for Geotechnical and Environmental Consulting Services dated August 10, 2010. We understand that the results of this evaluation will be utilized in the preparation of an Environmental Impact Report for the proposed project.

We appreciate the opportunity to provide geotechnical consulting services for this project.

Sincerely,
NINYO & MOORE

Michael E. Rogers, CEG
Senior Project Geologist

PROFESSIONAL GEOLOGIST
MICHAEL E. ROGERS
No. 2364
CERTIFIED
ENGINEERING
GEOLOGIST
Exp. 6/30/13
STATE OF CALIFORNIA

Carol A. Price, CEG
Principal Geologist

PROFESSIONAL GEOLOGIST
CAROL A. PRICE
No. 1774
CERTIFIED
ENGINEERING
GEOLOGIST
Exp. 4/30/13
STATE OF CALIFORNIA

Jalal Vakili, PhD, PE
Principal Engineer

JRS/MER/CAP/JV/mlc

Distribution: (2) Addressee (1 via e-mail; 1 hard copy)

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1. INTRODUCTION

In accordance with your request and authorization, we have performed a preliminary geotechnical evaluation for the proposed Westgate Specific Plan (WSP) project located near the intersection of Interstate 15 (I-15) and State Route 210 in Fontana, California (Figure 1). We have performed a geotechnical evaluation of the site geologic conditions and the impacts associated with potential geologic and seismic hazards for inclusion in the Environmental Impact Report (EIR) for the project.

The purpose of our preliminary geotechnical evaluation was to assess the geologic conditions at the site, develop preliminary conclusions regarding potential geologic and seismic impacts associated with the project in accordance with the California Environmental Quality Act (CEQA). Where appropriate, recommendations to mitigate potential geologic hazards, as noted in this report, have been provided. Our geotechnical evaluation was based on review of readily available geologic and seismic data and published geotechnical literature pertinent to the project site, and site reconnaissance.

2. SCOPE OF SERVICES

Ninyo & Moore's scope of services has included review of geotechnical background materials and geologic reconnaissance of the project area. Specifically, we have performed the following tasks:

- Review of readily available geologic maps, fault maps, seismic data, published geotechnical literature, geologic hazard maps, groundwater data, and aerial photographs.
- Geotechnical site reconnaissance by a representative from Ninyo & Moore conducted on May 9, 2012, to observe and document the existing surface conditions at the project site.
- Compilation and analysis of existing geotechnical data pertaining to the site.
- Assessment of the general geologic conditions and seismic hazards affecting the area and evaluation of their potential impacts on the project.
- Preparation of this report presenting the results of our study, as well as our conclusions regarding the projects' geologic and seismic impacts, and recommendations to address the impacts to be included in the EIR.

3. PROJECT DESCRIPTION

Based on our understanding (City of Fontana, 2009), the proposed WSP project involves a new specific plan for the development of approximately 964 acres to include commercial/light industrial zoned land, residential dwelling units, open space and recreation areas, a new high school, and two new elementary schools. Other components of the proposed development include a network of pedestrian trails and bikeways, utility infrastructure improvements and roadway improvements. The plan area is roughly located southeast of the Interstate 15, north of Baseline Avenue, and west of Cherry Avenue, San Sevaine Road and Lytle Creek Road, as shown on Figure 1. The WSP area is divided into four study areas: 1) Western Village, 2) Western Village East, 3) Westgate Center (Golden Triangle), and 4) Falcon Ridge Village (Figures 2 and 3A through 3D).

4. SITE DESCRIPTION

The WSP project area is situated in the northern part of the San Bernardino Valley on the western edge of a large, gently sloping alluvial fan that emanates from the canyon of Lytle Creek northeast of the project area. Topography of the site slopes gently down to the southwest, varying from an approximate elevation of 1,660 feet above mean sea level (MSL) near the northeast part of the project area to an approximate elevation of 1,300 feet MSL in the southwest part of the project area.

The site is currently comprised of primarily open space areas that were formerly used for agriculture (Figures 3A through 3D). Commercial developments are located on the western side of the Westgate Village Study Area (Figure 3A), and in the southwest part of the Falcon Ridge Village Study Area (Figure 3D). Some paved access roads pass through the project study areas. A transmission line corridor with steel lattice transmission towers passes through each of the project study areas, roughly parallel to the I-15 freeway. The open space areas generally contain old vineyards, grassy fields, scattered trees and bushes, unpaved roadways, fencing, and drainage features comprised of both unlined and concrete-lined drainage channels. Piles of dumped materials, including soil, brick and concrete pieces, wood, and other trash and construction debris, were observed in parts of the study areas during our reconnaissance.

5. GEOLOGY

5.1. Regional Geology

The project area is located within the Peninsular Ranges Geomorphic Province of southern California. This geomorphic province encompasses an area that extends approximately 125 miles from the Transverse Ranges and the Los Angeles Basin south to the Mexican border, and beyond another approximately 775 miles to the tip of Baja California. The Peninsular Ranges province varies in width from approximately 30 to 100 miles and is characterized by northwest-trending mountain range blocks separated by similarly trending northwest-trending faults (Norris and Webb, 1990).

The predominant rock type that underlies the Peninsular Ranges province is a Cretaceous-age igneous rock (granitic rock) referred to as the Southern California batholith. Older Jurassic-age metavolcanic and metasedimentary rocks and older Paleozoic limestone, altered schist, and gneiss are present within the province. Cretaceous-age marine sedimentary rocks and younger Tertiary-age rocks comprised of volcanic, marine, and non-marine sediments overlie the older rocks (Norris and Webb, 1990). More recent Quaternary sediments, primarily of alluvial origin, comprise the low-lying valley and drainage areas within the region, including the area where the WSP project site is located.

Active northwest-trending fault zones in the Peninsular Ranges province include the San Jacinto fault zone, Elsinore fault zone (Whittier fault), and Newport-Inglewood fault zone. The northern boundary of the Province is formed by the Transverse Ranges Southern Boundary fault system (Dolan, 2000). The active San Andreas fault zone is located northeast of the province within the adjacent Colorado Desert Geomorphic Province. The predominant major tectonic activity associated with these and other faults within this regional tectonic framework is right-lateral, strike-slip movement (Norris and Webb, 1990).

5.2. Site Geology

The site is located in an alluvial fan/flood plain on gently sloping terrain southwest of the Lytle Creek Wash. Regional geologic maps indicate that the near-surface earth materials underlying the WSP project area consist primarily of young, late-Holocene unconsolidated

deposits of sand, gravel and boulders (Morton and Miller, 2003). A regional geologic map of the site vicinity is shown on Figure 4. Areas of un-compacted, dumped fill soils were observed at the site during our reconnaissance. Artificial fill soils are presumably present in some portions of the site related to prior development of agricultural areas, roadways, utilities, buildings, and other improvements. Surface soils observed in open space portions of the site during reconnaissance by Ninyo & Moore generally consisted of sand with gravel, cobbles and boulders.

5.3. Groundwater

The site is located within the northern edge of the Chino groundwater basin. Based on a depth to groundwater contour map of groundwater levels in the fall of 2006, the groundwater depth in the WSP project area is approximately 600 feet deep (Chino Basin Watermaster, 2006). Well data from the State Water Resources Control Board GeoTracker website indicate that groundwater levels in the vicinity of the WSP project area are roughly 300 to 400 feet deep. Groundwater levels may be influenced by seasonal variations, precipitation, irrigation, soil/rock types, groundwater pumping, and other factors and are subject to fluctuations. Shallow perched conditions may be present.

6. FAULTING AND SEISMICITY

6.1. Regional Seismicity

The proposed WSP project area is located in a seismically active area, as is the majority of southern California, and the potential for strong ground motion in the project area is considered significant. Figure 5 shows the approximate site location relative to the principal faults in the region. The active Cucamonga fault is located approximately 2.8 miles northwest of the approximate center of the site, the active San Jacinto fault zone is located approximately 4 miles northeast of the approximate center of the site, and the active San Andreas fault zone is located approximately 9 miles northeast of the approximate center of the site. The site is not located within a State of California Earthquake Fault Zone (State of California, 1995a, 1995b).

Table 1 lists selected principal known active faults within approximately 50 miles of the WSP project area, the maximum moment magnitude (M_{max}) as published by the CGS (Cao, et al., 2003), and significant historic earthquakes that have occurred on the fault. The faults in Table 1 are roughly ordered in nearer to farther distance from the approximate center of the WSP project area.

Table 1 – Principal Regional Active Faults

Fault	Maximum Moment Magnitude (M_{max})[1]	Significant Historic Earthquakes[2]
Cucamonga	6.9	-
San Jacinto (San Bernardino)	6.7	M6.3 Loma Linda, 7/22/1923
San Andreas (San Bernardino)	7.5	M7.9 Fort Tejon, 1/9/1857
Cleghorn	6.5	-
San Jose	6.4	M4.7 Upland, 6/28/1988 M5.4 Upland, 2/28/1990
Sierra Madre	7.2	-
North Frontal Fault Zone (West)	7.2	-
Chino-Central Avenue (Elsinore)	6.7	-
Elsinore (Glen Ivy)	6.8	M6 Elsinore, 5/15/1910
Whittier	6.8	M5.9 Whittier Narrows, (Workman Hill fault extension)
Clamshell – Sawpit Canyon	6.5	M5.8 Sierra Madre, 6/28/1991
Raymond	6.5	-
Upper Elysian Park (Blind Thrust)	6.4	-
Helendale – S. Lockhart	7.3	-
Verdugo	6.9	-
Hollywood	6.4	-
Newport-Inglewood (L.A. Basin)	7.1	M6.4 Long Beach, 3/10/1933
Pinto Mountain	7.2	-
San Gabriel	7.2	-
Lenwood-Lockhart-Old Woman Springs	7.5	-

Notes:
[1] Cao, et al., 2003.
[2] Southern California Earthquake Center (SCEC), 2004.

7. METHODOLOGY FOR GEOLOGIC IMPACT AND HAZARD ANALYSES

As outlined by the CEQA, the proposed project has been evaluated with respect to potential geologic and seismic impacts associated with the project. Evaluation of impacts due to potential geologic and seismic hazards is based on our review of readily available published geotechnical literature and geologic and seismic data pertinent to the proposed project, and site reconnaissance. The references and data reviewed include, but are not limited to, the following:

- Geologic maps and fault maps from the California Geological Survey (CGS) and United States Geological Survey (USGS).
- Topographic maps from the USGS.
- State of California Earthquake Fault Zone Maps.
- State of California Seismic Hazards Zones Reports and Maps.
- A groundwater map from the Chino Basin Watermaster.
- Aerial photographs.
- Seismic data from the CGS and Southern California Earthquake Center.
- Geotechnical publications by the CGS and USGS.

8. THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA guidelines (CERES, 2005b), a project is considered to have a geologic impact if its implementation would result in or expose people/structures to potential substantial adverse effects, including the risk of loss, injury, or death involving hazards involving one or more of the geologic conditions presented in Table 2. Table 2 also presents the impact potential as defined by CEQA associated with each of the geologic conditions discussed in the following sections.

Table 2 – Summary of Potential Geologic Impacts/Hazards

Geologic Condition	Impact Potential[1]			
	Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
Surface Fault Rupture			x	
Seismic Ground Shaking		x		
Seismic Ground Failure, Including Liquefaction			x	
Landslides or Mudflows			x	
Soil Erosion		x		
Subsidence			x	
Compressible/Collapsible Soil		x		
Expansive Soil			x	
Shallow Groundwater			x	
Dam Inundation, Seiche & Tsunamis				x

Note:
[1]Reference: CERES, 2005, Appendix G – Environmental Checklist Form, Final Text, dated October 26. Website: http://ceres.ca.gov/topic/envlaw/ceqa/guidelines/appendices.html

9. CONCLUSIONS AND RECOMMENDATIONS FOR POTENTIAL GEOLOGIC AND SEISMIC IMPACTS/HAZARDS

Based on our review of geologic and seismic background information, and geotechnical site reconnaissance, implementation of the proposed WSP project is not anticipated to have a significant impact on the geologic environment. However, future development within the WSP area may be subjected to potential impacts from geologic and seismic hazards. Potential impacts on the proposed project based on our evaluation are provided in the following sections.

The potential geologic and seismic hazards described below may be addressed by employing sound engineering practice in the design and construction of future development in the WSP area. This practice includes the implementation of appropriate geotechnical recommendations prior to the design and construction of the facilities in the project area. Typical methods to reduce potential hazards that may be encountered during the construction of future improvements are described in the following sections. Where appropriate, recommendations to mitigate potential geologic hazards are provided. Prior to design of future improvements, detailed subsurface geotechnical evaluation should be performed to address the site-specific conditions at the locations

of the planned improvements and to provide detailed recommendations for design and construction.

9.1. Surface Fault Rupture

Surface fault rupture is the offset or rupturing of the ground surface by relative displacement across a fault during an earthquake. Based on our review of referenced geologic and fault hazard data and site reconnaissance, the proposed WSP project area is not transected by known active or potentially active faults. The active Cucamonga fault is located approximately 2.8 miles northwest of the approximate center of the site, the active San Jacinto fault zone is located approximately 4 miles northeast of the approximate center of the site, and the active San Andreas fault zone is located approximately 9 miles northeast of the approximate center of the site. Therefore, the potential for surface rupture is relatively low. However, lurching or cracking of the ground surface as a result of nearby seismic events is possible.

9.2. Seismic Ground Shaking

Earthquake events from one of the regional active or potentially active faults near the project area could result in strong ground shaking which could affect the WSP project area. The level of ground shaking at a given location depends on many factors, including the size and type of earthquake, distance from the earthquake, and subsurface geologic conditions. The type of construction also affects how particular structures and improvements perform during ground shaking.

In order to evaluate the level of ground shaking that might be anticipated in the WSP project area, site-specific analysis was performed. The 2010 California Building Code recommends that the design of structures be based on the horizontal peak ground acceleration (PGA) having a 2 percent probability of exceedance in 50 years which is defined as the Maximum Considered Earthquake (MCE). The statistical return period for PGA_{MCE} is approximately 2,475 years. Using the USGS (2012) ground motion calculator, the probabilistic PGA_{MCE} for the proposed WSP was calculated as 1.01g at the northeast end of the project area and 0.75g at the southwest end of the project area. The design PGA was estimated to be 0.67g at the northeast end of the project area and 0.50g at the southwest end of the project area using the

USGS ground motion calculator. These estimates of ground motion do not include near-source factors that may be applicable to the design of structures on site. The higher estimates of ground acceleration at the northeast end of the project are reflective of the closer proximity to the active Cucamonga fault, San Jacinto fault zone and San Andreas fault zone, which are located northward of the project area.

These potential levels of ground shaking could have high impacts on future improvements in the WSP project area without appropriate design mitigation, and should be considered during the detailed design phase of the project. Mitigation of the potential impacts of seismic ground shaking can be achieved through project structural design. Structural elements of future improvements can be designed to resist or accommodate appropriate site-specific ground motions and to conform to the current seismic design standards. Appropriate structural design and mitigation techniques would reduce the impacts related to seismic ground shaking to low levels.

9.3. Liquefaction

Liquefaction is the phenomenon in which loosely deposited granular soils located below the water table undergo rapid loss of shear strength due to excess pore pressure generation when subjected to strong earthquake-induced ground shaking. Ground shaking of sufficient duration results in the loss of grain-to-grain contact due to rapid rise in pore water pressure causing the soil to behave as a fluid for a short period of time. Liquefaction is known generally to occur in saturated or near-saturated cohesionless soils at depths shallower than 50 feet bgs. Factors known to influence liquefaction potential include composition and thickness of soil layers, grain size, relative density, groundwater level, degree of saturation, and both intensity and duration of ground shaking. The potential damaging effects of liquefaction include differential settlement, loss of ground support for foundations, ground cracking, heaving and cracking of slabs due to sand boiling, buckling of deep foundations due to liquefaction-induced ground settlement.

The State of California Seismic Hazards Mapping Program produces maps identifying areas of the state susceptible to liquefaction, but has not yet produced maps within the WSP pro-

ject area. The County of San Bernardino has evaluated generalized areas of liquefaction susceptibility based on areas where potentially loose alluvial soils and shallow groundwater (generally within 50 feet of the ground surface) exist. Based on the Geologic Hazard Overlays of the San Bernardino County Land Use Plan (2009a, 2009b, 2009c, 2009d), the WSP project is not located in an area considered to have susceptibility for liquefaction. Therefore, the potential for liquefaction in the WSP project area is relatively low.

Further assessment of the liquefaction potential would be evaluated prior to detailed design and construction of future improvements in the WSP project area and incorporated into the design, as appropriate, Structural design and mitigation techniques would be developed, as appropriate, to reduce the impacts related to liquefaction to low levels. Therefore, the potential impacts due to liquefaction are considered to be minimal with incorporation of techniques such as structural design, in-situ ground modification, or supporting foundations with piles at depths designed specifically for liquefaction.

Methods for construction in areas with potential liquefaction hazard may include in-situ ground modification, removal of liquefiable layers and replacement with compacted fill, or support of project improvements with piles at depths designed specifically for liquefaction. Pile foundations can be designed for liquefaction hazard by supporting the piles in dense soil or bedrock below the liquefiable zone or other appropriate methods as evaluated during the site-specific evaluation. Additional recommendations for mitigation of liquefaction may include densification by installation of stone columns, vibration, deep dynamic compaction, and/or compaction grouting.

9.4. Landslides

Landslides, slope failures, and mudflows of earth materials generally occur where slopes are steep and/or the earth materials are too weak to support themselves. Earthquake-induced landslides may also occur due to seismic ground shaking. The topography of the WSP project area is relatively flat with minor drainage channel slopes in some areas that are less than approximately 15 feet in height. Portions of the drainage channels are lined with concrete. Materials from potential landslides or mudflows of the drainage channel slopes would be

deposited within the drain channels, and, therefore, should not affect the future development areas outside of the channels. During future development within the WSP project area, the existing drainage channel slopes would be maintained and surface runoff from surrounding areas designed and managed to reduce the potential for failures of the slopes. Slopes created for future developments within the WSP area should also be designed to reduce the potential for landslides or mudflows. Accordingly, the potential for future landslides or mudflows to affect developments within the WSP project areas is relatively low, and significant impacts related to landslides or mudflows within the WSP project area are not anticipated.

9.5. Soil Erosion

Soil erosion refers to the process by which soil or earth material is loosened or dissolved and removed from its original location. Erosion can occur by varying processes and may occur in the WSP project area where bare soil is exposed to wind or moving water (both rainfall and surface runoff). The processes of erosion are generally a function of material type, terrain steepness, rainfall or irrigation levels, surface drainage conditions, and general land uses.

Review of geologic references and site reconnaissance indicates that surface soils in the WSP project area are generally comprised of granular, sandy soils with gravel, cobbles and boulders. Sandy soils typically have low cohesion, and have a relatively higher potential for erosion from surface runoff when exposed in cut slopes or utilized near the face of fill embankments. Surface soils with higher amounts of clay tend to be less erodible as the clay acts as a binder to hold the soil particles together.

Future construction in the WSP project area would result in ground surface disruption during excavation, grading, and trenching that would create the potential for erosion to occur. However, a Storm Water Pollution Prevention Program (SWPPP) incorporating Best Management Practices (BMPs) for erosion control would be prepared prior to the start of construction in accordance with governing agencies. In addition, the topographic gradients at the project site are relatively gentle. During long-term operation of future developments in the WSP project area, surface drainage provisions, as appropriate, would reduce the potential

for soil erosion at the site. Therefore, potential soil erosion would be reduced with incorporation of appropriate BMPs.

With the implementation of BMPs incorporated in the project SWPPP during future construction, water- and wind-related soil erosion can be limited and managed within construction site boundaries. Examples of these procedures could include surface drainage measures for erosion due to water, such as the use of erosion prevention mats or geofabrics, silt fencing, sandbags and plastic sheeting, and temporary drainage devices. Positive surface drainage should be accommodated at project construction sites to allow surface runoff to flow away from site improvements or areas susceptible to erosion. To reduce wind-related erosion, wetting of soil surfaces and/or covering exposed ground areas and soil stockpiles could be considered during construction operations, as appropriate. The use of soil tackifiers may be considered to reduce the potential for water- and wind-related soil erosion.

During long-term operation of future developments in the WSP project area, soil erosion can be mitigated through site drainage design and maintenance practices. Design procedures can be performed to reduce soil erosion such as appropriate surface drainage design of roadways and facilities to provide for positive surface runoff. Design would address reducing concentrated run-off conditions that could cause erosion and affect the stability of project improvements.

9.6. Subsidence

Subsidence is characterized as a sinking of the ground surface relative to surrounding areas, and can generally occur where deep soil deposits are present. Subsidence in areas of deep soil deposits is typically associated with regional groundwater withdrawal or other fluid withdrawal from the ground such as oil and natural gas. Subsidence can result in the development of ground cracks and damage to foundations, buildings and other improvements.

The County of San Bernardino General Plan (2007) includes information regarding historical regional subsidence within the County associated with groundwater withdrawal. According to the General Plan, areas of southwestern San Bernardino County, including the La Verne, Chino-Riverside, and Bunker Hill-Yucaipa areas have experienced historic sub-

sidence from groundwater withdrawal. As a result, local water agencies have reportedly spread imported water to halt or impede further subsidence. Subsidence has also been reported in the Antelope Valley area and may extend eastward into the edge of San Bernardino County (County of San Bernardino, 2007). Based on the San Bernardino County General Plan, the project site is not located in the area of reported historic subsidence. Therefore, the potential for subsidence in the WSP project area is relatively low.

9.7. Compressible/Collapsible Soils

Compressible soils are generally comprised of soils that undergo consolidation when exposed to new loading, such as fill or foundation loads. Soil collapse is a phenomenon where the soils undergo a significant decrease in volume upon increase in moisture content, with or without an increase in external loads. Buildings, structures and other improvements may be subject to excessive settlement-related distress when compressible soils or collapsible soils are present.

Based on our background review, the WSP project area is underlain by young, sandy alluvial sediments, and some fill soils. The alluvial deposits underlying the site are generally unconsolidated, based on the young nature of the deposits, reflecting a depositional history without substantial loading, and may be subject to collapse. Older, undocumented fill soils are considered potentially compressible/collapsible. Due to the presence of potentially compressible/collapsible soils at the site, there is a potential for differential settlement to cause damage to project improvements. The potential impacts of settlement are significant without appropriate mitigation during detailed project design and construction.

Since future development within the WSP project area will involve construction of new improvements that would be loaded upon the existing soils, potential settlement and/or collapsible soils will be a consideration in the detailed design and construction of project improvements. Assessment of the potential for soils prone to settlement would be evaluated prior to detailed design and construction of project improvements and mitigation techniques would be developed, as appropriate, to reduce the impacts related to settlement to low levels.

To evaluate the potential for settlement to affect the proposed project components, surface reconnaissance and subsurface evaluation would be performed. During the detailed design phase of the project, site-specific geotechnical evaluations would be performed to assess the settlement potential of the on-site natural soils and undocumented fill. This may include detailed surface reconnaissance to evaluate site conditions, and drilling of exploratory borings or test pits and laboratory testing of soils, where appropriate, to evaluate site conditions.

Examples of possible design construction techniques for soils with potential for settlement include removal of the compressible/collapsible soil layers and replacement with compacted fill; surcharging to induce settlement prior to construction of improvements; allowing for a settlement period after or during construction of new fills; and specialized foundation design including the use of deep foundation systems to support structures. Varieties of in-situ soil improvement techniques are also available, such as dynamic compaction (heavy tamping) or compaction grouting.

9.8. Expansive Soils

Expansive soils include clay minerals that are characterized by their ability to undergo significant volume change (shrink or swell) due to variations in moisture content. Sandy soils are generally not expansive. Changes in soil moisture content can result from rainfall, irrigation, pipeline leakage, surface drainage, perched groundwater, drought, or other factors.

Volumetric change of expansive soil may cause excessive cracking and heaving of structures with shallow foundations, concrete slabs-on-grade, or pavements supported on these materials. Based on our background review and site reconnaissance, the near-surface soils in the WSP project site are predominantly comprised of sandy, coarse-grained materials. These soils typically have a low expansion potential. However, clayey soils may be present is areas not observed. Constructing project improvements on soils known to be potentially expansive could have a significant impact on future improvements.

Detailed assessment of the potential for expansive soils would be evaluated during the design phase of the project and mitigation techniques would be developed, as appropriate, to reduce the impacts related to expansive soils to low levels. Therefore, the potential impacts

due to expansive soils would be reduced to low levels with incorporation of techniques such as overexcavation and replacement with non-expansive soil, soil treatment, moisture management, and/or specific structural design for expansive soil conditions developed during design of the project.

9.9. Corrosive Soils

The project site is located in a geologic environment that could potentially contain soil conditions that are corrosive to concrete and metals. Corrosive soil conditions may exacerbate the corrosion hazard to buried conduits, foundations, and other buried concrete or metal improvements. Corrosive soil could cause premature deterioration of these underground structures or foundations. Constructing future project improvements on corrosive soils could have a substantial impact to the project. Assessment of the potential for corrosive soils would be evaluated during the detailed design phase of the project through soil testing procedures, and mitigation techniques would be developed, as appropriate, to reduce the impacts related to corrosive soils to low levels.

To evaluate the potential for corrosive soils to affect future project improvements, subsurface evaluation including laboratory testing would be performed. Evaluation of the corrosive soil potential can be accomplished by testing and analysis of soils at foundation design depths. The laboratory tests conducted on the soils prior to construction and improvement plan preparation would include corrosivity tests to evaluate the corrosivity of the subsurface soils. Review of these data by a corrosion engineer would result in corrosion protection measures suitable to the project elements. Evaluation of the potential corrosive soils hazard would be performed prior to detailed design and construction so that, in the event the hazard exists, mitigation techniques can be implemented. To avoid site-specific subsurface evaluation, corrosion protection measures can be included in the initial design for the proposed project improvements.

Mitigation of corrosive soil conditions may involve the use of concrete resistant to sulfate exposure. Corrosion protection for metals may be needed for underground foundations or structures in areas where corrosive groundwater or soil could potentially cause deterioration.

Typical mitigation techniques include epoxy and metallic protective coatings, the use of alternative (corrosion resistant) materials, and selection of the appropriate type of cement and water/cement ratio. Specific measures to reduce the potential effects of corrosive soils would be developed in the detailed design phase.

9.10. Groundwater

Based on our background review, groundwater levels in the vicinity of the WSP project area vary from approximately 300 to 600 feet below the ground surface. Future improvements in the project area are anticipated to consist of excavations and site grading for planned commercial/light industrial buildings, residential dwelling units, schools, pedestrian trails and bikeways, utility infrastructure improvements and roadway improvements. Based on the reported depth of groundwater in the project area and the anticipated depth of these construction activities, groundwater is not considered to have a significant impact on shallow excavations for these project components. However, areas of perched groundwater may be encountered during excavations. Groundwater levels may be influenced by seasonal variations, precipitation, irrigation, soil/rock types, groundwater pumping, and other factors and are subject to fluctuations.

Wet or saturated soil conditions encountered in excavations during construction for the project can cause instability of the excavations, and present a constraint to the construction of foundations. Excavations for foundations in areas with shallow perched groundwater may need to be cased/shored and/or dewatered to maintain stability of the excavations and provide access for construction. Saturated soils encountered in excavations below the groundwater can be difficult for the contractor to handle.

Shallow groundwater can also impact ground stability, and foundation design of proposed improvements, as well as the methods and costs of construction. If not adequately monitored by the contractor, dewatering of excavations could induce consolidation of the underlying soils, which could cause differential settlement of existing structures and improvements located near the excavation. The amount of consolidation due to dewatering would depend on many factors, including the areal extent and depth of dewatering, soil type, soil density, and

the methods used by the dewatering contractor. Excavations for underground structures would need to be performed with care to reduce the potential for lateral deflection of excavation sidewalls and/or shoring, which could also cause differential movement of structures located near the excavation.

Further study, including subsurface exploration, would be performed during the detailed design phase of future improvements to evaluate the presence of groundwater, seepage, and/or perched groundwater at the site and the potential impacts on design and construction of project improvements. Assessment of the potential for shallow groundwater would be evaluated during the design phase of the project and mitigation techniques would be developed, as appropriate, to reduce the impacts related to shallow groundwater to low levels. Therefore, the potential impacts due to groundwater would be reduced with incorporation of techniques such as construction dewatering.

9.11. Dam Inundation, Seiche and Tsunamis

Based on the Geologic Hazard Overlays of the San Bernardino County Land Use Plan (2009e, 2009f, 2009g, 2009h), the site is not located in an area subject to dam inundation. The WOD alignment is not located near a natural or manmade lake or reservoir, and is not subject to inundation from seiche. Due to the distance from the Pacific Ocean, the project is not subject to tsunami run-up hazards.

10. LIMITATIONS

The purpose of this study was to evaluate geotechnical conditions and potential geologic and seismic hazards at the site using readily available geotechnical data, site reconnaissance, and to provide a preliminary geotechnical report which can be utilized in the preparation of an environmental impact report for the project.

The geotechnical analyses presented in this report have been conducted in accordance with current engineering practice and the standard of care exercised by reputable geotechnical consultants performing similar tasks in this area. No other warranty, implied or expressed, is made regarding the conclusions, recommendations, and professional opinions expressed in this

report. Our preliminary conclusions and recommendations are based on a review of readily available geotechnical literature, geologic and seismic data, and an analysis of the observed conditions. Variations may exist and conditions not observed or described in this report may be encountered.

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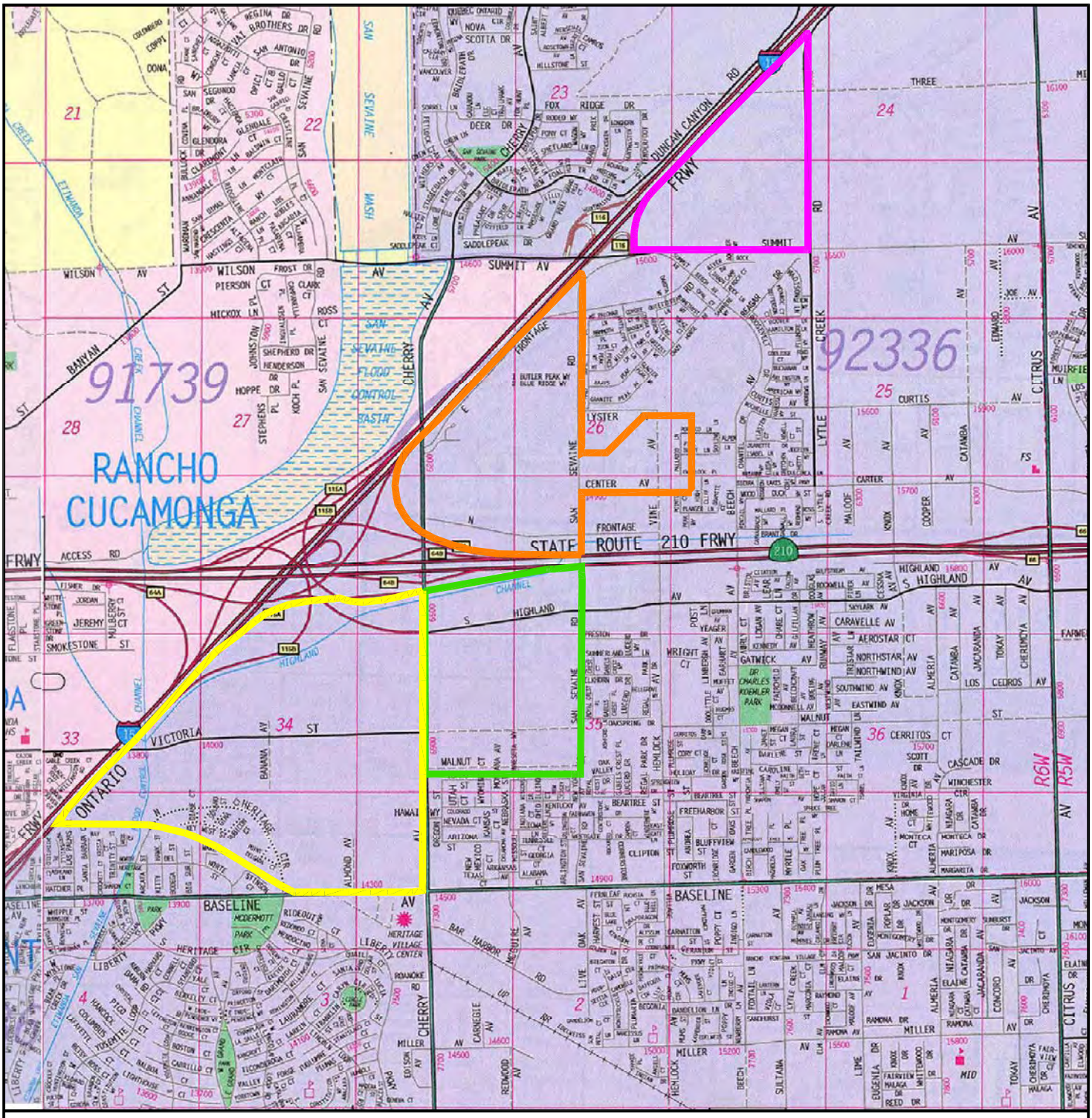

208578_A7.DWG..... –G.K.

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N

SCALE IN FEET

0 2400 4800

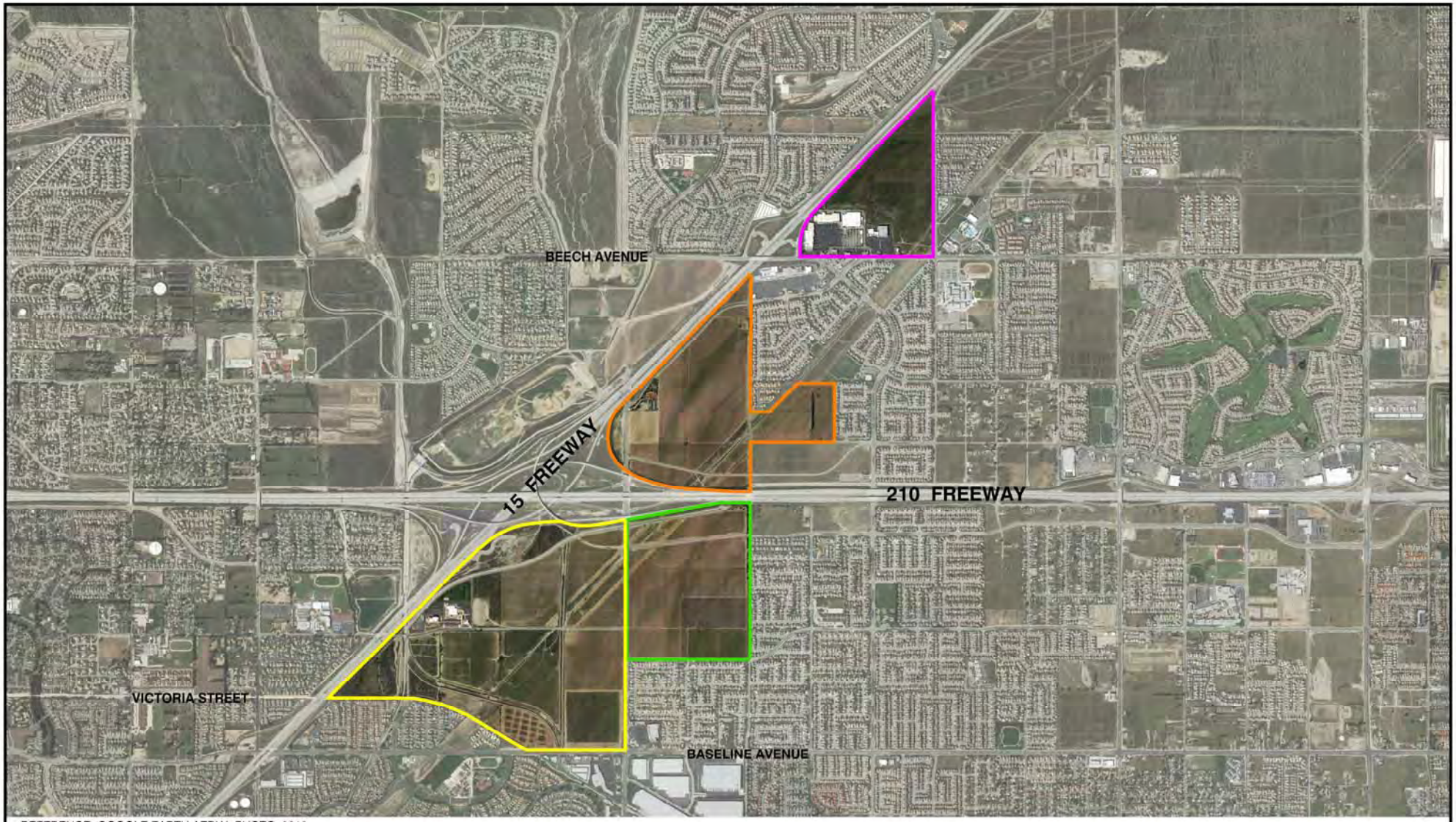
NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Map © Rand McNally, R.L.07-S-129

LEGEND

- FALCON RIDGE VILLAGE
- WESTGATE CENTER (GOLDEN TRIANGLE)
- WESTGATE VILLAGE EAST
- WESTGATE VILLAGE

Ninyo & Moore	SITE LOCATION	FIGURE
PROJECT NO. 208578002 / DATE 5/12	WESTGATE SPECIFIC PLAN FONTANA, CALIFORNIA	1



REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2012.

LEGEND

- FALCON RIDGE VILLAGE
- WESTGATE CENTER (GOLDEN TRIANGLE)
- WESTGATE VILLAGE EAST
- WESTGATE VILLAGE

N

SCALE IN FEET

0 3,000 6,000

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

PROJECT AREA BOUNDARIES

PROJECT NO.	DATE
208578002	5/12

WESTGATE SPECIFIC PLAN
FONTANA, CALIFORNIA

FIGURE

2

REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2012.

N

SCALE IN FEET

0 1,000 2,000

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

LEGEND

WESTGATE VILLAGE

Ninyo & Moore

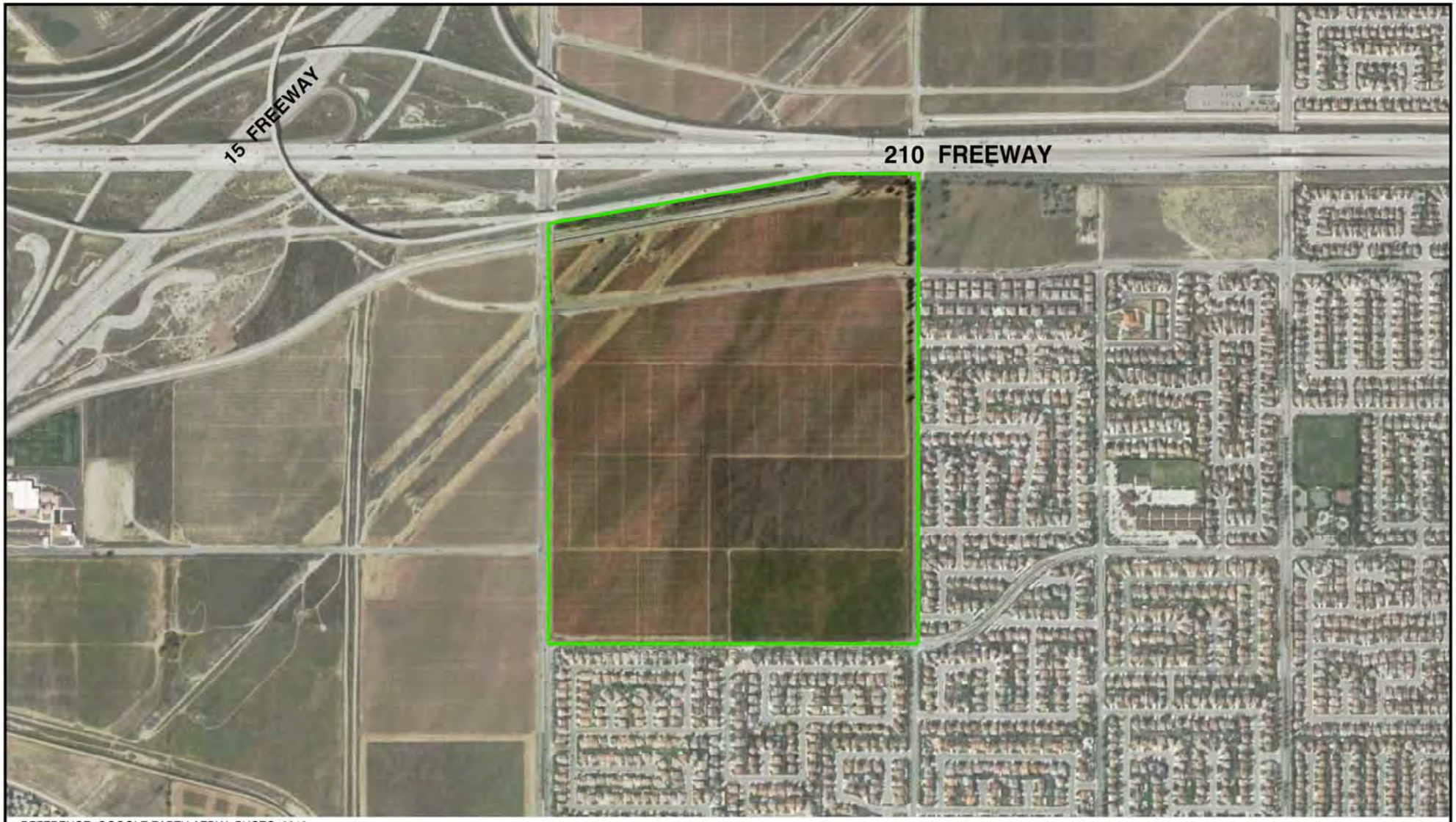
PROJECT NO.	DATE
208578002	5/12

WESTGATE VILLAGE SITE PLAN

WESTGATE SPECIFIC PLAN
FONTANA, CALIFORNIA

FIGURE

3A



REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2012.

N

SCALE IN FEET

0 1,000 2,000

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

LEGEND

WESTGATE VILLAGE EAST

Ninyo & Moore

WESTGATE VILLAGE EAST SITE PLAN

PROJECT NO.	DATE
208578002	5/12

WESTGATE SPECIFIC PLAN
FONTANA, CALIFORNIA

FIGURE

3B

REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2012.

N

SCALE IN FEET

0 1,000 2,000

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

LEGEND

WESTGATE CENTER (GOLDEN TRIANGLE)

Ninyo & Moore

PROJECT NO.	DATE
208578002	5/12

WESTGATE CENTER (GOLDEN TRIANGLE) STUDY AREA

WESTGATE SPECIFIC PLAN
FONTANA, CALIFORNIA

FIGURE

3C

REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2012.

N

SCALE IN FEET

0 1,000 2,000

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

LEGEND

FALCON RIDGE VILLAGE

Ninyo & Moore

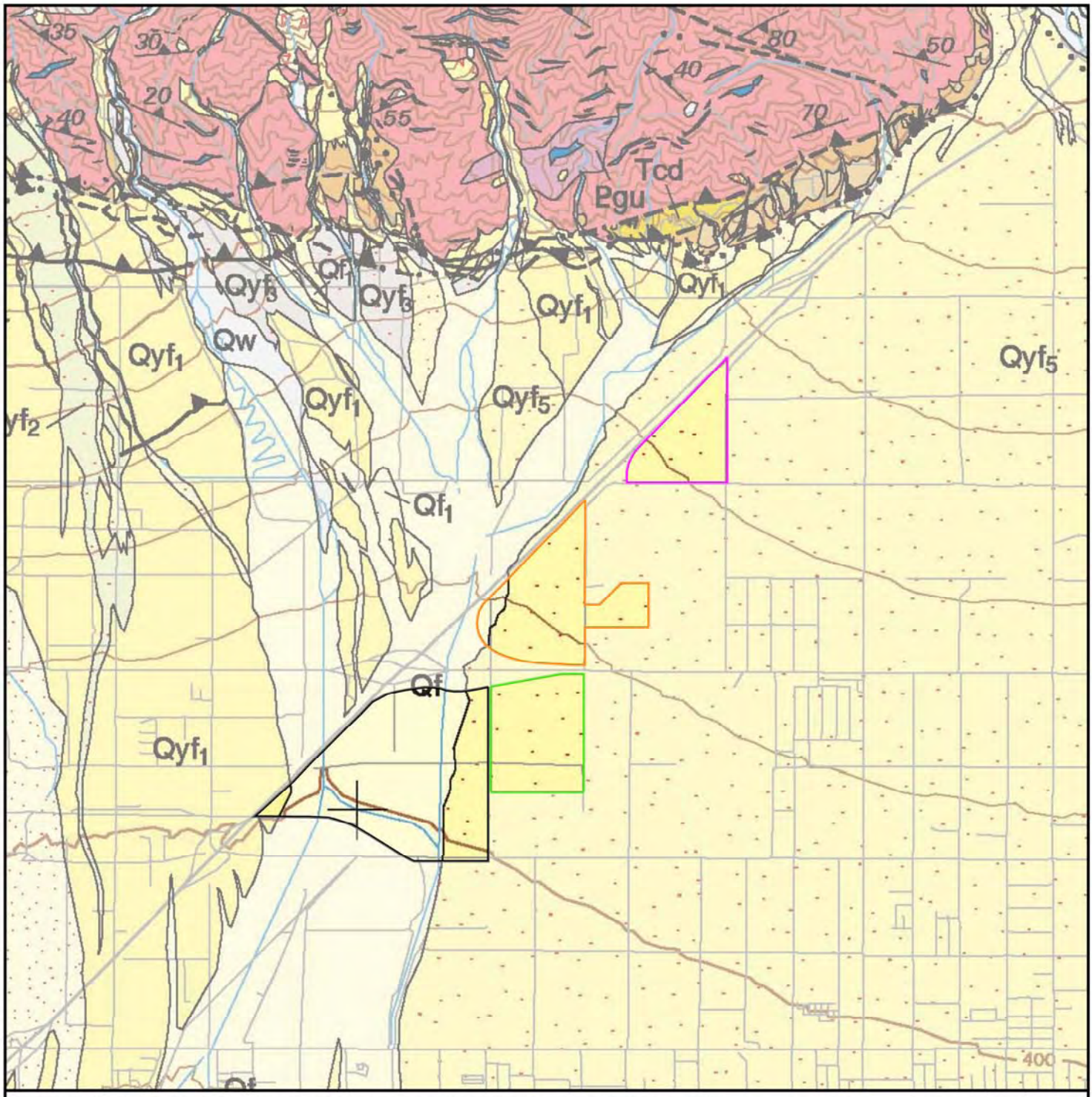
PROJECT NO.	DATE
208578002	5/12

FALCON RIDGE VILLAGE STUDY AREA

WESTGATE SPECIFIC PLAN
FONTANA, CALIFORNIA

FIGURE

3D



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N

SCALE IN FEET

0 4,000 8,000

LEGEND

- CONTACT LINE
- Qf — VERY YOUNG ALLUVIAL FAN DEPOSITS
- Qyf — YOUNG ALLUVIAL FAN DEPOSITS
- FALCON RIDGE VILLAGE
- WESTGATE CENTER (GOLDEN TRIANGLE)
- WESTGATE VILLAGE EAST
- WESTGATE VILLAGE

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

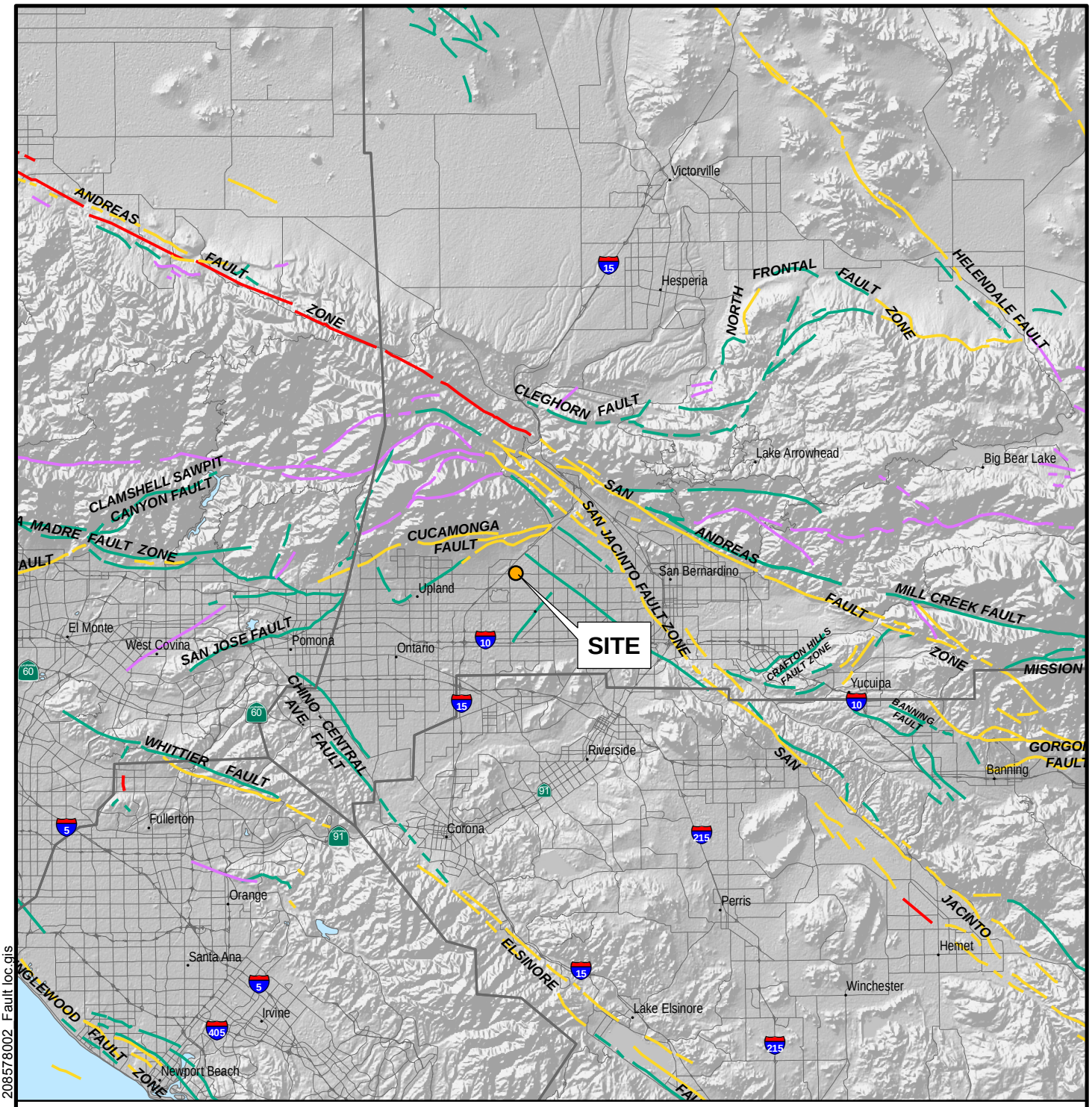
PROJECT NO.	DATE
208578002	5/12

REGIONAL GEOLOGY

WESTGATE SPECIFIC PLAN
FONTANA, CALIFORNIA

FIGURE

4



208578002 Fault loc.gis

GIS DATA SOURCE: CALIFORNIA GEOLOGICAL SURVEY (CGS); ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE (ESRI)
REFERENCE: JENNINGS, 2010, FAULT ACTIVITY MAP OF CALIFORNIA AND ADJACENT AREAS

LEGEND

FAULT ACTIVITY:

- HISTORICALLY ACTIVE
- LATE QUATERNARY
- HOLOCENE ACTIVE
- QUATERNARY
- COUNTY BOUNDARIES

N

0 5 10 20 Miles

NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	FAULT LOCATIONS	FIGURE
PROJECT NO. 208578002 / DATE 5/12	WESTGATE SPECIFIC PLAN FONTANA, CALIFORNIA	5

Appendix F - Greenhouse Gas Technical Appendix

WESTGATE SPECIFIC PLAN

Draft EIR

Appendix F

Greenhouse Gas Assessment Files

Provided by PCR Services Corporation

December 2014

F.1 Greenhouse Gas Emissions

Appendix F.1
Greenhouse Gas Emissions

- CalEEMod Output Files
  - Operational Emissions
- GHG Analysis
- GHG Reduction Plan

Unmitigated Operational Greenhouse Gas Emissions ($MTCO_2e$/year)

Emissions Source	Phase I (2018)	Phase I BAU (2018)	Buildout (2035)	Buildout BAU (2035)
Amortized Construction	454	454	1,814	1,814
Area Sources	464	464	1,659	1,659
Electricity	4,522	4,835	21,014	22,710
Natural Gas	1,950	2,478	7,185	9,081
Mobile Sources [a]	29,050	33,154	101,218	115,519
Solid Waste	625	625	2,060	2,060
Water	859	1,051	2,875	3,447
Total	37,923	43,061	137,825	156,290
Significance Threshold	15.8%	–	15.8%	–
Percent Reduction from BAU	11.9%	–	11.8%	–
Conflicts with Reduction Target	**YES**	–	**YES**	–

Notes:

a. Mobile source emissions for the unmitigated project (Phase I and Buildout) include a 12.38% reduction to account for VMT-reducing project design features (see "Transportation Reduction Measures" for details).

Source: PCR Services Corporation, 2014; California Emissions Estimator Model, (version 2013.2.2)

Mitigated Operational Greenhouse Gas Emissions ($MTCO_2e$/year)

Emissions Source	Phase I (2018)	Phase I BAU (2018)	Buildout (2035)	Buildout BAU (2035)
Amortized Construction	454	454	1,814	1,814
Area Sources	464	464	1,659	1,659
Electricity	4,522	4,835	21,014	22,710
Natural Gas	1,950	2,478	7,185	9,081
Mobile Sources [a]	26,590	33,154	92,415	115,519
Solid Waste	625	625	2,060	2,060
Water	859	1,051	2,875	3,447
Total	35,463	43,061	129,023	156,290
Significance Threshold	15.8%	–	15.8%	–
Percent Reduction from BAU	17.6%	–	17.4%	–
Conflicts with Reduction Target	**NO**	–	**NO**	–

Notes:

a. Mobile source emissions for the unmitigated project (Phase I and Buildout) include a 19.80% reduction for Phase I and a 20.00% reduction for Buildout to account for VMT-reducing project design features (see "Transportation Reduction Measures" for details).

Source: PCR Services Corporation, 2014; California Emissions Estimator Model, (version 2013.2.2)

Westgate Specific Plan
Draft EIR
Greenhouse Gas Assessment

Construction Greenhouse Gas Emissions

Source	GHG Emissions ($MTCO_2e$) Modeled Phase I [a]	Total Phase I [b]	Buildout [c]
Construction (Total)	4,536	13,608	54,434
Construction (Amortized over 30 years)	151	454	1,814

Notes:

a. CalEEMod model run for construction is based on the assumption that the maximum amount of simultaneous construction activity would be equal to or less than approximately one-third of the Phase I development.

b. The total Phase I construction emissions are multiplied by three as per the assumption in note "a." above.

c. Phase I development would build out just over one-fourth of all land uses under the Specific Plan. Therefore, buildout construction emissions are based on four times the total Phase I emissions.

Source: PCR Services Corporation, 2014

Transportation Reduction Measures[a]

Code	Reduction Measure	VMT Reduction %	Explanation (assumptions in bold/underline)
	Project Features		
LUT-2	Increase Location Efficiency	10	Suburban center: 10% reduction
SDT-1	Provide Pedestrian Network Improvements	1	Extent of pedestrian accommodations within project site only
SDT-2	Provide Traffic Calming Measures	0.50	Assuming **50%** of streets and **50%** intersections
TST-3	Expand Transit Network	0.88	Assuming **100%** coverage (according to Traffic - Transportation section)
SUBTOTAL		**12.38**	
	Mitigation Measures		
TRT-2	Commute Trip Reduction - Monitoring & Reporting Required	2.10	% VMT reduction = % shift in vehicle mode share of commute trips(21)*% employees eligible (**50**)*% commute VMT of total (20)[b]
TRT-3	Provide Ride-Sharing Programs	1.00	% VMT reduction = % reduction in commute VMT (**10** for suburban center)*% employees eligible (**50**)*% commute VMT of total (20)[b]
TRT-6	Encourage Telecommuting and Alternative Work Schedules	0.35	At **25%** employee participation, a 9-day/80-hr work week = 1.75%*% commute VMT of total (20)[b]
TRT-10	Implement a School Carpool Program	1.13	% VMT reduction = % familities participating (**25**)*adjustment factor (45%)*% school VMT of total (10)[b]
TRT-11	Provide Employer-Sponsored Vanpool/Shuttle	0.67	% VMT reduction = % shift in vanpool mode share of commute trips (**10**)*% employees eligible (**50**)*adjustments from vanpool mode share to commute VMT(0.67)*% commute VMT of total (20)[b]
TRT-13	Implement School Bus Program	3.75-5.1	% VMT reduction = % participation (**50-68**)* conversion from school day VMT to annual school VMT (0.75)*% school VMT of total(5.8 [Phase I] or 10 [Buildout])[b]
SUBTOTAL[c]	Reduction Range (Buildout)	**9.00 - 10.35**	
	Reduction Range (Phase I)	**7.42 - 8.40**	

Notes:

a. Source: California Air Pollution Control Officers Association - Quantifying Greenhouse Gas Mitigation Measures, August 2010.

b. See "Vehicle Miles Traveled by Land Use Category" and "Work Commute Vehicle Miles Traveled" for percent work/school commute of total VMT.

c. A global maximum reduction of 20% of all VMT was taken for the project as a **suburban center**, per Chart 6-2 of Source (in note "a." above).

Westgate Specific Plan
Draft EIR
Greenhouse Gas Assessment

Vehicle Miles Traveled by Land Use Category

Land Use	Phase I Annual Total VMT	Phase I % of Total VMT	Buildout Annual Total VMT	Buildout % of Total VMT
Single-Family	13,598,078	17.3%	28,627,532	9.5%
Multi-Family	26,789,890	34.1%	114,892,849	38.1%
City Park	4,517,371	5.7%	6,442,494	2.1%
Elementary School	4,579,210	5.8%	9,158,420	3.0%
High School	-	0.0%	20,179,447	6.7%
Retail	17,650,680	22.5%	17,638,580	5.8%
Office	-	0.0%	83,260,360	27.6%
Industrial	-	0.0%	9,271,617	3.1%
Warehouse	11,484,007	14.6%	12,359,065	4.1%
Total	78,619,236	100.0%	301,830,364	100.0%
Total School	4,579,210	5.8%	29,337,867	9.7%

Work Commute Vehicle Miles Traveled

Land Use	Work Trip Length (miles)	% Work Trips	% Primary	% Diverted	% Pass-By	Phase I Units	Phase I Trip Rate (trips/unit)	Phase I Work VMT	Buildout Units	Buildout Trip Rate (trips/unit)	Buildout Work VMT
Single-Family	14.7	40.2%	86%	11%	3%	418	9.52	7,621,952	880	9.52	16,046,214
Multi-Family	14.7	40.2%	86%	11%	3%	1,373	5.71	15,016,185	5,530	6.08	64,399,379
Total Work Commute VMT (Home to Work)								22,638,137			80,445,593
Percent of Total VMT								28.8%			26.7%

Fontana Westgate SP - Phase 1 Construction

San Bernardino-South Coast County Annual

1.0 Pro ect Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	1,030.00	Student	12.00	86,111.47	0
Unrefrigerated Warehouse-No Rail	406.00	1000sqft	12.65	406,000.00	0
City Park	13.72	Acre	13.72	597,643.20	0
Condo/Townhouse	458.00	Dwelling Unit	74.90	458,000.00	1310
Single Family Housing	139.00	Dwelling Unit	24.00	250,200.00	398
Strip Mall	52.41	1000sqft	1.20	52,410.00	0
Other Asphalt Surfaces	15.00	Acre	15.00	653,400.00	0

1.2 Other Pro ect Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate one	10			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - [Draft EIR Section 2.0, Project Description]. Conservative assumption that up to approximately one-third of the Phase 1 land uses would be under construction at any given time.

Construction Phase - Site Preparation, Grading, Building Construction/Architectural Coating/Paving.

Off-road Equipment - 4 Air Compressors.

Off-road Equipment - 4 Cranes, 4 Forklifts, 4 Tractors/Loaders/Backhoes, 4 Welders, 4 Aerial Lifts, 4 Other Construction Equipment, 4 Other General Industrial Equipment.
Off-road Equipment - 4 Excavators, 4 Graders, 4 Rubber Tired Dozers, 4 Scrapers, 4 Tractors/Loaders Backhoes, 4 Other Material Handling Equipment, 4 Sweepers/Scrubbers.
Off-road Equipment - 4 Pavers, 4 Paving Equipment, 4 Rollers, 8 Cement and Mortar Mixers.

Off-road Equipment - 4 Rubber Tired Dozers, 4 Tractors/Loaders/Backhoes.

Grading -

Construction Off-road Equipment Mitigation - Use Water/Soil Stabilizers on exposed areas and unpaved roads three times daily; Limit vehicle speeds to 15 mph on unpaved roads.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	10
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	10
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	10
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	220.00	131.00
tblConstructionPhase	NumDays	3,100.00	305.00
tblConstructionPhase	NumDays	310.00	65.00
tblConstructionPhase	NumDays	220.00	87.00
tblConstructionPhase	NumDays	120.00	23.00
tblConstructionPhase	PhaseEndDate	7/3/2017	12/31/2016
tblConstructionPhase	PhaseEndDate	12/30/2016	12/31/2016
tblConstructionPhase	PhaseEndDate	10/30/2015	10/31/2015
tblConstructionPhase	PhaseEndDate	5/2/2017	12/31/2016
tblConstructionPhase	PhaseStartDate	1/1/2017	7/1/2016
tblConstructionPhase	PhaseStartDate	1/1/2017	9/1/2016
tblGrading	MaterialExported	0.00	108,450.00
tblLandUse	LotAcreage	1.98	12.00

tblLandUse	LotAcreage	9.32	12.65
tblLandUse	LotAcreage	28.63	74.90
tblLandUse	LotAcreage	45.13	24.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

2.1 Overall Construction

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	tons/yr										MT/yr					
2015	1.3146	13.6252	10.5657	0.0172	1.6565	0.6239	2.2804	0.7095	0.5777	1.2872	0.0000	1,560.4426	1,560.4426	0.2379	0.0000	1,565.4381
2016	18.3064	16.1558	19.3744	0.0356	1.5712	0.8466	2.4178	0.4214	0.8031	1.2245	0.0000	2,963.9813	2,963.9813	0.3207	0.0000	2,970.7161

Total	**19.6210**	**29.7809**	**29.9401**	**0.0528**	**3.2277**	**1.4705**	**4.6982**	**1.1309**	**1.3808**	**2.5117**	**0.0000**	**4 524.4239**	**4 524.4239**	**0.5586**	**0.0000**	**4 536.1542**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2015	7/31/2015	5	23	
2	Grading	Grading	8/1/2015	10/31/2015	5	65	
3	Building Construction	Building Construction	11/1/2015	12/31/2016	5	305	
4	Architectural Coating	Architectural Coating	7/1/2016	12/31/2016	5	131	
5	Paving	Paving	9/1/2016	12/31/2016	5	87	

Acres of Grading (Grading Phase): 390

Residential Indoor: 1 434 105 Residential Outdoor: 478 035 Non-Residential Indoor: 1 713 247 Non-Residential Outdoor: 571 082

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	4	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	4	8.00	162	0.38
Grading	Graders	4	8.00	174	0.41
Grading	Other Material Handling Equipment	4	8.00	167	0.40
Grading	Rubber Tired Dozers	4	8.00	255	0.40
Grading	Scrapers	4	8.00	361	0.48
Grading	Sweepers/Scrubbers	4	8.00	64	0.46
Grading	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Aerial Lifts	4		62	0.31
Building Construction	Cranes	4	7.00	226	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	4	8.00	84	0.74

Building Construction	Other Construction Equipment	4		171	0.42
Building Construction	Other General Industrial Equipment	4		87	0.34
Building Construction	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Building Construction	Welders	4	8.00	46	0.45
Architectural Coating	Air Compressors	4	6.00	78	0.48
Paving	Cement and Mortar Mixers	8		9	0.56
Paving	Pavers	4	8.00	125	0.42
Paving	Paving Equipment	4	8.00	130	0.36
Paving	Rollers	4	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	28	70.00	0.00	13,556.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	32	854.00	251.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	4	171.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	20	50.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2015

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	tons/yr										MT/yr					

Fugitive Dust					0.2770	0.0000	0.2770	0.1523	0.0000	0.1523	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0751	0.8197	0.6165	5.5000e-004		0.0432	0.0432		0.0398	0.0398	0.0000	52.6396	52.6396	0.0157	0.0000	52.9697
Total	**0.0751**	**0.8197**	**0.6165**	**5.5000e-004**	**0.2770**	**0.0432**	**0.3203**	**0.1523**	**0.0398**	**0.1921**	**0.0000**	**52.6396**	**52.6396**	**0.0157**	**0.0000**	**52.9697**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	1.4900e-003	0.0157	3.0000e-005	2.5200e-003	2.0000e-005	2.5400e-003	6.7000e-004	2.0000e-005	6.9000e-004	0.0000	2.3380	2.3380	1.3000e-004	0.0000	2.3408
Total	**9.9000e-004**	**1.4900e-003**	**0.0157**	**3.0000e-005**	**2.5200e-003**	**2.0000e-005**	**2.5400e-003**	**6.7000e-004**	**2.0000e-005**	**6.9000e-004**	**0.0000**	**2.3380**	**2.3380**	**1.3000e-004**	**0.0000**	**2.3408**

3.3 Grading - 2015

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	tons/yr										MT/yr					
Fugitive Dust					0.9958	0.0000	0.9958	0.4536	0.0000	0.4536	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.7288	8.1089	5.1441	6.0700e-003		0.4186	0.4186		0.3851	0.3851	0.0000	578.8224	578.8224	0.1728	0.0000	582.4513
Total	**0.7288**	**8.1089**	**5.1441**	**6.0700e-003**	**0.9958**	**0.4186**	**1.4144**	**0.4536**	**0.3851**	**0.8387**	**0.0000**	**578.8224**	**578.8224**	**0.1728**	**0.0000**	**582.4513**

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	tons/yr										MT/yr					

Hauling	0.1382	2.2367	1.6083	4.9700e-003	0.1161	0.0363	0.1524	0.0318	0.0334	0.0652	0.0000	459.0749	459.0749	3.6500e-003	0.0000	459.1515
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.8300e-003	0.0148	0.1551	3.0000e-004	0.0249	2.0000e-004	0.0251	6.6200e-003	1.8000e-004	6.8100e-003	0.0000	23.1257	23.1257	1.3100e-003	0.0000	23.1532
Total	**0.1480**	**2.2515**	**1.7634**	**5.2700e-003**	**0.1410**	**0.0365**	**0.1775**	**0.0385**	**0.0336**	**0.0720**	**0.0000**	**482.2006**	**482.2006**	**4.9600e-003**	**0.0000**	**482.3047**

3.4 Building Construction - 2015

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	tons/yr										MT/yr					
Off-Road	0.2240	1.7494	1.0515	1.6100e-003		0.1143	0.1143		0.1089	0.1089	0.0000	143.3580	143.3580	0.0326	0.0000	144.0420
Total	**0.2240**	**1.7494**	**1.0515**	**1.6100e-003**		**0.1143**	**0.1143**		**0.1089**	**0.1089**	**0.0000**	**143.3580**	**143.3580**	**0.0326**	**0.0000**	**144.0420**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0564	0.5723	0.6937	1.2000e-003	0.0341	9.6400e-003	0.0438	9.7700e-003	8.8600e-003	0.0186	0.0000	110.1012	110.1012	8.8000e-004	0.0000	110.1197
Worker	0.0812	0.1219	1.2808	2.4400e-003	0.2060	1.6400e-003	0.2076	0.0547	1.5000e-003	0.0562	0.0000	190.9828	190.9828	0.0108	0.0000	191.2101
Total	**0.1376**	**0.6942**	**1.9745**	**3.6400e-003**	**0.2401**	**0.0113**	**0.2514**	**0.0645**	**0.0104**	**0.0748**	**0.0000**	**301.0840**	**301.0840**	**0.0117**	**0.0000**	**301.3297**

3.4 Building Construction - 2016

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	tons/yr										MT/yr					

Off-Road	1.2300	9.8676	6.1380	9.5600e-003		0.6275	0.6275		0.5974	0.5974	0.0000	845.4804	845.4804	0.1873	0.0000	849.4127
Total	**1.2300**	**9.8676**	**6.1380**	**9.5600e-003**		**0.6275**	**0.6275**		**0.5974**	**0.5974**	**0.0000**	**845.4804**	**845.4804**	**0.1873**	**0.0000**	**849.4127**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2936	2.9943	3.8239	7.1000e-003	0.2025	0.0476	0.2501	0.0580	0.0437	0.1017	0.0000	645.6339	645.6339	4.7200e-003	0.0000	645.7331
Worker	0.4289	0.6472	6.8122	0.0145	1.2220	9.2400e-003	1.2312	0.3245	8.4900e-003	0.3330	0.0000	1,092.0833	1,092.0833	0.0587	0.0000	1,093.3151
Total	**0.7225**	**3.6414**	**10.6361**	**0.0216**	**1.4245**	**0.0568**	**1.4813**	**0.3825**	**0.0522**	**0.4347**	**0.0000**	**1 737.7172**	**1 737.7172**	**0.0634**	**0.0000**	**1 739.0482**

3.5 Architectural Coating - 2016

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	tons/yr										MT/yr					
Archit. Coating	16.0045					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0965	0.6215	0.4936	7.8000e-004		0.0515	0.0515		0.0515	0.0515	0.0000	66.8953	66.8953	7.8900e-003	0.0000	67.0609
Total	**16.1010**	**0.6215**	**0.4936**	**7.8000e-004**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**66.8953**	**66.8953**	**7.8900e-003**	**0.0000**	**67.0609**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0431	0.0650	0.6846	1.4500e-003	0.1228	9.3000e-004	0.1237	0.0326	8.5000e-004	0.0335	0.0000	109.7551	109.7551	5.9000e-003	0.0000	109.8789
Total	**0.0431**	**0.0650**	**0.6846**	**1.4500e-003**	**0.1228**	**9.3000e-004**	**0.1237**	**0.0326**	**8.5000e-004**	**0.0335**	**0.0000**	**109.7551**	**109.7551**	**5.9000e-003**	**0.0000**	**109.8789**

3.6 Paving - 2016

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	tons/yr										MT/yr					
Off-Road	0.1818	1.9476	1.2891	1.9400e-003		0.1097	0.1097		0.1009	0.1009	0.0000	182.8202	182.8202	0.0552	0.0000	183.9783
Paving	0.0197					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2015**	**1.9476**	**1.2891**	**1.9400e-003**		**0.1097**	**0.1097**		**0.1009**	**0.1009**	**0.0000**	**182.8202**	**182.8202**	**0.0552**	**0.0000**	**183.9783**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.3700e-003	0.0126	0.1330	2.8000e-004	0.0239	1.8000e-004	0.0240	6.3300e-003	1.7000e-004	6.5000e-003	0.0000	21.3131	21.3131	1.1400e-003	0.0000	21.3371
Total	**8.3700e-003**	**0.0126**	**0.1330**	**2.8000e-004**	**0.0239**	**1.8000e-004**	**0.0240**	**6.3300e-003**	**1.7000e-004**	**6.5000e-003**	**0.0000**	**21.3131**	**21.3131**	**1.1400e-003**	**0.0000**	**21.3371**

Fontana Westgate SP Buildout (Phase 1)

San Bernardino-South Coast County Annual

1.0 Pro ect Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	1,030.00	Student	12.00	86,111.47	0
Unrefrigerated Warehouse-No Rail	1,218.00	1000sqft	27.96	1,218,000.00	0
City Park	41.15	Acre	41.15	1,792,494.00	0
Condo/Townhouse	1,373.00	Dwelling Unit	74.90	1,373,000.00	3927
Single Family Housing	418.00	Dwelling Unit	72.00	752,400.00	1195
Strip Mall	157.24	1000sqft	3.61	157,235.00	0

1.2 Other Pro ect Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate one	10			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Draft EIR Section 2.0, Project Description

Vehicle Trips - Kunzman Associates, Inc. ,Westgate Specific Plan Traffic Impact Analysis, (2013)

Woodstoves - No Wood Burning

Water And Wastewater - Reference- Draft EIR Section 4.O.1

Solid Waste - Reference: Draft EIR 4.O.3 Solid Waste

Energy Mitigation - CEC 2013- 25% better than 2008; Exceed Title 24: 25%

Water Mitigation - Reduction Indoor: 20%; Outdoor reclaimed water use based on projected 2035 recycled water supply as a % of total supplies (FWC, WSA, Jan 2014 update).

Waste Mitigation - Waste Mitigation - Waste Diversion Rate: 50%

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	1,167.05	1,373.00
tblFireplaces	NumberGas	355.30	418.00
tblFireplaces	NumberNoFireplace	137.30	0.00
tblFireplaces	NumberNoFireplace	41.80	0.00
tblFireplaces	NumberWood	68.65	0.00
tblFireplaces	NumberWood	20.90	0.00
tblLandUse	LandUseSquareFeet	157,240.00	157,235.00
tblLandUse	LotAcreage	1.98	12.00
tblLandUse	LotAcreage	85.81	74.90
tblLandUse	LotAcreage	135.71	72.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblSolidWaste	SolidWasteGenerationRate	3.54	3.70
tblSolidWaste	SolidWasteGenerationRate	631.58	661.40
tblSolidWaste	SolidWasteGenerationRate	187.97	196.80
tblSolidWaste	SolidWasteGenerationRate	489.95	513.30
tblSolidWaste	SolidWasteGenerationRate	165.10	172.90
tblSolidWaste	SolidWasteGenerationRate	1,144.92	1,198.97
tblVehicleTrips	ST_TR	1.59	38.15
tblVehicleTrips	ST_TR	7.16	5.71
tblVehicleTrips	ST_TR	0.00	1.29
tblVehicleTrips	ST_TR	10.08	9.52
tblVehicleTrips	ST_TR	42.04	59.00
tblVehicleTrips	ST_TR	2.59	2.20

tblVehicleTrips	SU_TR	1.59	38.15
tblVehicleTrips	SU_TR	6.07	5.71
tblVehicleTrips	SU_TR	0.00	1.29
tblVehicleTrips	SU_TR	8.77	9.52
tblVehicleTrips	SU_TR	20.43	59.00
tblVehicleTrips	SU_TR	2.59	2.20
tblVehicleTrips	WD_TR	1.59	38.15
tblVehicleTrips	WD_TR	6.59	5.71
tblVehicleTrips	WD_TR	9.57	9.52
tblVehicleTrips	WD_TR	44.32	59.00
tblVehicleTrips	WD_TR	2.59	2.20
tblWater	IndoorWaterUseRate	89,456,477.18	37,759,621.00
tblWater	IndoorWaterUseRate	2,496,967.20	1,053,975.00
tblWater	IndoorWaterUseRate	27,234,382.71	11,495,665.00
tblWater	IndoorWaterUseRate	11,647,163.28	4,916,127.00
tblWater	IndoorWaterUseRate	281,662,500.00	118,890,489.00
tblWater	OutdoorWaterUseRate	49,029,457.54	20,695,382.00
tblWater	OutdoorWaterUseRate	56,396,474.74	23,805,001.00
tblWater	OutdoorWaterUseRate	6,420,772.80	2,710,215.00
tblWater	OutdoorWaterUseRate	17,169,502.14	7,247,265.00
tblWater	OutdoorWaterUseRate	7,138,583.94	3,013,114.00
tblWoodstoves	NumberCatalytic	68.65	0.00
tblWoodstoves	NumberCatalytic	20.90	0.00
tblWoodstoves	NumberNoncatalytic	68.65	0.00
tblWoodstoves	NumberNoncatalytic	20.90	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

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	tons/yr										MT/yr					
Area	24.6593	0.2162	18.6346	9.8000e-004		0.1317	0.1317		0.1313	0.1313	0.0000	460.3167	460.3167	0.0383	7.8800e-003	463.5655
Energy	0.2489	2.1382	0.9862	0.0136		0.1720	0.1720		0.1720	0.1720	0.0000	7,279.3431	7,279.3431	0.2686	0.0910	7,313.1824
Mobile	15.2705	50.7318	177.4549	0.4401	29.7843	0.6807	30.4650	7.9671	0.6270	8.5941	0.0000	33,129.0318	33,129.0318	1.2031	0.0000	33,154.2957
Waste						0.0000	0.0000		0.0000	0.0000	557.6304	0.0000	557.6304	32.9550	0.0000	1,249.6856
Water						0.0000	0.0000		0.0000	0.0000	55.2389	831.5052	886.7442	5.7118	0.1419	1,050.6724
Total	**40.1788**	**53.0862**	**197.0758**	**0.4547**	**29.7843**	**0.9844**	**30.7687**	**7.9671**	**0.9304**	**8.8974**	**612.8693**	**41 700.1969**	**42 313.0662**	**40.1768**	**0.2407**	**43 231.4017**

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	tons/yr										MT/yr					
Area	24.6593	0.2162	18.6346	9.8000e-004		0.1317	0.1317		0.1313	0.1313	0.0000	460.3167	460.3167	0.0383	7.8800e-003	463.5655
Energy	0.1958	1.6819	0.7742	0.0107		0.1353	0.1353		0.1353	0.1353	0.0000	6,442.8498	6,442.8498	0.2442	0.0784	6,472.2740
Mobile	15.2705	50.7318	177.4549	0.4401	29.7843	0.6807	30.4650	7.9671	0.6270	8.5941	0.0000	33,129.0318	33,129.0318	1.2031	0.0000	33,154.2957
Waste						0.0000	0.0000		0.0000	0.0000	278.8152	0.0000	278.8152	16.4775	0.0000	624.8428
Water						0.0000	0.0000		0.0000	0.0000	44.1912	683.7332	727.9244	4.5703	0.1137	859.1395
Total	**40.1257**	**52.6299**	**196.8637**	**0.4518**	**29.7843**	**0.9477**	**30.7320**	**7.9671**	**0.8937**	**8.8607**	**323.0063**	**40 715.9315**	**41 038.9378**	**22.5334**	**0.1999**	**41 574.1175**

	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	N20	CO2e
Percent Reduction	**0.13**	**0.86**	**0.11**	**0.64**	**0.00**	**3.73**	**0.12**	**0.00**	**3.94**	**0.41**	**47.30**	**2.36**	**3.01**	**43.91**	**16.95**	**3.83**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	tons/yr										MT/yr					
Mitigated	15.2705	50.7318	177.4549	0.4401	29.7843	0.6807	30.4650	7.9671	0.6270	8.5941	0.0000	33,129.0318	33,129.0318	1.2031	0.0000	33,154.2957
Unmitigated	15.2705	50.7318	177.4549	0.4401	29.7843	0.6807	30.4650	7.9671	0.6270	8.5941	0.0000	33,129.0318	33,129.0318	1.2031	0.0000	33,154.2957

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	1,569.87	1,569.87	1569.87	4,517,371	4,517,371
Condo/Townhouse	7,839.83	7,839.83	7839.83	26,789,890	26,789,890
Elementary School	1,328.70	1,328.70	1328.70	4,579,210	4,579,210
Single Family Housing	3,979.36	3,979.36	3979.36	13,598,078	13,598,078
Strip Mall	9,277.16	9,277.16	9277.16	17,650,680	17,650,680
Unrefrigerated Warehouse-No Rail	2,679.60	2,679.60	2679.60	11,484,007	11,484,007
Total	26,674.52	26,674.52	26,674.52	78,619,237	78,619,237

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.470490	0.065594	0.173154	0.156076	0.056237	0.009050	0.016623	0.041711	0.001119	0.001337	0.004965	0.000700	0.002944

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,504.8479	4,504.8479	0.2071	0.0428	4,522.4777
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,815.8847	4,815.8847	0.2214	0.0458	4,834.7317
NaturalGas Mitigated	0.1958	1.6819	0.7742	0.0107		0.1353	0.1353		0.1353	0.1353	0.0000	1,938.0019	1,938.0019	0.0372	0.0355	1,949.7963
NaturalGas Unmitigated	0.2489	2.1382	0.9862	0.0136		0.1720	0.1720		0.1720	0.1720	0.0000	2,463.4585	2,463.4585	0.0472	0.0452	2,478.4507

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	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
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	786198	4.2400e-003	0.0385	0.0324	2.3000e-004		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003	0.0000	41.9545	41.9545	8.0000e-004	7.7000e-004	42.2098
Single Family Housing	1.41146e+007	0.0761	0.6504	0.2768	4.1500e-003		0.0526	0.0526		0.0526	0.0526	0.0000	753.2073	753.2073	0.0144	0.0138	757.7912
Strip Mall	364785	1.9700e-003	0.0179	0.0150	1.1000e-004		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003	0.0000	19.4663	19.4663	3.7000e-004	3.6000e-004	19.5848
Unrefrigerated Warehouse-No Rail	2.60652e+006	0.0141	0.1278	0.1073	7.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003	0.0000	139.0938	139.0938	2.6700e-003	2.5500e-003	139.9403
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	2.82914e+007	0.1526	1.3036	0.5547	8.3200e-003		0.1054	0.1054		0.1054	0.1054	0.0000	1,509.7365	1,509.7365	0.0289	0.0277	1,518.9245
Total		**0.2489**	**2.1382**	**0.9862**	**0.0136**		**0.1720**	**0.1720**		**0.1720**	**0.1720**	**0.0000**	**2 463.4585**	**2 463.4585**	**0.0472**	**0.0452**	**2 478.4507**

Mitigated

	NaturalGas Use	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
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	628183	3.3900e-003	0.0308	0.0259	1.8000e-004		2.3400e-003	2.3400e-003		2.3400e-003	2.3400e-003	0.0000	33.5223	33.5223	6.4000e-004	6.1000e-004	33.7263
Single Family Housing	1.12077e+007	0.0604	0.5164	0.2198	3.3000e-003		0.0418	0.0418		0.0418	0.0418	0.0000	598.0866	598.0866	0.0115	0.0110	601.7264
Strip Mall	285382	1.5400e-003	0.0140	0.0118	8.0000e-005		1.0600e-003	1.0600e-003		1.0600e-003	1.0600e-003	0.0000	15.2290	15.2290	2.9000e-004	2.8000e-004	15.3217
Unrefrigerated Warehouse-No Rail	1.96403e+006	0.0106	0.0963	0.0809	5.8000e-004		7.3200e-003	7.3200e-003		7.3200e-003	7.3200e-003	0.0000	104.8079	104.8079	2.0100e-003	1.9200e-003	105.4457
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	2.22315e+007	0.1199	1.0244	0.4359	6.5400e-003		0.0828	0.0828		0.0828	0.0828	0.0000	1,186.3562	1,186.3562	0.0227	0.0218	1,193.5762
Total		**0.1958**	**1.6819**	**0.7742**	**0.0107**		**0.1353**	**0.1353**		**0.1353**	**0.1353**	**0.0000**	**1 938.0019**	**1 938.0019**	**0.0371**	**0.0355**	**1 949.7963**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	6.69543e+006	1,916.0117	0.0881	0.0182	1,923.5100
Elementary School	782753	223.9981	0.0103	2.1300e-003	224.8747
Single Family Housing	3.21009e+006	918.6213	0.0422	8.7400e-003	922.2164
Strip Mall	2.4623e+006	704.6288	0.0324	6.7000e-003	707.3863
Unrefrigerated Warehouse-No Rail	3.67836e+006	1,052.6248	0.0484	0.0100	1,056.7443
Total		**4 815.8847**	**0.2214**	**0.0458**	**4 834.7317**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	6.23827e+006	1,785.1860	0.0821	0.0170	1,792.1723
Elementary School	709559	203.0522	9.3300e-003	1.9300e-003	203.8468
Single Family Housing	3.0107e+006	861.5618	0.0396	8.1900e-003	864.9336
Strip Mall	2.24217e+006	641.6351	0.0295	6.1000e-003	644.1462
Unrefrigerated Warehouse-No Rail	3.54133e+006	1,013.4128	0.0466	9.6400e-003	1,017.3788
Total		**4 504.8479**	**0.2071**	**0.0428**	**4 522.4777**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	tons/yr										MT/yr					
Mitigated	24.6593	0.2162	18.6346	9.8000e-004		0.1317	0.1317		0.1313	0.1313	0.0000	460.3167	460.3167	0.0383	7.8800e-003	463.5655
Unmitigated	24.6593	0.2162	18.6346	9.8000e-004		0.1317	0.1317		0.1313	0.1313	0.0000	460.3167	460.3167	0.0383	7.8800e-003	463.5655

6.2 Area by SubCategory

Unmitigated

	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
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.6016					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	19.4379					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0435	0.0000	2.3700e-003	0.0000		0.0300	0.0300		0.0297	0.0297	0.0000	430.0856	430.0856	8.2400e-003	7.8800e-003	432.7030
Landscaping	0.5764	0.2162	18.6322	9.8000e-004		0.1016	0.1016		0.1016	0.1016	0.0000	30.2311	30.2311	0.0301	0.0000	30.8625
Total	**24.6593**	**0.2162**	**18.6346**	**9.8000e-004**		**0.1317**	**0.1317**		**0.1313**	**0.1313**	**0.0000**	**460.3167**	**460.3167**	**0.0383**	**7.8800e-003**	**463.5655**

Mitigated

	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
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.6016					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	19.4379					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0435	0.0000	2.3700e-003	0.0000		0.0300	0.0300		0.0297	0.0297	0.0000	430.0856	430.0856	8.2400e-003	7.8800e-003	432.7030
Landscaping	0.5764	0.2162	18.6322	9.8000e-004		0.1016	0.1016		0.1016	0.1016	0.0000	30.2311	30.2311	0.0301	0.0000	30.8625
Total	**24.6593**	**0.2162**	**18.6346**	**9.8000e-004**		**0.1317**	**0.1317**		**0.1313**	**0.1313**	**0.0000**	**460.3167**	**460.3167**	**0.0383**	**7.8800e-003**	**463.5655**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Reclaimed Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	727.9244	4.5703	0.1137	859.1395
Unmitigated	886.7442	5.7118	0.1419	1,050.6724

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 20.6954	65.7971	3.0200e-003	6.3000e-004	66.0546
Condo/Townhouse	37.7596 / 23.805	228.3621	1.2403	0.0311	264.0535
Elementary School	1.05398 / 2.71021	12.8783	0.0349	9.3000e-004	13.9000
Single Family Housing	11.4957 / 7.24726	69.5233	0.3776	9.4700e-003	80.3893
Strip Mall	4.91613 / 3.01311	29.4577	0.1615	4.0500e-003	34.1035
Unrefrigerated Warehouse-No Rail	118.89 / 0	480.7257	3.8944	0.0957	592.1716
Total		**886.7442**	**5.7118**	**0.1419**	**1 050.6724**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 20.6954	65.7971	3.0200e-003	6.3000e-004	66.0546
Condo/Townhouse	30.2077 / 23.805	193.9196	0.9928	0.0250	222.5167
Elementary School	0.84318 / 2.71021	11.9169	0.0280	7.6000e-004	12.7406
Single Family Housing	9.19653 / 7.24726	59.0375	0.3023	7.6100e-003	67.7437
Strip Mall	3.9329 / 3.01311	24.9734	0.1292	3.2500e-003	28.6956
Unrefrigerated Warehouse-No Rail	95.1124 / 0	372.2798	3.1150	0.0764	461.3883
Total		**727.9244**	**4.5703**	**0.1137**	**859.1395**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	278.8152	16.4775	0.0000	624.8428
Unmitigated	557.6304	32.9550	0.0000	1,249.6856

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	3.7	0.7511	0.0444	0.0000	1.6832
Condo/Townhouse	661.4	134.2582	7.9344	0.0000	300.8813
Elementary School	196.8	39.9486	2.3609	0.0000	89.5274
Single Family Housing	513.3	104.1953	6.1578	0.0000	233.5083
Strip Mall	172.9	35.0971	2.0742	0.0000	78.6550
Unrefrigerated Warehouse-No Rail	1198.97	243.3801	14.3834	0.0000	545.4304
Total		**557.6304**	**32.9550**	**0.0000**	**1 249.6856**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	1.85	0.3755	0.0222	0.0000	0.8416
Condo/Townhouse	330.7	67.1291	3.9672	0.0000	150.4407
Elementary School	98.4	19.9743	1.1805	0.0000	44.7637
Single Family Housing	256.65	52.0976	3.0789	0.0000	116.7542
Strip Mall	86.45	17.5486	1.0371	0.0000	39.3275
Unrefrigerated Warehouse-No Rail	599.485	121.6900	7.1917	0.0000	272.7152
Total		**278.8152**	**16.4775**	**0.0000**	**624.8428**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Fontana Westgate SP Buildout

San Bernardino-South Coast County Annual

1.0 Pro ect Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	2,156.00	1000sqft	49.49	2,156,000.00	0
Elementary School	1,030.00	Student	12.00	86,111.47	0
Elementary School	1,030.00	Student	12.00	86,111.47	0
High School	2,500.00	Student	60.00	331,652.44	0
General Light Industry	303.00	1000sqft	6.96	303,000.00	0
Unrefrigerated Warehouse-No Rail	1,299.00	1000sqft	29.82	1,299,000.00	0
City Park	58.35	Acre	58.35	2,541,726.00	0
Condo/Townhouse	5,530.00	Dwelling Unit	229.70	5,530,000.00	21954
Single Family Housing	880.00	Dwelling Unit	120.00	1,584,000.00	3494
Strip Mall	602.00	1000sqft	302.40	602,000.00	0

1.2 Other Pro ect Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate one	10			**Operational Year**	2035
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Population based on 3.97 persons/DU (Multi-family: 21,954; Single-family: 3,494). Land Uses from Draft EIR Section 2.0, Project Description.

Vehicle Trips - Kunzman Associates, Inc., Westgate Specific Plan Traffic Impact Analysis, (2013).

Woodstoves - No wood burning fireplaces.

Water And Wastewater - Reference: Based on factors from Draft EIR Section 4.O.1, Water Supply.

Solid Waste - Reference: Based on factors from Draft EIR, Section 4.O.3, Solid Waste.

Energy Mitigation - CEC 2013- 25% better than 2008; Exceed Title 24: 25%

Water Mitigation - Reduction Indoor: 20%; Outdoor reclaimed water use based on projected 2035 recycled water supply as a % of total supplies (FWC, WSA, Jan 2014 update).
Waste Mitigation - Waste Diversion Rate: 50%

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	3,850.50	5,530.00
tblFireplaces	NumberGas	748.00	880.00
tblFireplaces	NumberNoFireplace	453.00	0.00
tblFireplaces	NumberNoFireplace	88.00	0.00
tblFireplaces	NumberWood	226.50	0.00
tblFireplaces	NumberWood	44.00	0.00
tblLandUse	LotAcreage	1.98	12.00
tblLandUse	LotAcreage	1.98	12.00
tblLandUse	LotAcreage	7.61	60.00
tblLandUse	LotAcreage	345.63	229.70
tblLandUse	LotAcreage	285.71	120.00
tblLandUse	LotAcreage	13.82	302.40
tblLandUse	Population	15,816.00	21,954.00
tblLandUse	Population	2,517.00	3,494.00
tblProjectCharacteristics	OperationalYear	2014	2035
tblSolidWaste	SolidWasteGenerationRate	5.02	5.25
tblSolidWaste	SolidWasteGenerationRate	2,083.80	2,663.90
tblSolidWaste	SolidWasteGenerationRate	375.95	393.69
tblSolidWaste	SolidWasteGenerationRate	419.12	393.45

tblSolidWaste	SolidWasteGenerationRate	456.25	477.80
tblSolidWaste	SolidWasteGenerationRate	2,247.81	2,099.71
tblSolidWaste	SolidWasteGenerationRate	1,031.97	1,080.69
tblSolidWaste	SolidWasteGenerationRate	632.10	661.94
tblSolidWaste	SolidWasteGenerationRate	1,221.06	1,278.70
tblVehicleTrips	ST_TR	1.59	38.37
tblVehicleTrips	ST_TR	7.16	6.08
tblVehicleTrips	ST_TR	0.00	1.29
tblVehicleTrips	ST_TR	1.32	6.91
tblVehicleTrips	ST_TR	0.61	1.89
tblVehicleTrips	ST_TR	1.64	11.43
tblVehicleTrips	ST_TR	10.08	9.52
tblVehicleTrips	ST_TR	42.04	15.40
tblVehicleTrips	ST_TR	2.59	2.22
tblVehicleTrips	SU_TR	1.59	38.37
tblVehicleTrips	SU_TR	6.07	6.08
tblVehicleTrips	SU_TR	0.00	1.29
tblVehicleTrips	SU_TR	0.68	6.91
tblVehicleTrips	SU_TR	0.25	1.89
tblVehicleTrips	SU_TR	0.76	11.43
tblVehicleTrips	SU_TR	8.77	9.52
tblVehicleTrips	SU_TR	20.43	15.40
tblVehicleTrips	SU_TR	2.59	2.22
tblVehicleTrips	WD_TR	1.59	38.37
tblVehicleTrips	WD_TR	6.59	6.08
tblVehicleTrips	WD_TR	6.97	6.91
tblVehicleTrips	WD_TR	1.71	1.89
tblVehicleTrips	WD_TR	11.42	11.43
tblVehicleTrips	WD_TR	9.57	9.52
tblVehicleTrips	WD_TR	44.32	15.40

tblVehicleTrips	WD_TR	2.59	2.22
tblWater	IndoorWaterUseRate	295,147,736.07	152,083,759.76
tblWater	IndoorWaterUseRate	4,993,934.40	2,107,945.06
tblWater	IndoorWaterUseRate	78,162,500.00	29,576,094.48
tblWater	IndoorWaterUseRate	11,012,400.00	4,648,345.84
tblWater	IndoorWaterUseRate	429,582,468.90	161,746,581.54
tblWater	IndoorWaterUseRate	57,335,542.55	24,201,393.97
tblWater	IndoorWaterUseRate	44,591,657.93	18,822,186.61
tblWater	IndoorWaterUseRate	300,393,750.00	126,796,523.86
tblWater	OutdoorWaterUseRate	69,522,936.75	29,345,706.12
tblWater	OutdoorWaterUseRate	186,071,398.82	95,878,892.05
tblWater	OutdoorWaterUseRate	12,841,545.60	5,420,430.16
tblWater	OutdoorWaterUseRate	28,317,600.00	11,952,889.31
tblWater	OutdoorWaterUseRate	263,292,480.94	99,135,001.59
tblWater	OutdoorWaterUseRate	36,146,320.30	15,257,400.54
tblWater	OutdoorWaterUseRate	27,330,370.99	11,536,178.89
tblWoodstoves	NumberCatalytic	226.50	0.00
tblWoodstoves	NumberCatalytic	44.00	0.00
tblWoodstoves	NumberNoncatalytic	226.50	0.00
tblWoodstoves	NumberNoncatalytic	44.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

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	tons/yr										MT/yr					
Area	65.9174	0.7610	65.9942	3.5000e-003		0.4745	0.4745		0.4733	0.4733	0.0000	1,647.4818	1,647.4818	0.1329	0.0282	1,659.0203
Energy	0.9121	7.8689	3.8662	0.0498		0.6302	0.6302		0.6302	0.6302	0.0000	31,647.5648	31,647.5648	1.2128	0.3806	31,791.0261
Mobile	33.0183	94.9057	409.7209	1.7575	114.4886	2.5110	116.9996	30.6332	2.3161	32.9493	0.0000	115,457.6541	115,457.6541	2.8978	0.0000	115,518.5086
Waste						0.0000	0.0000		0.0000	0.0000	1,838.1096	0.0000	1,838.1096	108.6292	0.0000	4,119.3220
Water						0.0000	0.0000		0.0000	0.0000	164.9666	2,791.2792	2,956.2458	17.0720	0.4266	3,447.0098
Total	**99.8477**	**103.5357**	**479.5813**	**1.8108**	**114.4886**	**3.6156**	**118.1042**	**30.6332**	**3.4196**	**34.0528**	**2 003.0761**	**151 543.9800**	**153 547.0561**	**129.9446**	**0.8355**	**156 534.8867**

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	tons/yr										MT/yr					
Area	65.9174	0.7610	65.9942	3.5000e-003		0.4745	0.4745		0.4733	0.4733	0.0000	1,647.4818	1,647.4818	0.1329	0.0282	1,659.0203
Energy	0.7216	6.2274	3.0703	0.0394		0.4986	0.4986		0.4986	0.4986	0.0000	28,073.4272	28,073.4272	1.0991	0.3300	28,198.8066
Mobile	33.0183	94.9057	409.7209	1.7575	114.4886	2.5110	116.9996	30.6332	2.3161	32.9493	0.0000	115,457.6541	115,457.6541	2.8978	0.0000	115,518.5086
Waste						0.0000	0.0000		0.0000	0.0000	919.0548	0.0000	919.0548	54.3146	0.0000	2,059.6610
Water						0.0000	0.0000		0.0000	0.0000	131.9733	2,349.9702	2,481.9434	13.6629	0.3424	2,875.0123
Total	**99.6573**	**101.8941**	**478.7854**	**1.8004**	**114.4886**	**3.4841**	**117.9726**	**30.6332**	**3.2880**	**33.9212**	**1 051.0280**	**147 528.5333**	**148 579.5613**	**72.1073**	**0.7006**	**150 311.0088**

	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	N20	CO2e
Percent Reduction	**0.19**	**1.59**	**0.17**	**0.57**	**0.00**	**3.64**	**0.11**	**0.00**	**3.85**	**0.39**	**47.53**	**2.65**	**3.24**	**44.51**	**16.14**	**3.98**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	tons/yr										MT/yr					
Mitigated	33.0183	94.9057	409.7209	1.7575	114.4886	2.5110	116.9996	30.6332	2.3161	32.9493	0.0000	115,457.6541	115,457.6541	2.8978	0.0000	115,518.5086
Unmitigated	33.0183	94.9057	409.7209	1.7575	114.4886	2.5110	116.9996	30.6332	2.3161	32.9493	0.0000	115,457.6541	115,457.6541	2.8978	0.0000	115,518.5086

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	2,238.89	2,238.89	2238.89	6,442,494	6,442,494
Condo/Townhouse	33,622.40	33,622.40	33622.40	114,892,849	114,892,849
Elementary School	1,328.70	1,328.70	1328.70	4,579,210	4,579,210
Elementary School	1,328.70	1,328.70	1328.70	4,579,210	4,579,210
General Light Industry	2,093.73	2,093.73	2093.73	9,271,617	9,271,617
High School	4,725.00	4,725.00	4725.00	20,179,447	20,179,447
Office Park	24,643.08	24,643.08	24643.08	83,260,360	83,260,360
Single Family Housing	8,377.60	8,377.60	8377.60	28,627,532	28,627,532
Strip Mall	9,270.80	9,270.80	9270.80	17,638,580	17,638,580
Unrefrigerated Warehouse-No Rail	2,883.78	2,883.78	2883.78	12,359,065	12,359,065
Total	90,512.68	90,512.68	90,512.68	301,830,364	301,830,364

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.445160	0.068315	0.180257	0.161061	0.057208	0.009197	0.016142	0.050774	0.001074	0.001468	0.004084	0.000577	0.004683

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	20,931.9424	20,931.9424	0.9622	0.1991	21,013.8600
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	22,621.2825	22,621.2825	1.0398	0.2151	22,709.8113
NaturalGas Mitigated	0.7216	6.2274	3.0703	0.0394		0.4986	0.4986		0.4986	0.4986	0.0000	7,141.4847	7,141.4847	0.1369	0.1309	7,184.9466
NaturalGas Unmitigated	0.9121	7.8689	3.8662	0.0498		0.6302	0.6302		0.6302	0.6302	0.0000	9,026.2823	9,026.2823	0.1730	0.1655	9,081.2148

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	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
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	786198	8.4800e-003	0.0771	0.0648	4.6000e-004		5.8600e-003	5.8600e-003		5.8600e-003	5.8600e-003	0.0000	83.9090	83.9090	1.6100e-003	1.5400e-003	84.4197
General Light Industry	1.00869e+007	0.0544	0.4945	0.4153	2.9700e-003		0.0376	0.0376		0.0376	0.0376	0.0000	538.2738	538.2738	0.0103	9.8700e-003	541.5496
High School	3.02799e+006	0.0163	0.1484	0.1247	8.9000e-004		0.0113	0.0113		0.0113	0.0113	0.0000	161.5849	161.5849	3.1000e-003	2.9600e-003	162.5683
Office Park	6.61892e+006	0.0357	0.3245	0.2725	1.9500e-003		0.0247	0.0247		0.0247	0.0247	0.0000	353.2108	353.2108	6.7700e-003	6.4800e-003	355.3604
Single Family Housing	2.97149e+007	0.1602	1.3692	0.5826	8.7400e-003		0.1107	0.1107		0.1107	0.1107	0.0000	1,585.6997	1,585.6997	0.0304	0.0291	1,595.3500
Strip Mall	1.39664e+006	7.5300e-003	0.0685	0.0575	4.1000e-004		5.2000e-003	5.2000e-003		5.2000e-003	5.2000e-003	0.0000	74.5300	74.5300	1.4300e-003	1.3700e-003	74.9836
Unrefrigerated Warehouse-No Rail	2.77986e+006	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	148.3439	148.3439	2.8400e-003	2.7200e-003	149.2467
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	1.13949e+008	0.6144	5.2506	2.2343	0.0335		0.4245	0.4245		0.4245	0.4245	0.0000	6,080.7302	6,080.7302	0.1166	0.1115	6,117.7365
Total		**0.9121**	**7.8689**	**3.8662**	**0.0498**		**0.6302**	**0.6302**		**0.6302**	**0.6302**	**0.0000**	**9 026.2823**	**9 026.2823**	**0.1730**	**0.1655**	**9 081.2148**

Mitigated

	NaturalGas Use	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
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	628183	6.7700e-003	0.0616	0.0517	3.7000e-004		4.6800e-003	4.6800e-003		4.6800e-003	4.6800e-003	0.0000	67.0445	67.0445	1.2900e-003	1.2300e-003	67.4525
General Light Industry	8.86275e+006	0.0478	0.4345	0.3649	2.6100e-003		0.0330	0.0330		0.0330	0.0330	0.0000	472.9501	472.9501	9.0600e-003	8.6700e-003	475.8284
High School	2.4194e+006	0.0131	0.1186	0.0996	7.1000e-004		9.0100e-003	9.0100e-003		9.0100e-003	9.0100e-003	0.0000	129.1086	129.1086	2.4700e-003	2.3700e-003	129.8944
Office Park	4.96419e+006	0.0268	0.2433	0.2044	1.4600e-003		0.0185	0.0185		0.0185	0.0185	0.0000	264.9081	264.9081	5.0800e-003	4.8600e-003	266.5203
Single Family Housing	2.35952e+007	0.1272	1.0872	0.4627	6.9400e-003		0.0879	0.0879		0.0879	0.0879	0.0000	1,259.1296	1,259.1296	0.0241	0.0231	1,266.7925
Strip Mall	1.09263e+006	5.8900e-003	0.0536	0.0450	3.2000e-004		4.0700e-003	4.0700e-003		4.0700e-003	4.0700e-003	0.0000	58.3069	58.3069	1.1200e-003	1.0700e-003	58.6617
Unrefrigerated Warehouse-No Rail	2.09464e+006	0.0113	0.1027	0.0863	6.2000e-004		7.8000e-003	7.8000e-003		7.8000e-003	7.8000e-003	0.0000	111.7778	111.7778	2.1400e-003	2.0500e-003	112.4581
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	8.95412e+007	0.4828	4.1259	1.7557	0.0263		0.3336	0.3336		0.3336	0.3336	0.0000	4,778.2591	4,778.2591	0.0916	0.0876	4,807.3388
Total		**0.7216**	**6.2274**	**3.0703**	**0.0394**		**0.4986**	**0.4986**		**0.4986**	**0.4986**	**0.0000**	**7 141.4847**	**7 141.4847**	**0.1369**	**0.1309**	**7 184.9466**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	2.6967e+007	7,717.0754	0.3547	0.0734	7,747.2763
Elementary School	782753	447.9961	0.0206	4.2600e-003	449.7494
General Light Industry	3.35421e+006	959.8639	0.0441	9.1300e-003	963.6203
High School	3.01472e+006	862.7132	0.0397	8.2000e-003	866.0895
Office Park	2.40394e+007	6,879.2803	0.3162	0.0654	6,906.2025
Single Family Housing	6.75808e+006	1,933.9397	0.0889	0.0184	1,941.5082
Strip Mall	9.42732e+006	2,697.7869	0.1240	0.0257	2,708.3447
Unrefrigerated Warehouse-No Rail	3.92298e+006	1,122.6270	0.0516	0.0107	1,127.0204
Total		**22 621.2825**	**1.0398**	**0.2151**	**22 709.8113**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	2.51257e+007	7,190.1518	0.3305	0.0684	7,218.2906
Elementary School	709559	406.1043	0.0187	3.8600e-003	407.6936
General Light Industry	3.15044e+006	901.5523	0.0414	8.5700e-003	905.0806
High School	2.73282e+006	782.0415	0.0360	7.4400e-003	785.1020
Office Park	2.20181e+007	6,300.8655	0.2896	0.0599	6,325.5241
Single Family Housing	6.33831e+006	1,813.8143	0.0834	0.0173	1,820.9127
Strip Mall	8.58452e+006	2,456.6054	0.1129	0.0234	2,466.2194
Unrefrigerated Warehouse-No Rail	3.77684e+006	1,080.8073	0.0497	0.0103	1,085.0370
Total		**20 931.9424**	**0.9622**	**0.1991**	**21 013.8600**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	tons/yr										MT/yr					
Mitigated	65.9174	0.7610	65.9942	3.5000e-003		0.4745	0.4745		0.4733	0.4733	0.0000	1,647.4818	1,647.4818	0.1329	0.0282	1,659.0203
Unmitigated	65.9174	0.7610	65.9942	3.5000e-003		0.4745	0.4745		0.4733	0.4733	0.0000	1,647.4818	1,647.4818	0.1329	0.0282	1,659.0203

6.2 Area by SubCategory

Unmitigated

	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
SubCategory	tons/yr										MT/yr					
Architectural Coating	11.3153					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	52.4666					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1555	1.0000e-005	8.4800e-003	0.0000		0.1075	0.1075		0.1063	0.1063	0.0000	1,539.2791	1,539.2791	0.0295	0.0282	1,548.6468
Landscaping	1.9800	0.7610	65.9857	3.5000e-003		0.3670	0.3670		0.3670	0.3670	0.0000	108.2028	108.2028	0.1034	0.0000	110.3734
Total	**65.9174**	**0.7610**	**65.9942**	**3.5000e-003**		**0.4745**	**0.4745**		**0.4733**	**0.4733**	**0.0000**	**1 647.4818**	**1 647.4818**	**0.1329**	**0.0282**	**1 659.0203**

Mitigated

	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
SubCategory	tons/yr										MT/yr					
Architectural Coating	11.3153					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	52.4666					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1555	1.0000e-005	8.4800e-003	0.0000		0.1075	0.1075		0.1063	0.1063	0.0000	1,539.2791	1,539.2791	0.0295	0.0282	1,548.6468
Landscaping	1.9800	0.7610	65.9857	3.5000e-003		0.3670	0.3670		0.3670	0.3670	0.0000	108.2028	108.2028	0.1034	0.0000	110.3734
Total	**65.9174**	**0.7610**	**65.9942**	**3.5000e-003**		**0.4745**	**0.4745**		**0.4733**	**0.4733**	**0.0000**	**1 647.4818**	**1 647.4818**	**0.1329**	**0.0282**	**1 659.0203**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Reclaimed Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2,481.9434	13.6629	0.3424	2,875.0123
Unmitigated	2,956.2458	17.0720	0.4266	3,447.0098

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 29.3457	93.2992	4.2900e-003	8.9000e-004	93.6644
Condo/Townhouse	152.084 / 95.8789	919.7696	4.9957	0.1253	1,063.5232
Elementary School	2.10795 / 5.42043	25.7566	0.0698	1.8600e-003	27.8000
General Light Industry	29.5761 / 0	119.5890	0.9688	0.0238	147.3131
High School	4.64835 / 11.9529	56.7973	0.1540	4.1000e-003	61.3033
Office Park	161.747 / 99.135	969.1928	5.3127	0.1332	1,122.0447
Single Family Housing	24.2014 / 15.2574	146.3648	0.7950	0.0199	169.2406
Strip Mall	18.8222 / 11.5362	112.7834	0.6182	0.0155	130.5705
Unrefrigerated Warehouse-No Rail	126.797 / 0	512.6932	4.1534	0.1021	631.5501
Total		**2 956.2458**	**17.0720**	**0.4266**	**3 447.0098**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 29.3457	93.2992	4.2900e-003	8.9000e-004	93.6644
Condo/Townhouse	121.667 / 95.8789	781.0464	3.9987	0.1007	896.2263
Elementary School	1.68636 / 5.42043	23.8338	0.0560	1.5200e-003	25.4812
General Light Industry	23.6609 / 0	92.6111	0.7749	0.0190	114.7784
High School	3.71868 / 11.9529	52.5573	0.1235	3.3500e-003	56.1899
Office Park	129.397 / 99.135	821.6556	4.2523	0.1070	944.1183
Single Family Housing	19.3611 / 15.2574	124.2895	0.6363	0.0160	142.6183
Strip Mall	15.0577 / 11.5362	95.6147	0.4948	0.0125	109.8655
Unrefrigerated Warehouse-No Rail	101.437 / 0	397.0358	3.3221	0.0815	492.0699
Total		**2 481.9434**	**13.6629**	**0.3424**	**2 875.0123**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	919.0548	54.3146	0.0000	2,059.6610
Unmitigated	1,838.1096	108.6292	0.0000	4,119.3220

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	5.25	1.0657	0.0630	0.0000	2.3883
Condo/Townhouse	2663.9	540.7476	31.9573	0.0000	1,211.8503
Elementary School	393.69	79.9155	4.7229	0.0000	179.0958
General Light Industry	393.45	79.8668	4.7200	0.0000	178.9866
High School	477.8	96.9891	5.7319	0.0000	217.3588
Office Park	2099.71	426.2222	25.1890	0.0000	955.1913
Single Family Housing	1080.69	219.3703	12.9644	0.0000	491.6230
Strip Mall	661.94	134.3678	7.9409	0.0000	301.1270
Unrefrigerated Warehouse-No Rail	1278.7	259.5645	15.3398	0.0000	581.7009
Total		**1 838.1095**	**108.6292**	**0.0000**	**4 119.3220**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	2.625	0.5329	0.0315	0.0000	1.1942
Condo/Townhouse	1331.95	270.3738	15.9786	0.0000	605.9251
Elementary School	196.845	39.9578	2.3614	0.0000	89.5479
General Light Industry	196.725	39.9334	2.3600	0.0000	89.4933
High School	238.9	48.4945	2.8660	0.0000	108.6794
Office Park	1049.86	213.1111	12.5945	0.0000	477.5957
Single Family Housing	540.345	109.6852	6.4822	0.0000	245.8115
Strip Mall	330.97	67.1839	3.9705	0.0000	150.5635
Unrefrigerated Warehouse-No Rail	639.35	129.7823	7.6699	0.0000	290.8504
Total		**919.0548**	**54.3146**	**0.0000**	**2 059.661 0**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

WESTGATE SPECIFIC PLAN
GREENHOUSE GAS EMISSIONS REDUCTION PLAN

City of Fontana
Community Development Department
Fontana, CA

December 2014

Prepared for

CITY OF FONTANA
COMMUNITY DEVELOPMENT DEPARTMENT
PLANNING DEVISION
8353 Sierra Avenue
Fontana, California 92335

Prepared by:

PCR SERVICES CORPORATION
80 South Lake Avenue, Suite 570
Pasadena, CA 91101
TEL 626.204.6170
FAX 626.204.6171

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EXECUTIVE SUMMARY

The Westgate Specific Plan Greenhouse Gas Reduction Plan (GHGRP) has been developed for the City of Fontana (City) as a guide for developers of projects subject to the Westgate Specific Plan to reduce emissions of greenhouse gases (GHG) associated with future development. The Westgate Specific Plan area encompasses 964 acres in the rapidly growing northwestern part of the City of Fontana and is primarily undeveloped. The new Westgate Specific Plan will allow for up to 6,410 single- and multi-family dwelling units; approximately 159 acres of parks and other open space; a high school and two elementary schools on approximately 84 acres; approximately 602,235 square feet of retail; approximately 2,103,771 square feet of office; and approximately 1,602,373 square feet of industrial.

Since the passage of the Global Warming Solutions Act of 2006 (AB 32), the framework of GHG emissions reduction strategies have been adopted by the California Air Resources Board (CARB) in the AB 32 *Climate Change Scoping Plan*. The Scoping Plan includes a range of actions both mandated and voluntary, providing the main strategies for California to meet its GHG reduction goal of 1990 level emissions by 2020. As required by AB 32, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions limit for 2020, at 427 million metric tons of carbon dioxide equivalents ($MMTCO_2e$). In order to estimate the state's 2020 "business as usual" (BAU) emissions and determine the level of reductions necessary, CARB originally used an average of the state's GHG emissions from 2002 through 2004 and projected the 2020 levels at approximately 596 $MMTCO_2e$. Under this original projection, the state must reduce its 2020 BAU emissions by 28.4 percent in order to meet the 1990 target. CARB updated their 2020 BAU emissions estimate to account for the effect of the 2007–2009 economic recession, new estimates for future fuel and energy demand, and the reductions required by regulation that were recently adopted for motor vehicles and renewable energy. CARB's revised 2020 BAU emissions estimate is 507 $MMTCO_2e$. Therefore, the emission reductions necessary to achieve the 2020 emissions target of 427 $MMTCO_2e$ would be 80 $MMTCO_2e$, or a reduction of GHG emissions by 15.8 percent. The Westgate Specific Plan GHGRP reduction goal is based on AB 32 and CARB's recommendations to ensure California GHG emissions are reduced to 1990 levels by the year 2020. Consistent with AB 32, the Westgate Specific Plan GHGRP goal is to decrease its inventory of GHG emissions to a level at least 15.8 percent below BAU emissions.

The analysis herein is tailored to include known projected emission sources within the Westgate Specific Plan to provide, to the fullest extent feasible, a comprehensive analysis of GHG impacts. The CARB Local Government Operations Protocol (LGOP) categorizes GHG emissions into three distinct "scopes" as a way of organizing GHG emissions. Scope 1 emissions are characterized and named in this report as "direct emissions." Scope 2 emissions are characterized and named as "indirect source emissions." Scope 3 emissions are sources not directly controlled by the City of Fontana, but have been included in this report to the extent that they are reasonably known and quantifiable. CARB believes that consideration of so-called indirect emissions provides a more complete picture of the GHG footprint of a facility. Therefore, direct and indirect emissions have been calculated for the proposed project.

Emissions of GHGs were calculated using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2. CalEEMod is a statewide land use emissions computer model which calculates criteria pollutant and GHG emissions associated with a variety of land use projects. The model was developed in collaboration with the air districts of California including the South Coast Air Quality Management District (SCAQMD).

CalEEMod incorporates the EMFAC model, which is an emissions estimation model developed by CARB to calculate emissions from motor vehicles. CalEEMod generates GHG emissions results for carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), which are the GHGs associated with and relevant to the proposed project.

The GHG emissions from development that would occur with implementation of the Westgate Specific Plan under BAU conditions was estimated to be 43,061 $MTCO_2e$ for Phase I (year 2018) and 156,290 $MTCO_2e$ for full buildout of all proposed land uses (year 2035). These emissions do not take into account any GHG reductions from design features or mitigation measures.

The Westgate Specific Plan includes project sustainability features that would reduce its GHG emissions compared to a BAU scenario. In particular, the Westgate Specific Plan would establish a land use development pattern that would reduce vehicle miles traveled (VMT) by approximately 10 percent resulting in substantial reductions in associated GHG emissions. Furthermore, the Westgate Specific Plan would implement design features that would reduce water demand and associated GHG emissions. The Westgate Specific Plan would also be required to implement program level mitigation measures that would further reduce VMT as well as energy consumption. If the EIR is certified by the City, these mitigation measures would be enforced through the required Mitigation Monitoring and Reporting Plan (MMRP).

The annual GHG emissions from buildout of the Westgate Specific Plan with the inclusion of required design features and mitigation measures, such as improved location efficiency, reduced water demand, and reduced energy consumption would be approximately 35,463 $MTCO_2e$ for Phase I (17.6 percent reduction from BAU) and 129,023 $MTCO_2e$ at full buildout (17.4 percent reduction from BAU). As a result, development that would occur with implementation of the Westgate Specific Plan would exceed the GHG emissions reduction target of 15.8 percent.

Success in meeting the Westgate Specific Plan's GHG emission reduction goal will depend on cooperation and participation by City departments, future residents, businesses, and cooperation of developers. Prior to adoption of the Westgate Specific Plan and certification of the EIR, a MMRP would be developed. Compliance with the required mitigation measures would be enforced by the City via the MMRP. The City will establish a process of monitoring the implementation of the GHG reduction measures in the GHGRP to individual projects and amending the plan as necessary. Further, state and federal action may also result in changes which will influence the level of the City's emissions and the reductions necessary to achieve future to-be-determined state goals. The City will evaluate how to incorporate these changes in state and federal actions into the GHGRP as needed.

1.0 INTRODUCTION

The Westgate Specific Plan Greenhouse Gas Reduction Plan (GHGRP) has been developed for the City of Fontana (City) 2012 Westgate Specific Plan to reduce emissions of greenhouse gases (GHG) associated with the increased development resulting from implementation of the Specific Plan. The City's emission reduction efforts as outlined in the GHGRP is consistent with state and regional strategies for reducing GHG emissions in an efficient and cost-effective manner. This GHGRP presents a comprehensive set of actions that would reduce GHG emissions associated with implementation of the Westgate Specific Plan to at least 15.8 percent below "business as usual" (BAU) levels by 2020, which is consistent with the goals of the Global Warming Solutions Act of 2006 (Assembly Bill 32 [AB 32]) *Climate Change Scoping Plan*.[1]

The City of Fontana has developed the Westgate Specific Plan, which will replace the existing specific plan approved in 1996, to establish policies for development and conservation within this area, specifically land uses with regards to long-term planning. Specific land use policies are contained in the City of Fontana General Plan (GP) and are established to protect against land uses which are incompatible with existing uses and to allow for growth. Topics addressed on the Westgate Specific Plan include transportation, land use, population and employment, air quality and GHG emissions.

The term GHG refers to gases that trap heat in the atmosphere which contribute to global climate change. Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation and storms. The World Meteorological Organization and United Nations Environmental Program established the Intergovernmental Panel on Climate Change (IPCC) in 1988. The goal of the IPCC is to evaluate the risk of climate change caused by human activities based on peer-reviewed and published scientific literature. The IPCC reports its evaluation through special reports called "assessment reports." In its 2007 *Fourth Assessment Report*, the IPCC stated that global temperature changes since the mid-20th century was "very likely" attributable to man-made activities (greater than 90 percent certainty).[2] Based on scientific data that shows increasing concentrations of GHGs in the atmosphere, an emphasis has emerged on a statewide and national basis for reducing anthropogenic GHG emissions by developing sustainable communities that encourage conservation of resources, increase energy efficiency, promote reduction of water consumption, and promote healthy buildings and communities.

Based on these development characteristics, a new vision has been developed for the Westgate Specific Plan that focuses on creating a village-oriented mixed-use development which locates jobs and retail, school, and park land uses near housing in order to promote walking and non-motorized transportation. These characteristics would in turn reduce vehicular emissions and improve the health and quality of life of residents. The Westgate Specific Plan will become one of the first large scale planned communities in the Inland Empire to meet the mandatory green building standards code (CALGreen), which will significantly reduce climate change-inducing GHG emissions.

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1 *California Air Resources Board,* Climate Change Scoping Plan*, 2008.*

2 *Intergovernmental Panel on Climate Change,* Fourth Assessment Report: The Physical Science Basis, Summary for Policy Makers*, 2007.*

1.1 PROJECT DESCRIPTION

The Westgate Specific Plan area encompasses 964 acres in the rapidly growing northwestern part of the City of Fontana and is primarily undeveloped currently. The new Westgate Specific Plan will allow for:

- Up to 6,410 single- and multi-family residential dwelling units;
- Approximately 159 acres of parks and other open space;
- A high school and two elementary schools on approximately 84 acres;
- Approximately 602,235 square feet of retail;
- Approximately 2,103,771 square feet of office; and
- Approximately 1,602,373 square feet of industrial.

The Westgate Specific Plan area would include a network of pedestrian trails and bikeways and a pedestrian bridge over Baseline Avenue that will connect to the various parks and to the regional trail on the Southern California Edison/Southern California Gas Company (SCE/SCG) easement. The proposed developments would include on-site infrastructure improvements, such as water, sewer, power, gas, telephone, and cable line extensions both on and off-site, as well as roadway extensions and related improvements.

In addition, as part of the project, the Westgate Specific Plan proposes to amend three Elements of the City of Fontana GP. The Westgate Specific Plan would amend the Land Use Element, Chapter 3, by modifying the text to include a residential land use designation that will allow a density of 50 dwelling units per acre and to amend the Land Use Map to mirror the land use designations proposed in the Specific Plan. The Noise Element, Chapter 12, and Air Quality Element, Chapter 13, would be amended to reduce the setback for residential development from a freeway from 200 feet minimum to approximately 88 feet minimum in accordance with the proposed Specific Plan. A zone change application is also required to modify the Zoning District Map to outline the proposed new Specific Plan boundary. A Development Agreement that establishes the phasing and financing for the Specific Plan would also be included as part of the Westgate Specific Plan Project.

1.2 PURPOSE OF THE GREENHOUSE GAS REDUCTION PLAN

Since the passage of AB 32, the framework of emissions reduction strategies have been adopted by the California Air Resources Board (CARB) in the AB 32 Scoping Plan. The Scoping Plan includes a range of actions both mandated and voluntary, providing the main strategies for California to meet its reduction goal. The plan encourages local governments to set a GHG reduction target and develop plans of action for reducing government and community-wide emissions. The Sustainable Communities and Climate Protection Act of 2008 (Senate Bill 375 [SB 375]) enhances California's ability to achieve AB 32 through sustainable transportation (one of the largest sources of GHG emissions) and land use strategies. SB 375 takes a regional approach to achieving GHG emission reductions and establishes a process for CARB to develop GHG emissions reduction targets by region. While there is no specific number that a local government must reduce its emissions to, the success of SB 375 and AB 32 relies in part on local governments developing strategies to reduce their emissions and complying with regional targets as they are developed.

In recognizing that reducing GHG emissions is an important part of ensuring a sustainable future, the City of Fontana has prepared this GHGRP for the Westgate Specific Plan to provide a framework and strategy to meet the AB 32 goals. By using energy more efficiently, harnessing renewable energy to power buildings, reducing water usage, enhancing access to sustainable transportation modes, and recycling waste, the Westgate Specific Plan can help reduce and control GHG emissions associated with development of the Westgate Specific Plan area and improve the health and quality of life of its residents.

1.3 GREENHOUSE GAS REDUCTION PLAN OBJECTIVES

The City of Fontana has proposed this GHGRP for the new Westgate Specific Plan to address the City's intent to reduce GHG emissions that are reasonably attributable to internal activities, services, and facilities; and private industry and development located within the Specific Plan area. The Westgate Specific Plan's objectives are as follows:

- Adopt a GHG emissions reduction target consistent with the goals of AB 32 and the AB 32 Scoping Plan;
- Reduce GHG emissions resulting from anticipated growth in the Westgate Specific Plan area;
- Provide estimated GHG reductions associated with the City of Fontana's existing sustainability efforts and integrate their sustainability efforts into the GHGRP;
- Provide a list of discrete actions that will reduce GHG emissions; and,
- Approve a GHG emissions reduction plan that satisfies the requirements of CEQA Guidelines Section 15183.5,[3] such that compliance with the GHGRP may be used within the Westgate Specific Plan to determine the significance of a project's effects relating to GHG emissions, thus providing streamlined CEQA analysis of future projects that are consistent with the approved GHGRP.

The GHGRP and the Appendices that support this GHGRP comply with the provisions listed above by providing a quantified reduction inventory of GHG emissions, and by establishing a GHG reduction level based on substantial evidence below which activities subject to the GHGRP would not result in a cumulatively considerable impact to GHG emissions. The GHGRP and associated documents also identify and analyze the emissions associated with specific actions, and set forth performance standards to achieve the specified emissions goals. The GHGRP also incorporates monitoring and reporting, and shall be adopted in a public process following environmental review.

1.4 ORGANIZATION OF THE GHG REDUCTION PLAN

The framework of the GHGRP consists of this introduction, followed by: (1) a description of greenhouse gases (2) an inventory of GHG emissions that identifies and quantifies existing emissions and projected future emissions; (3) a discussion on current GHG regulatory regulations,(4) a reduction target to reduce BAU GHG emissions by 15.8 percent and, (5) the goals, objectives and strategies that have been devised to reduce existing emissions to meet the reduction target. This GHGRP is based on the County's GHG Reduction

[3] *California Environmental Quality Act Statute and Guidelines, 2012, Section 15183.5 - Tiering and Streamlining the Analysis of Greenhouse Gas Emissions*

Plan and its reduction target are based on AB 32 and the California Air Resources Board (CARB) recommendations to ensure that California emissions are reduced to 1990 levels by the year 2020. For the purpose of defining BAU emission levels, the Westgate Specific Plan uses the same baseline conditions as CARB when it revised its statewide 2020 GHG emission projections (see discussion under **Subsection 2.2.2**, *Assembly Bill 32, The Global Warming Solutions Act of 2006*, of this report).

The GHG emissions reduction measures identified in the GHGRP include existing and proposed state, regional, county and other local measures that will reduce GHG emissions that are available as of October, 2012. Reduction measures have been organized by emissions sector (e.g., transportation, energy). The measures also include information such as the relative degree of feasibility for those measures that may be voluntarily implemented, and also whether the measure is quantifiable in terms of calculating potential emission reductions. Upon adoption, the GHGRP may be utilized in appropriate situations to determine the significance of the project effects related to GHG emissions, thus streamlining the CEQA analysis of future projects under CEQA Guidelines Section 15183.5.

2.0 GREENHOUSE GASES

2.1 DESCRIPTION OF GREENHOUSE GASES

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation and storms. Historical records indicate that global climate changes have occurred in the past due to natural phenomena; however, data indicates that the current global conditions differ from past climate changes in rate and magnitude. The current changes in global climate have been attributed to anthropogenic activities by the IPCC.[4] The term GHG refers to gases that trap long-wave radiation or heat in the atmosphere, which in turn heats the surface of the Earth. Without human intervention, the Earth maintains an approximate balance between the GHG emissions in the atmosphere and the storage of GHGs in the oceans and terrestrial ecosystems. GHGs are the result of both natural and anthropogenic activities. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking are the primary sources of GHG emissions.

The Federal Government and State of California recognized that anthropogenic (human-caused) GHG emissions are contributing to changes in the global climate, and that such changes are having and will have adverse effects on the environment, the economy, and public health. While worldwide contributions of GHG emissions are expected to have widespread consequences, it is not possible to link particular changes to the environment of California or elsewhere to GHGs emitted from a particular source or location. In other words, emissions of GHGs have the potential to cause global impacts rather than local impacts.

State law defines GHGs to include the following compounds: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).[5] The most common GHG that results from human activity is CO_2, which represents 77 percent of total anthropogenic GHG emissions in the atmosphere (as of 2004 data),[6] followed by CH_4 and N_2O. Scientists have established a Global Warming Potential (GWP) to gauge the potency of each GHG's ability to absorb and re-emit long-wave radiation. The GWP of a gas is determined using CO_2 as the reference gas with a GWP of 1 over 100 years. For example, a gas with a GWP of 10 is 10 times more potent than CO_2 over 100 years. The sum of each GHG multiplied by its associated GWP is referred to as carbon dioxide equivalents (CO_2e). The measurement unit CO_2e is used to report the combined potency of GHG emissions. Standard GWP values have been established for the GHGs defined by state law, such as CH_4, which has a GWP of 21, and NO_2, which has a GWP of 310.[7]

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[4] *Intergovernmental Panel on Climate Change,* Fourth Assessment Report: The Physical Science Basis, Summary for Policy Makers*, 2007.*

[5] *CEQA Guidelines Section 15364.5; Health and Safety Code, section 38505(g).*

[6] *Intergovernmental Panel on Climate Change,* Fourth Assessment Report: Synthesis Report*, 2007.*

[7] *In accordance with international and U.S. convention to maintain the value of the carbon dioxide 'currency', GHG emission inventories are calculated using the GWPs from the IPCC Second Assessment Report (*Climate Change 1995: The Science of Climate Change – Contribution of Working Group I to the Second Assessment Report of the Intergovernmental Panel on Climate Change*, 1996).*

2.2 SUMMARY OF CALIFORNIA EMISSIONS

CARB compiles GHG inventories for the State of California. Based on the 2012 GHG inventory data (i.e., the latest year for which data are available), California emitted 458.7 million metric tons (MMT) of CO_2e including emissions resulting from imported electrical power and 414.6 $MMTCO_2e$ excluding emissions related to imported power.[8] Between 1990 and 2012, the population of California grew by approximately 7.9 million (from 29.8 to 37.7 million).[9] This represents an increase of approximately 27 percent from 1990 population levels. In addition, the California economy, measured as gross state product, grew from $773 billion in 1990 to $2.13 trillion in 2012 representing an increase of approximately 176 percent (about two and three-quarter times the 1990 gross state product).[10] Despite the population and economic growth, California's net GHG emissions only grew by approximately 8 percent. The California Energy Commission (CEC) attributes the slow rate of growth to the success of California's renewable energy programs and its commitment to clean air and clean energy.[11] **Table 1**, *State of California GHG Emissions,* identifies and quantifies statewide anthropogenic GHG emissions and sinks in 1990 and 2012 (the most recent year in which data is available from CARB). As shown, the transportation sector is the largest contributor to statewide GHG emissions at 36 percent in 2012. California emissions are due in part to its large size and large population.

2.2 REGULATORY BACKGROUND

2.2.1 International

The World Meteorological Organization (WMO) and United Nations Environmental Program (UNEP) established the IPCC in 1988. The goal of the IPCC is to evaluate the risk of climate change caused by human activities. Rather than performing research or monitoring climate, the IPCC relies on peer-reviewed and published scientific literature to make its assessment. While not a regulatory body, the IPCC assesses information (i.e., scientific literature) regarding human-induced climate change and the impacts of human-induced climate change, and recommends options to policy makers for the adaptation and mitigation of climate change. The IPCC reports its evaluations in special reports called "assessment reports." The latest assessment report (i.e., Fourth Assessment Report, consisting of three working group reports and a synthesis report based on the first three reports) was published in 2007.[12] In its 2007 report, the IPCC stated that global temperature increases since the mid-20th century were "very likely" attributable to man-made activities (greater than 90 percent certainty).[13] The Fifth Assessment Report is underway and will consist of

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[8] *California Air Resources Board, "California Greenhouse Gas 2000-2012 Inventory by Scoping Plan Category - Summary," http://www.arb.ca.gov/cc/inventory/data/data.htm. Accessed August 2014..*

[9] *U.S. Census Bureau, "California, Population of Counties by Decennial Census: 1900 to 1990," http://quickfacts.census.gov/qfd/states/06000lk.html. Accessed April 2014; California Department of Finance, "E-5 Population and Housing Estimates for Cities, Counties and the State, January 2011-2014, with 2010 Benchmark," http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2011-20/view.php. Accessed August 2014.*

[10] *California Department of Finance, "Financial & Economic Data: Gross Domestic Product, California," http://www.dof.ca.gov/HTML/FS_DATA/LatestEconData/FS_Misc.htm. Accessed August 2014. Amounts are based on current dollars as of the date of the report (June 2014).*

[11] *California Energy Commission,* Inventory of California Greenhouse Gas Emissions and Sinks 1990 to 2004*, (2006).*

[12] *The IPCC's Fourth Assessment Report is available online at http://www.ipcc.ch/.*

[13] *Intergovernmental Panel on Climate Change, "Climate Change 2007: The Physical Science Basis, Summary for Policymakers," http://ipcc-wg1.ucar.edu/wg1/docs/WG1AR4_SPM _PlenaryApproved.pdf. 2007.*

Table 1

State of California GHG Emissions

Category	Total 1990 Emissions ($MMTCO_2e$)	Percent of Total 1990 Emissions	Total 2012 Emissions ($MMTCO_2e$)	Percent of Total 2012 Emissions
Transportation	150.7	35%	167.4	36%
Electric Power	110.6	26%	95.1	21%
Commercial	14.4	3%	14.2	3%
Residential	29.7	7%	28.1	6%
Industrial	103.0	24%	89.2	19%
Recycling and Waste[a]	–	–	8.5	2%
High GWP/Non-Specified[b]	1.3	<1%	18.4	4%
Agriculture/Forestry	23.6	6%	37.9	8%
Forestry Sinks	-6.7		–[c]	
Net Total[d]	**426.6**	**100%**	**458.7**	**100%**

[a] *Included in other categories for the 1990 emissions inventory.*

[b] *High GWP gases are not specifically called out in the 1990 emissions inventory.*

[c] *Revised methodology under development (not reported for 2012).*

[d] *Totals may not add up exactly due to rounding.*

Source: California Air Resources Board, Staff Report – California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit, (2007); California Air Resources Board, "California Greenhouse Gas 2000-2012 Inventory by Scoping Plan Category – Summary," http://www.arb.ca.gov/cc/inventory/data/data.htm. Accessed August 2014.

three Working Group Reports (The Physical Science Basis, Impacts, Adaptation and Vulnerability, and Mitigation of Climate Change) and is scheduled to be completed in the 2013-2014 time frame.

The United States participated in the United Nations Framework Convention on Climate Change (UNFCCC) (signed on March 21, 1994). The Kyoto Protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. It has been estimated that if the commitments outlined in the Kyoto Protocol are met, global GHG emissions could be reduced by an estimated 5 percent from 1990 levels during the first commitment period of 2008–2012 (UNFCCC, 1997). It should be noted that although the United States is a signatory to the Kyoto Protocol, Congress has not ratified the Protocol and the United States is not bound by the Protocol's commitments.

In anticipation of providing an updated international treaty for the reduction of GHG emissions, representatives from 170 countries met in Copenhagen in December 2009 to ratify an updated UNFCCC agreement (Copenhagen Accord). The Copenhagen Accord, a voluntary agreement between the United States, China, India, and Brazil, recognizes the need to keep global temperature rise to below 2°C and obliges signatories to establish measures to reduce greenhouse gas emissions and to prepare to provide help to poorer countries in adapting to climate change. The countries met again in Cancun in December, 2010 and adopted the Cancun Agreements, which reinforces and builds upon the Copenhagen Accord. The nations agreed to recognize country targets, develop low-carbon development plans and strategies, and report

inventories annually. In addition, agreements were made regarding financing for developing countries and technology support and coordination among all nations.

In December, 2011 the countries met once again, this time in Durban, South Africa. At this meeting, the Kyoto Protocol commitment period, which ends in 2012, was extended from 2013 onwards. The length of the second commitment period is to be determined; it will be for either five or eight years to be voted on at the next meeting. The major outcome of this meeting was the establishment of the Durban Platform for Enhanced Action. This Platform allows negotiation of a new legal and universal emission reduction agreement, which accounts for the mitigation efforts of all countries under one agreement. In addition, all industrialized countries and more than 48 developing countries have reiterated and affirmed their intentions to pursue their emissions reduction pledges made at or after Cancun. Unfortunately, the sum total of official emission reduction pledges received so far amounts to only around 60 percent of what is needed to limit the temperature increase to 2°C above pre-Industrial levels. During 2013–2015 the UNFCCC nations will review the 2°C limit and consider a 1.5°C limit.

2.2.2 Federal Regulations

The U.S. Environmental Protection Agency (USEPA) is responsible for implementing federal policy to address global climate change. The federal government administers a wide array of public-private partnerships to reduce the GHG intensity generated by the United States. These programs focus on energy efficiency, renewable energy, methane and other non-CO_2 gases, agricultural practices, and implementation of technologies to achieve GHG reductions. The USEPA implements several voluntary programs that substantially contribute to the reduction of GHG emissions including:

- The State Climate and Energy Partner Network that allows for the exchange of information between federal and state agencies regarding climate and energy,
- The Climate Leaders program for companies,
- The Energy Star labeling system for energy-efficient products, and
- The Green Power Partnership for organizations interested in buying green power.

All of these programs play a significant role in encouraging voluntary reductions from large corporations, consumers, industrial and commercial buildings, and many major industrial sectors.

In *Massachusetts v. Environmental Protection Agency* (Docket No. 05–1120), the U.S. Supreme Court held in April of 2007 that the USEPA has statutory authority under Section 2020 of the federal Clean Air Act (CAA) to regulate GHGs. The court did not hold that the USEPA was required to regulate GHG emissions; however, it indicated that the agency must decide whether GHGs cause or contribute to air pollution that is reasonably anticipated to endanger public health or welfare.

On December 7, 2009, the USEPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the federal Clean Air Act. The USEPA adopted a Final Endangerment Finding for the six defined GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) on December 7, 2009. The Endangerment Finding is required before USEPA can regulate GHG emissions under Section 202(a)(1) of the Clean Air Act consistently with the United States Supreme Court decision. The USEPA also adopted a Cause or Contribute Finding in which the

USEPA Administrator found that GHG emissions from new motor vehicle and motor vehicle engines are contributing to air pollution, which is endangering public health and welfare. These findings do not themselves impose any requirements on industry or other entities. However, these actions were a prerequisite for implementing GHG emissions standards for vehicles.

On May 19, 2009, the President announced a national policy for fuel efficiency and emissions standards in the U.S. auto industry. The policy is a collaboration between the U.S. Department of Transportation (USDOT) and the USEPA. The proposed federal standards apply to passenger cars and light-duty trucks built in model years 2012 through 2016. The proposed rule would surpass the prior Corporate Average Fuel Economy (CAFE) standards and require an average fuel economy standard of 35.5 miles per gallon (mpg) and 250 grams of CO_2 per mile by model year 2016, based on USEPA calculation methods. Based on USDOT calculation methods, the standards set a requirement to meet an average fuel economy of 34.1 mpg by 2016. Although this is lower than the 35.5 mpg, the USEPA method gives automakers credits for improvements to air-conditioning systems that also reduce leakage of refrigerants into the atmosphere or reduce fuel consumption while the system is operating. The improvements to these systems equate to an overall reduction of GHGs. These standards were formally adopted by the USEPA and USDOT on April 1, 2010.

In August 2012, the USEPA and USDOT adopted standards for model year 2017 through 2025 passenger cars and light-duty trucks. By 2020, vehicles are required to achieve a combined standard of 41.7 mpg and 213 grams of CO_2 per mile. By 2025, vehicles are required to achieve 54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO_2 per mile. According to the USEPA, a model year 2025 vehicle would emit one-half of the GHG emissions from a model year 2010 vehicle.[14]

On September 22, 2009, the USEPA released its final Greenhouse Gas Reporting Rule (Reporting Rule). The Reporting Rule is a response to the fiscal year 2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110-161), that required USEPA to develop "… mandatory reporting of greenhouse gases above appropriate thresholds in all sectors of the economy…" The Reporting Rule applies to most entities that emit 25,000 metric tons of CO_2e or more per year. Starting in 2010, facility owners are required to submit an annual GHG emissions report with detailed calculations of facility GHG emissions. The Reporting Rule would also mandate recordkeeping and administrative requirements in order for USEPA to verify annual GHG emissions reports.

2.2.3 State Regulations

California Air Resources Board

CARB, a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, CARB conducts research, sets state ambient air quality standards (California Ambient Air Quality Standards [CAAQS]), compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB has

[14] *U.S. Environmental Protection Agency, "EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks," http://www.epa.gov/oms/climate/documents/420f12051.pdf. 2012.*

primary responsibility for the development of California's State Implementation Plan (SIP) and works closely with the federal government and the local air districts.

Executive Order S-3-05

The Governor of California announced on June 1, 2005, through Executive Order S-3-05, the following GHG emission reduction targets:

- By 2010, California shall reduce GHG emissions to 2000 levels;
- By 2020, California shall reduce GHG emissions to 1990 levels; and
- By 2050, California shall reduce GHG emissions to 80 percent below 1990 levels.

The Secretary of CalEPA is required to coordinate efforts of various agencies in order to collectively and efficiently reduce GHGs. Some of the agency representatives involved in the GHG reduction plan include the Secretary of the Business, Transportation and Housing Agency, the Secretary of the Department of Food and Agriculture, the Secretary of the Resources Agency, the Chairperson of CARB, the Chairperson of the California Energy Commission, and the President of the Public Utilities Commission. Representatives from these agencies comprise the California Climate Action Team (CCAT).

The CCAT provides biennial reports to the Governor and Legislature on the state of GHG reductions in the state as well as strategies for mitigating and adapting to climate change. The first *California Climate Action Team Report to the Governor and the Legislature* in 2006 contained recommendations and strategies to help meet the targets in Executive Order S 3-05.[15] The 2010 CCAT Report, finalized in December 2010, expands on the policy oriented 2006 assessment.[16] The new information detailed in the CCAT Report includes development of revised climate and sea-level projections using new information and tools that have become available in the last two years; and an evaluation of climate change within the context of broader social changes, such as land-use changes and demographic shifts..

Assembly Bill 32, The Global Warming Solutions Act of 2006

In 2006, the California State Legislature adopted the California Global Warming Solutions Act of 2006 (AB 32), focusing on reducing GHG emissions in California to 1990 levels by 2020. As required by AB 32, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was set at 427 $MMTCO_2e$. CARB also projected the state's 2020 GHG emissions under BAU conditions—that is, emissions that would occur without any plans, policies, or regulations to reduce GHG emissions. CARB originally used an average of the state's GHG emissions from 2002 through 2004 and projected the 2020 levels at approximately 596 $MMTCO_2e$. Therefore, under this original projection, the state must reduce its 2020 BAU emissions by 28.4 percent in order to meet the 1990 target. CARB updated their 2020 BAU emissions estimate to account for the effect of the 2007–2009 economic recession, new estimates for future fuel and energy demand, and the reductions required by regulation that were recently

[15] *California Environmental Protection Agency, California Climate Action Team Report to the Governor and the Legislature, (2006).*

[16] *California Environmental Protection Agency, California Climate Action Team Report to the Governor and the Legislature, (2010).*

adopted for motor vehicles and renewable energy.[17] CARB's revised 2020 BAU emissions estimate is 507 $MMTCO_2e$. Therefore, the emission reductions necessary to achieve the 2020 emissions target of 427 $MMTCO_2e$ would be 80 $MMTCO_2e$, or a reduction of GHG emissions by 15.8 percent.

AB 32 defines GHGs as CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6 and represents the first enforceable statewide program to limit emissions of these GHGs from all major industries with penalties for noncompliance. The law further required that reduction measures be technologically feasible and cost effective. Under AB 32, CARB has the primary responsibility for reducing GHG emissions. CARB is required to adopt rules and regulations directing state actions that would achieve GHG emissions reductions equivalent to 1990 statewide levels by 2020. On or before June 30, 2007, CARB was required to publish a list of discrete early action GHG emission reduction measures that would be implemented to be made enforceable by 2010. In 2007, CARB published its *Final Report for Proposed Early Actions to Mitigate Climate Change in California*.[18] This report described recommendations for discrete early action measures to reduce GHG emissions as part of California's AB 32 GHG reduction strategy. Resulting from this are three new regulations proposed to meet the definition of "discrete early action greenhouse gas reduction measures," including the following: a low carbon fuel standard; reduction of HFC 134a emissions from non-professional servicing of motor vehicle air conditioning systems; and improved landfill methane capture. CARB estimates that by 2020, the reductions from those three measures would range from 13 to 26 $MMTCO_2e$. Six additional early-action regulations were on October 25, 2007 that targeted: motor vehicles; auxiliary engines from docked ships; PFCs from the semiconductor industry; propellants in consumer products; automotive maintenance; and SF_6 from non-electricity sectors.

AB 32 required CARB to adopt a scoping plan indicating how reductions in significant GHG sources will be achieved through regulations, market mechanisms, and other actions. CARB released the *Climate Change Scoping Plan* in December 2008, which contained an outline of the proposed state strategies to achieve the 2020 GHG emission limits.[19] The CARB Governing Board approved the *Climate Change Scoping Plan* on December 11, 2008. The *Climate Change Scoping Plan* indicates how emissions reductions will be achieved from significant sources of GHGs via regulations, market mechanism, and other actions. It identifies 18 recommended strategies the state should implement to achieve AB 32. CARB has identified ongoing programs and has adopted regulations for a number of individual measures to reduce GHG emissions in accordance with the *Climate Change Scoping Plan* strategies. Key elements of the Climate Change Scoping Plan include the following recommendations:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewable 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;

[17] *California Air Resources Board, "Greenhouse Gas Inventory – 2020 Emissions Forecast," http://www.arb.ca.gov/cc/inventory/data/forecast.htm. 2012.*

[18] *California Air Resources Board, Proposed Early Actions to Mitigation Climate Change in California, 2007.*

[19] *California Air Resources Board, Climate Change Scoping Plan, 2008.*

- Establishing targets for transportation-related greenhouse gas 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.

Under the *Climate Change Scoping Plan*, approximately 85 percent of the state's emissions are subject to a cap-and-trade program where covered sectors are placed under a declining emissions cap. The emissions cap incorporates a margin of safety whereby the 2020 emissions limit will still be achieved even in the event that uncapped sectors do not fully meet their anticipated emission reductions. Emission reductions will be achieved through regulatory requirements and the option to reduce emissions further or purchase allowances to cover compliance obligations. It is expected that emission reductions from the cap and trade program will account for a sizeable portion of the reductions required by AB 32.

Assembly Bill 1493, Greenhouse Gas Emission Standards for Automobiles (Pavley)

In response to the transportation sector accounting for more than half of California's CO_2 emissions, AB 1493, enacted on July 22, 2002, required CARB to set GHG emission standards for passenger vehicles, light duty trucks, and other vehicles whose primary use is non-commercial personal transportation manufactured in and after 2009. In setting these standards, CARB must consider cost effectiveness, technological feasibility, economic impacts, and provide maximum flexibility to manufacturers. The State of California in 2004 submitted a request for a waiver from federal clean air regulations, which ordinarily preempts state regulation of motor vehicle emission standards, to allow the state to require reduced tailpipe emissions of CO_2. In late 2007, the USEPA denied California's waiver request. In early 2008, the state brought suit against USEPA related to this denial. In January 2009, the President directed the USEPA to assess whether its denial of the waiver was appropriate under the federal CAA. In June 2009, the USEPA granted California the waiver.

However, as discussed previously, the USEPA and USDOT have adopted federal standards for model year 2012 through 2016 light-duty vehicles. In light of the USEPA and USDOT standards, California—and states adopting California emissions standards—have agreed to defer to the proposed national standard through model year 2016. The 2016 endpoint of the federal and state standards is similar, although the federal standard ramps up slightly more slowly than required under the state standard. The state standards (called the Pavley standards) require additional reductions in CO_2 emissions beyond model year 2016 (referred to as Pavley Phase II standards). As noted above, the USEPA and USDOT have adopted GHG emission standards for model year 2017 through 2025 vehicles. These standards are slightly different from the Pavley Phase II standards, but the State of California has agreed not to contest these standards, in part due to the fact that while the national standard would achieve slightly less reductions in California, it would achieve greater reductions nationally. CARB is in the process of adopting regulations that would allow manufacturers to comply with the 2017-2025 national standards to meet state law.

Executive Order S-01-07

Executive Order S-01-07 was enacted by Governor Schwarzenegger on January 18, 2007. The order mandates the following: (1) that a statewide goal be established to reduce the carbon intensity of

California's transportation fuels by at least ten (10) percent by 2020; and (2) that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established in California. CARB adopted the LCFS on April 23, 2009. The final regulation was approved by the Office of Administrative Law and filed with the Secretary of State on January 12, 2010; the LCFS became effective on the same day.

Senate Bill 97

Senate Bill 97 (SB 97), enacted in 2007, amended the California Environmental Quality Act (CEQA) to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis. It directed the California Office of Planning and Research (OPR) to develop revisions to the state CEQA Guidelines "for the mitigation of GHG emissions or the effects of GHG emissions" and directed the Resources Agency to certify and adopt these revised state CEQA Guidelines by January 2010. The revisions were completed in March, 2010 and codified into the California Code of Regulations and became effective within 120 days pursuant to CEQA. The amendments provide regulatory guidance for the analysis and mitigation of the potential effects of GHG emissions. The CEQA Guidelines require:

- Inclusion of GHG analyses in CEQA documents;
- Determination of significance of GHG emissions; and,
- If significant GHG emissions would occur, adoption of mitigation to address significant emissions.

The CEQA Guidelines provide for streamlining the environmental review of project-level analysis of GHG emissions from a programmatic document, such as a greenhouse gas reduction plan, and allow for a finding of less than significant where a project is determined to be consistent with a local reduction plan. The CEQA Guidelines provide that the environmental analysis of specific projects may be tiered from a programmatic GHG plan that substantially lessens the cumulative effect of GHG emissions. If a public agency adopts such a programmatic GHG plan, the environmental review of subsequent projects may be streamlined. A specific project's incremental contribution of GHG emissions will not be considered cumulatively significant if the project complies with the adopted GHG plan.

Senate Bill 375

Senate Bill 375 (SB 375), which establishes mechanisms for the development of regional targets for reducing passenger vehicle greenhouse gas emissions, was adopted by the state on September 30, 2008. Under SB 375, CARB is required, in consultation with the metropolitan planning organizations (MPOs) to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. On September 23, 2010, CARB adopted the vehicular GHG emissions reduction targets for the Southern California Association of Governments (SCAG), which is the MPO for the region in which the City of Fontana is located. The target is a per capita reduction of 8 percent for 2020 and 13 percent for 2035 compared to the 2005 baseline. Of note, the proposed reduction targets explicitly exclude emission reductions expected from the AB 1493 and the low carbon fuel standard regulations.

Under SB 375, the target must be incorporated within that region's Regional Transportation Plan (RTP), which is used for long-term transportation planning, in a Sustainable Communities Strategy (SCS). Certain transportation planning and programming activities would then need to be consistent with the SCS; however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plan) are not required to be consistent with either the RTP or

SCS. On April 4, 2012, SCAG adopted the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Using growth forecasts and economic trends, the RTP provides a vision for transportation throughout the region for the next 20 years. It considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address mobility needs. The RTP/SCS successfully achieves and exceeds the greenhouse gas emission-reduction targets set by CARB by achieving a 9 percent reduction by 2020 and 16 percent reduction by 2035 compared to the 2005 level on a per capita basis. This RTP/SCS also meets criteria pollutant emission budgets set by the USEPA.

Title 24, Building Standards Code and CALGreen Code

The CEC first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality."[20] The CALGreen Code is not intended to substitute for or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC). When the CALGreen code went into effect in 2009, compliance through 2010 was voluntary. As of January 1, 2011, the CALGreen code is mandatory for all new buildings constructed in the state.

Renewables Portfolio Standard

Senate Bill 1078 (SB 1078) (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008, Governor Schwarzenegger signed Executive Order S-14-08, which expands the state's Renewable Energy Standard (RPS) to 33 percent renewable power by 2020. Pursuant to Executive Order S-21-09, CARB was also preparing regulations to supplement the RPS with a Renewable Energy Standard that will result in a total renewable energy requirement for utilities of 33 percent by 2020. But on April 12, 2011, Governor Jerry Brown signed SB X1-2 to increase California's RPS to 33 percent by 2020. Notably, unlike the prior 20 percent RPS, the current 33 percent RPS applies to Publicly Owned Utilities, such as Southern California Edison, which is the utility provider for the City of Fontana.

[20] *California Building Standards Commission, 2010 California Green Building Standards Code, (2010).*

2.2.4 Regional Regulations

Southern California Air Quality Management District (SCAQMD)

The City of Fontana is located in the South Coast Air Basin (Basin). Air emissions are regulated by the SCAQMD. The SCAQMD is responsible for promoting and improving the air quality of the Basin. This is accomplished though air quality monitoring, evaluation, education, implementation of control measures to reduce emissions from stationary sources, permitting and inspection of pollution sources, enforcement of air quality regulations, and by supporting and implementing measures to reduce emissions from motor vehicles. After AB 32 was passed, SCAQMD formed a Climate Change Committee along with a Greenhouse Gases CEQA Significance Thresholds Working Group and the SoCal Climate Solutions Exchange Technical Advisory Group. On September 5, 2008, the SCAQMD Board approved the SCAQMD Climate Change Policy, which outlines actions the District will take to assist businesses and local governments in implementing climate change measures, decrease the agency's carbon emissions, and provide information to the public regarding climate change. On December 5, 2008, the Board approved interim CEQA GHG significance thresholds for stationary sources, and related rules, and plans. The District also adopted a tiered approach for determining significance. Projects that are exempt from CEQA or consistent with an approved local GHG reduction plan can be found to be less than significant. Tier 3, the primary tier the Board will use for determining significance, has a screening significance threshold designed to capture 90 percent of sector GHG emissions.[21] This goal was determined by SCAQMD staff to be more appropriate to address the long-term adverse impacts associated with global climate change because most projects will be required to implement GHG reduction measures. Further, it was determined that a 90 percent emission capture rate sets the emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions.

San Bernardino Associated Governments

In 2010, the City of Fontana executed a Memorandum of Understanding (MOU) with the San Bernardino Associated Governments (SANBAG) for the preparation of the *San Bernardino County Regional Greenhouse Gas Inventory and Reduction Plan* and related EIR. The Reduction Plan provides an inventory of GHG emissions and an evaluation of GHG reduction measures that could be adopted by the 21 Partnership Cities of San Bernardino County, which includes the City of Fontana. The Reduction Plan summarizes the actions that each city has selected in order to reduce GHG emissions, state-mandated actions, GHG emissions avoided in 2020 associated with each local and state action, and each city's predicted progress towards their selected GHG reduction goal. Local GHG reduction measures selected for implementation by the City of Fontana include the following measures as described in the Reduction Plan:

Energy-2, Outdoor Lighting Upgrades for Existing Development: Adopt outdoor lighting standards in the zoning ordinance to reduce electricity consumption above and beyond the requirements of AB 1109. The lighting standards could include the following provisions.

[21] *South Coast Air Quality Management District, "Greenhouse Gases (GHG) CEQA Significance Thresholds Working Group Meeting #15," http://www.aqmd.gov/ceqa/handbook/GHG/2010/sept28mtg/sept29.html. 2010.*

- Encourage lighting along the urban-rural edge, not to exceed one-half the current maximum lighting standard.
- Prohibit continuous all night outdoor lighting in parks, sport facilities, construction sites, and other relevant areas (unless it compromises safety).
- Implement or exceed CALGreen's nonresidential voluntary mandatory measures related to outdoor lighting controls and equipment (Section A5.209.3) and outdoor lighting (Section A5.209.4), (i.e., achieve CALGreen Tier 1 lighting standards or otherwise demonstrate that energy efficiency of lighting fixtures exceeds mandatory Title 24 by a minimum 15 percent).

Wastewater-2, Energy Efficiency Equipment Upgrades at Wastewater Treatment Plants (Regional): Work with IEUA or other local wastewater treatment provider to upgrade and replace wastewater treatment and pumping equipment with more energy-efficient equipment, as is financially feasible, at the existing facilities by 2020. Require all pumping and treatment equipment to be 25 percent more energy efficient at the time of replacement. Utilize best management practices for the treatment of waste. This measure could also include the following. WWTPs may already have energy efficiency upgrades scheduled as part of their capital improvements program.

Water-4, Senate Bill X7-7 – The Water Conservation Act of 2009: SB X7-7 was enacted in November 2009 and requires urban water agencies throughout California to increase conservation to achieve a statewide goal of a 20 percent reduction in urban per capita use (compared to nominal 2005 levels) by December 31, 2020 (referred to as the "20X2020 goal"). Each urban water retailer in the county subject to the law has established a 2020 per-capita urban water use target to meet this goal.

Transportation (On-Road)-1, SB 375 Sustainable Communities Strategy: SB 375 provides for a new planning process that coordinates land use planning, regional transportation plans, and funding priorities in order to help California meet the GHG reduction goals established in AB 32. While Pavley and LCFS seek to reduce fuel consumed and reduce the carbon content of fuel consumed, SB 375 seeks to reduce VMT through land use planning. SB 375 requires regional transportation plans, developed by MPOs to incorporate an SCS in their RTPs. The goal of the SCS is to reduce regional vehicle miles traveled (VMT) through land use planning and associated transportation patterns. SB 375 also includes provisions for streamlined CEQA review for some infill projects such as transit-oriented development. The regional GHG reduction target for SCAG is 8 percent by 2020 and 13 percent by 2035, compared to 2005 GHG emissions on a per capita basis. SCAG's 2012–2035 RTP/SCS, if fully implemented would successfully achieve the targets set by CARB.

Transportation (On-Road)-2, "Smart Bus" Technologies (Regional): Collaborate with Omnitrans to implement "Smart Bus" technology, global positioning system (GPS), and electronic displays at all transit stops by 2020 to provide customers with "real-time" arrival and departure time information.[22] Smart Bus Technologies include Automatic Vehicle Location (AVL) systems and real-time passenger information at bus stations. Omnitrans plans to implement these technologies system-wide on all bus routes serving San Bernardino Valley (Omnitrans service area) to enable information sharing, enhance rider services, and

[22] *These systems not only allow riders to know exactly when the next vehicle will be arriving, but also enable the system operator to track, schedule, and repair vehicles in service. Providing better information to passengers about scheduled arrivals can result in dramatic increases in passengers' perceptions of the service, even if the actual service provided is the same in terms of frequency and on-time arrivals.*

attract potential riders. The AVL system has already been implemented. The Bus Arrival Prediction Information System (BAPIS) would be installed in two phases. In Phase I, real-time rider information would be available via text messaging, Quick Response (QR), website, Interactive Voice Response (IVR), and mobile phone devices. Completed implementation is slated for December 2012. In Phase II, Omnitrans will install electronic signs at all major transit hubs and provide General Transit Feed Specification (GTFS) data to the general public to build apps for mobile devices like smartphones and tablet computers. Phase II completion is slated for December 2013. GHG emissions are expected to decrease because the AVL technologies could lead to more fuel-efficient bus operations for Omnitrans and the BAPIS technologies could potentially attract more transit riders who may switch modes from automobiles. Omnitrans' Demand Response Services, OmniLink and Access, do not operate on a fixed schedule or route and are not included in this analysis.

PS-1, GHG Performance Standard for New Development: Individual cities may adopt a GHG Performance Standard for New Development (PS) that would provide a streamlined and flexible program for new residential and nonresidential projects to reduce their emissions. The PS would be a reduction standard for new private developments as part of the discretionary approval process under CEQA. Under the PS, new projects would be required to quantify project-generated GHG emissions and adopt feasible reduction measures to reduce project emissions to a level that is a certain percent below BAU project emissions. The PS does not require project applicants to implement a pre-determined set of measures. Rather, project applicants are allowed to choose the most appropriate measures for achieving the percent reduction goal, while taking into consideration cost, environmental or economic benefits, schedule, and other project requirements. A city may select a suite of other local measures that may already meet the PS-1 percent reduction goal specified by that city. In these cases, a city can still select PS-1 and use it to support those local measures, even though direct reductions from PS-1 for those cities may be zero. An effort was made to not to double-count emissions reductions from PS-1 and overlapping local measures.

2.2.5 City of Fontana Regulations

General Plan Air Quality Element

City of Fontana General Plan Air Quality Element

The City of Fontana sits at the foot of two mountain ranges: the San Gabriel Mountains to the west and the San Bernardino Mountains to the east. The mountains effectively trap air pollutants and prevent their dispersion. The City's industries and heavy traffic further exacerbate the problem by introducing large amounts of pollutants into the region. Thus, the City of Fontana experiences a unique combination of air quality issues. Adopted in October 2003, the General Plan provides a vision and blueprint for the City's long-term physical development. In addition to the seven elements mandated by the state, the General Plan includes an optional Air Quality Element, which outlines the City's existing air quality conditions, the natural and anthropogenic factors which impact air quality, and goals, policies, and actions as related to the regulation of air quality. The following City goals and policies addressing impacts related to air quality, specifically those most associated with GHGs and climate change, and applicable to the proposed Westgate Specific Plan are as follows:

Goal 1: Our City has a diverse and efficiently operated ground transportation system that generates the minimum feasible pollutants.

Policy 1: The City shall seek to integrate land use and transportation planning to the maximum extent possible. Policy 2: Mixed-use development should be planned for and incentivized to develop in our City.

Policy 3: Merchants in our City should be assisted with getting their customers to shift from single occupancy vehicles to transit, carpools, bicycles or foot.

Policy 4: Developers in our community shall work to reduce vehicle trips and total vehicle miles traveled in projects that are approved here.

Goal 2: A concerted effort to reduce energy consumption in our City results in reduced emissions.

Policy 1: The City shall promote and provide incentives for the use of energy-efficient building materials/methods that reduce emissions.

Policy 2: The City shall require residential building construction to comply with energy use guidelines detailed in Title 24 of the California Administrative Code and shall promote and provide incentives for residential building construction that goes beyond the guidelines detailed in Title 24.

Policy 3: Stationary air pollution sources shall comply with applicable air district rules and control measures.

Policy 4: Any project that exceeds allowable emissions, as established by the SCAQMD, shall mitigate its anticipated emissions to the extent reasonable feasible.

Goal 3: The minimum practicable particulate emissions are released in our City from construction and operation of roads and buildings.

Policy 2: Emissions from building materials and construction methods that generate excessive pollutants shall be kept at the minimum feasible level.

Green Building Standards

The City of Fontana currently follows the adopted California Building Standards Codes, 2010 Edition, known as the California Code of Regulations, Title 24, which consists of the following codes related to GHG emissions:[23]

- The California Building Code, Volumes 1 & 2, based on the 2009 International Building Code;
- The California Residential Code, based on the 2009 International Residential Code; and
- The California Green Building Standards, 2010.

[23] *City of Fontana, "Codes & Local Amendments," http://www.fontana.org/index.aspx?NID=145. 2012.*

3.0 GREENHOUSE GAS REDUCTION TARGET

The Westgate Specific Plan GHGRP reduction goal is based on AB 32 and CARB's recommendations to ensure California GHG emissions are reduced to 1990 levels by the year 2020. As discussed previously in **Subsection 2.2**, *Regulatory Background*, AB 32 establishes GHG reduction targets for statewide emissions, focusing on reducing GHG emissions in California to 1990 levels, or 427 $MMTCO_2e$, by 2020. CARB's revised 2020 BAU baseline is 507 $MMTCO_2e$. Therefore, the emission reductions necessary to achieve the 2020 emissions target of 427 $MMTCO_2e$ would be 80 $MMTCO_2e$, or a reduction of GHG emissions by 15.8 percent from BAU.

The Westgate Specific Plan GHG Inventory forms a benchmark and projected unmitigated 2020 inventory from which the City has established its reduction target. Consistent with AB 32, the Westgate Specific Plan GHGRP goal is to decrease its inventory of GHG emissions to a level at least 15.8 percent below BAU emissions.

When taking into account the required design features and mitigation measures described in Section 5, *Greenhouse Gas Reduction Strategies,* the estimated total GHG emissions of the Westgate Specific Plan at buildout would be approximately 129,023 $MTCO_2e$ compared to BAU emissions of 156,290 $MTCO_2e$, which represents a 17.4 percent reduction from BAU levels. The reduction level would be greater than the minimum required 15.8 reduction percentage. The additional implementation of optional reduction strategies discussed in Chapter 5 would result in even greater reduction beyond what is minimally necessary to achieve the reduction target.

4.0 METHODOLOGY AND BUSINESS AS USUAL EMISSIONS

4.1 CALCULATION METHODOLOGY

A number of widely accepted protocols data sources for estimating GHG emissions were used to prepare the Westgate Specific Plan's inventory. The primary protocols and data sources relied upon for this GHGRP include the following:

- California Air Pollution Control Officers Association (CAPCOA), *Quantifying Greenhouse Gas Mitigation Measures*, (2010). The CAPCOA guidance provides methodologies for quantifying GHG reductions from a variety of transportation, energy, water, and solid waste measures.
- CARB, *Local Governments Operations Protocol*, (LGOP, 2008). This protocol is the standard for estimating emissions resulting from government buildings and facilities, government fleet vehicles, wastewater treatment and potable water treatment facilities, landfill and composting facilities, and other operations.
- CARB, *California Greenhouse Gas Inventory Data 2000-2012*, (2014). CARB's documentation provides background methodology, activity data, protocols, and calculations used for California's statewide inventory.
- The Climate Registry (formerly the California Climate Action Registry), *General Reporting Protocol*, (2009). This protocol provides guidance for preparing GHG inventories in California.
- CEC, *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004*, (2006). This inventory provides useful methodology and emission factors for statewide GHG emissions inventorying.
- IPCC, *Guidelines for National Greenhouse Gas Inventories*, (2006). This document is the international standard for inventories and provides much of the baseline methodology used in the national and statewide emission inventories.
- SCAQMD, *California Emissions Estimator Model, User's Guide, Version 2013.2*, (2013). This is the User's Guide for the California Emissions Estimator Model (CalEEMod) that was developed by the SCAQMD to calculate criteria pollutant and GHG emissions from land use development projects in the state. The model was developed in coordination with other air quality management and air pollution control districts in California.
- USEPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2007*, (2009). This inventory provides useful methodology and emission factors for nationwide GHG emissions inventorying.

The LGOP categorizes GHG emissions into three distinct "scopes" as a way of organizing GHG emissions, as follows:

- **Scope 1 Emissions** - All "direct" sources of community-wide GHG emissions[24] from sources within the jurisdictional boundaries of the Westgate Specific Plan. This includes fuel burned onsite in

[24] *A direct source is one where the action and the associated emissions are in the same location. For example, when a homeowner burns wood in his fireplace, he releases GHGs directly from his fireplace. An "indirect" source is one where the action that generates*

(Footnote continued on next page)

buildings and equipment such as natural gas or diesel fuel; transportation fuels burned in motor vehicles and airplanes; and wood-burning emissions from household hearths.

- **Scope 2 Emissions** – Encompasses "indirect" sources of GHG emissions resulting from the consumption of purchased electricity, which is electricity used by the residents, businesses, and City of Fontana's facilities. These emissions are "indirect" as the GHG emissions arise distantly, for example at an electric generating station in another county or even state. Thus they are distinguished from direct emissions (i.e., Scope 1 emissions), which are reported by the utility itself, in order to avoid double counting.
- **Scope 3 Emissions** – This is an optional reporting category that encompasses all other "indirect emissions" not covered in Scope 2 that are a consequence of activities of the City's residents and businesses, but occur from sources out of the jurisdictional control of the local government. For example, emissions from trucks hauling waste under a County contract.

Scope 1 emissions are characterized and named in this report as "direct emissions." Scope 2 emissions are characterized and named as "indirect source emissions." Scope 3 emissions are not controlled by the owner/developer/operator of the individual projects to be implemented under the Specific Plan, but have been included in this report to the extent that they are reasonably known and quantifiable. The analysis herein is tailored to include all existing and projected emission sources within the Westgate Specific Plan to provide, to the fullest extent feasible, a comprehensive analysis of GHG impacts.

CARB believes that consideration of so-called indirect emissions provides a more complete picture of the GHG footprint of a facility: "As facilities consider changes that would affect their emissions – addition of a cogeneration unit to boost overall efficiency even as it increases direct emissions, for example – the relative impact on total (direct plus indirect) emissions by the facility should be monitored. Annually reported indirect energy usage also aids the conservation awareness of the facility and provides information" to CARB to be considered for future strategies by the industrial sector.[25] For these reasons, CARB has proposed requiring the calculation of direct and indirect GHG emissions as part of the AB 32 reporting requirements. Therefore, direct and indirect emissions have been calculated for the proposed project.

Emissions were calculated using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2. CalEEMod is a statewide land use emissions computer model which calculates criteria pollutant and GHG emissions associated with a variety of land use projects. The model was developed in collaboration with the air districts of California including the SCAQMD. CalEEMod incorporates the EMFAC model, which is an emissions estimation model developed by CARB to calculate emissions from motor vehicles. CalEEMod generates GHG emissions results for CO_2, CH_4, and N_2O, which are the GHGs associated with and relevant to the proposed project. In CalEEMod, emissions are derived from emission factors published in the *2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories*. These emissions are then converted to units of metric tons of CO_2e ($MTCO_2e$) for consistency.

GHGs is separated from the where the GHGs are actually emitted. For example, when a building uses electricity, it necessitates the burning of coal (and resultant release of GHGs) by a coal-fired electricity generating station located elsewhere.

[25] *California Air Resources Board, Initial Statement of Reasons for Rulemaking, Proposed Regulation for Mandatory Reporting of Greenhouse Gas Emissions Pursuant to the California Global Warming Solutions Act of 2006 (Assembly Bill 32). Planning and Technical Support Division Emission Inventory Branch, October 19, 2007.*

Mobile source emission calculations associated with buildout of the Westgate Specific Plan are calculated using the CalEEMod model and an estimated projection of annual vehicle miles traveled (VMT), which is derived from the Traffic Study conducted for the project (provided in Appendix J of the Westgate Specific Plan Draft EIR).[26] These values account for the daily and seasonal variations in trip frequency and length associated with the project trips. Mobile source emissions also account for residents traveling to and from work and other activities that require a commute. Mobile source calculations utilize the EMFAC model and the California Climate Action Registry (CCAR) *General Reporting Protocol*, Version 3.1 to generate emission factors for CO_2 and CH_4, and N_2O.[27] These emission factors are then applied to the annual VMT calculated in the Traffic Study.

In addition to mobile source GHG emissions, the CalEEMod model also calculates GHG emissions from Scope 2 sources such as energy usage, water and wastewater usage and Scope 3 sources such as solid waste generation. With regards to energy usage, the consumption of fossil fuels to generate electricity and to provide heating and hot water results in GHG emissions. Future fuel consumption rates are based on the allowed development, such as the number of dwelling units and square footage of commercial, school, and office space. Energy usage (off-site electricity generation and on-site natural gas consumption) is calculated within CalEEMod using the CEC's Residential Appliance Saturation Survey (RASS) and Commercial Building Energy Consumption Survey (CBECS).

Water and waste water generated from the project require energy to supply, distribute and treat. CalEEMod calculates water usage based on the Pacific Institute report, *Waste Not Want Not*.[28] The California Energy Commission's estimate for energy intensity of the water use cycle in southern California is used to calculate the energy usage related to water conveyance. Emission factors from the CCAR *General Reporting Protocol*, Version 3.1 are implemented in calculating the associated GHGs. Because water conveyance associated with the proposed project is regional in nature, the emission factors used in this component of the analysis represent a State-wide average of known power producing facilities, utilizing various technologies and emission control strategies.

Emissions from solid waste handling generated from the project are also accounted for in the GHG emissions inventory. Waste disposal rates from the California Department of Resources Recycling and Recovery (CalRecycle) data for individual land uses was used to estimate the amount of waste generated by the project. GHG emissions from solid waste are calculated based on decomposition of waste into methane based on the USEPA's *AP-42*, Compilation of Air Pollutant Emission Factors.[29]

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[26] *Kunzman Associates, Inc.,* Westgate Specific Plan, Traffic Impact Analysis*, 2013.*

[27] *The Climate Registry is the successor organization to the CCAR.*

[28] *Gleick, P.H.; Haasz, D.; Henges-Jeck, C.; Srinivasan, V.; Cushing, K.K.; Mann, A. 2003.* Waste Not, Want Not: The Potential for Urban Water Conservation in California*. Published by the Pacific Institute for Studies in Development, Environment, and Security. Full report available online at: http://www.pacinst.org/reports/urban_usage/waste_not_want_not_full_report.pdf . Appendices available online at: http://www.pacinst.org/reports/urban_usage/appendices.htm.*

[29] *USEPA,* AP 42, *Compilation of Air Pollutant Emission Factors, has been published since 1972 as the primary compilation of USEPA's emission factor information. It contains emission factors and process information for more than 200 air pollution source categories. http://www.epa.gov/ttnchie1/ap42/*

4.2 BUSINESS AS USUAL EMISSIONS INVENTORY

The BAU emissions inventory assumes operation of comparable amenities (housing, commercial, office, school, etc.) similar in scale and size to serve the regional need. A BAU case does not consider the site-specific benefits or reductions in GHG emissions resulting from co-location of uses, availability of public transportation, project design features, or prescribed mitigation measures. The BAU scenario emissions estimates assume energy and water consumption, emission factors, and GHG emission reduction measures in accordance with the minimum regulatory requirements in place at the time CARB updated the statewide 2020 GHG emissions projection pursuant to AB 32 using baseline years of 2006 through 2008. Therefore, the BAU scenario is consistent with measures in effect at that time, which include the Pavley Phase I motor vehicle standards and the RPS standard.

The Westgate Specific Plan is expected to be fully operational and occupied in 2035, with completion and occupation of Phase I developments in as early as 2018. The annual GHG emissions for these expected opening years were calculated. AB 32 has not established a GHG reduction goal for 2018, while year 2035 is an interim year between the long-term CARB and SCAG planning horizon years of 2020 and 2050. However, for the purposes of this analysis, the Phase I and full buildout GHG emissions are compared to the AB 32 reduction target for 2020.

As shown in **Table 2**, W*estgate Specific Plan Annual Greenhouse Gas Emissions – Business as Usual,* the BAU scenario GHG emissions resulting from vehicle, electrical, and natural gas usage associated with operation of Phase I and buildout of the Westgate Specific Plan were estimated to be 43,061 $MTCO_2e$ for year 2018 and 154,290 $MTCO_2e$ for year 2035, respectively. These emissions do not take into account reductions from project-specific or site specific design features or mitigation measures.

Table 2

Westgate Specific Plan Annual Greenhouse Gas Emissions – Business as Usual

	Phase 1 BAU (2018)	Buildout BAU (2035)
Emission Source	**CO_2e (Metric Tons/year)**	
Amortized Construction	454	1,814
Area Sources	464	1,659
Mobile Sources[a]	33,154	115,519
Electricity[b]	4,835	22,710
Natural gas	2,478	9,081
Water	1,051	3,447
Solid Waste	625	2,060
Total	**43,061**	**156,290**

[a] *Mobile source values were derived using CalEEMod.*
[b] *Electricity Usage Rates from CalEEMod default values for Southern California Edison.*

Source: PCR Services Corporation, 2014

5.0 GREENHOUSE GAS REDUCTION STRATEGIES

5.1 ATTAINING THE REDUCTION TARGET

The Westgate Specific Plan's goal is to reduce its inventory of emissions by 15.8 percent below BAU emissions, or more. The purpose of this section is to describe the reduction strategies that are supported by the State and that are feasible and applicable to the Westgate Specific Plan. Required design features and mitigation measures as well as optional reduction strategies will help reduce the Westgate Specific Plan area-wide GHG emissions levels. Emission reduction strategies are classified into the following six sectors: Building Energy (including both Energy Efficiency and Alternative Energy), Transportation and Land Use, Water Conservation, Area Landscaping, Solid Waste, Vegetation, and General Plans. For each sector, reduction strategies have been developed to achieve the Westgate Specific Plan's emissions reduction target.

As shown previously in Table 2, the Westgate Specific Plan's BAU GHG emissions inventory is projected to reach 156,290 $MTCO_2e$ at buildout. With the required design features and mitigation measures described in this section, the projected inventory of GHG emissions would be reduced to 129,023 $MTCO_2e$, a level 17.4 percent less than BAU emissions. With the implementation of additional optional reduction strategies, the expected reduction percentage from BAU emissions is expected to be even greater. As a result, the Westgate Specific Plan would achieve and exceed the reduction target.

5.2 REDUCTION GOALS, OBJECTIVES AND STRATEGIES

5.2.1 Required Design Features and Mitigation Measures

The Westgate Specific Plan includes project sustainability features that would reduce its GHG emissions compared to a BAU scenario. The following sustainability features result in a reduction in GHG emissions and are proposed as part of the project.

SF-1: By providing jobs near housing, with retail, parks and schools within walking distance of compact residential villages, the Westgate Specific Plan residents will have less reliance on the automobile. This in turn will result in reduced vehicular emissions and an overall healthier community.

SF-2: The Westgate Specific Plan will become one of the first large scale planned communities in the Inland Empire to meet one of the nation's first mandatory green building standards code (CALGreen). These comprehensive regulations were adopted by the State of California and went into effect as of January 1, 2011. By adhering to these regulations, the Westgate Specific Plan will achieve significant reductions in greenhouse gas emissions, energy consumption and water use. CALGreen, for example, requires that every new building constructed in California reduce water consumption by 20 percent, divert 50 percent of construction waste from landfills and install low pollutant-emitting materials. It also requires separate water meters for non-residential buildings' indoor and outdoor water use, with a requirement for moisture-sensing irrigation systems for large scale landscape projects and mandatory inspections of energy systems (e.g., heat furnace, air conditioner and mechanical equipment) for nonresidential buildings over

10,000 square feet designed to ensure that all are working at their maximum capacity and according to their design efficiencies.

SF-3: In order to further conserve resources, in addition to the above, the Westgate Specific Plan is designed to use recycled water for landscape in public parks and rights of ways. The Inland Empire Utilities Agency (IEUA) is in the process of building a regional recycled water system to serve the Westgate Specific Plan and others areas in Fontana.

SF-4: The Westgate Specific Plan infrastructure plans include a reclaimed water "purple pipe" system that will be installed as part of the major streets for all medians, parkways and public parks. It would be connected to the IEUA master plan upon its completion.

For the purposes of obtaining a numerical quantification in GHG emissions reduction that would result from implementing the above design features, this analysis identified corresponding GHG reduction measures listed in the CAPCOA guidance, *Quantifying Greenhouse Gas Mitigation Measures*, and calculated reduction percentages using Westgate Specific Plan-specific assumptions. The corresponding CAPCOA measures, their descriptions, as well as GHG reduction percentages are shown below in **Table 3**, *Westgate Specific Plan GHG Reduction Plan: Required Design Features*. Details on the assumptions used in the calculations can be found in Appendix A of this GHGRP.

The following mitigation measures are intended to set forth a program of GHG emission control strategies designed to reduce the proposed Westgate Specific Plan's GHG emissions to the extent feasible during operation. The following mitigation measures are required as part of the Westgate Specific Plan EIR (see Section 4.G, *Greenhouse Gas Emissions*, of the Westgate Specific Plan Draft EIR). If the EIR is certified by the City, these mitigation measures would be enforced through the required Mitigation Monitoring and Reporting Plan (MMRP).

Mitigation Measure G-1: For future projects, the City shall establish a Westgate Specific Plan Area-wide performance standard of 50 percent of all employees within the Specific Plan Area be eligible for participation in an employee commute trip reduction program. To achieve this standard, future projects with employers of 250 or more employees at a single location are required to implement an employee commute trip reduction program as required by the AQMP. In addition, future projects with employers of less than 250 employees at a single location are required to implement an employee commute trip reduction program. The City may waive this requirement for businesses that are extremely small, such as local shops with fewer than 10 employees, etc. to the extent that such a waiver would not conflict with achievement of the performance standard (i.e., 50 percent of all employees within the Specific Plan Area be eligible for participation in an employee commute trip reduction program).[30] Employee commute trip reduction programs shall encompass a combination of individual measures which may include, but are not limited to, the following:

[30] *According to the U.S. Small Business Administration's, 2012 Small Business Profile for California (see: http://www.sba.gov/sites/default/files/ca12.pdf), approximately 50.4 percent of California's private-sector labor force is employed by businesses of 500 employees or less. Of these businesses, most have fewer than 20 employees. Therefore, it is assumed that the City could waive the employee commute trip reduction program requirement for some projects with extremely small employers, such as local shops with less than 10 employees, and still meet the eligibility rate of 50 percent of all employees within the Specific Plan Area.*

Table 3

Westgate Specific Plan GHG Reduction Plan: Required Design Features

CAPCOA Measure	Description/Methodology	Westgate SP Reduction
LUT-2 Increase Location Efficiency	Urban landscapes such as urban areas, infill, or suburban centers are eligible for set percentage reductions in VMT due to the efficiency and synergistic benefits of these landscapes.	10% reduction from Specific Plan mobile source GHG emissions
SDT-1 Provide Pedestrian Network Improvements	Providing a pedestrian access network to link areas of a project site encourages people to walk instead of drive. This mode shift results in people driving less and thus a reduction in VMT.	1% reduction from Specific Plan mobile source GHG emissions
SDT-2 Provide Traffic Calming Measures	Providing traffic calming measures that reduces vehicle speeds and encourages people to walk or bike instead of using a vehicle. Traffic calming features may include: marked crosswalks, count-down signal timers, curb extensions, speed tables, raised crosswalks, raised intersections, median islands, tight corner radii, roundabouts or mini-circles, on-street parking, planter strips with street trees, chicanes/chokers, and others. This mode shift will result in a decrease in VMT.	0.5% reduction from Specific Plan mobile source GHG emissions
TST-3 Expand Transit Network	Expanding the local transit network to enhance service near the project site will encourage the use of transit and therefore reduce VMT.	0.88 % reduction from Specific Plan mobile source GHG emissions
WSW-1 Use Reclaimed Water	Transporting and treating water requires significant amounts of electricity. Using reclaimed water, which is water reused after wastewater treatment for non-potable uses, significantly reduces this energy demand and therefore the associated indirect GHG emissions.	1.2% reduction from Specific Plan water-related GHG emissions
WUW-2 Adopt a Water Conservation Strategy	Water use contributes to GHG emissions indirectly, via the production of electricity that is used to pump, treat, and distribute the water. Reducing water use reduces energy demand and associated indirect GHG emissions.	16.5% reduction from Specific Plan water-related GHG emissions

Source: California Air Pollution Control Officers Association (CAPCOA), Quantifying Greenhouse Gas Mitigation Measures, 2010; PCR Services Corporation, 2012.

- Provide ride-sharing programs and designate a certain percentage of parking spaces for ride sharing vehicles with adequate passenger loading and unloading and waiting areas for ride-sharing vehicles that minimize on-site circulation impacts and traffic impacts on adjacent roadways;
- Allow telecommuting and alternative work schedules such as staggered start times, flexible schedules, or compressed work weeks;
- Provide employer-sponsored vanpools or shuttles for employee commutes, including purchasing or leasing vans for employee use and subsidizing the cost of vanpool program administration;
- Provide convenient access to bicycle parking facilities;
- Provide information on public or alternative transportation options;
- Provide access to employee break rooms with refrigerators and microwaves; and

- Require regular performance monitoring and reporting by employers to demonstrate achievement, or absence of conflict with achievement, of the Specific Plan Area-wide performance standard.

Mitigation Measure G-2: For future projects, the City shall recommend that schools (K-12) located within the Westgate Specific Plan Area implement a multi-strategy school commute trip reduction program that encompasses a combination of individual measures including, but not limited to, the following:

- Provide a school bus program within each school's service area boundary;
- Implement ride-sharing programs for students, faculty, and staff;
- Provide priority parking for carpools/vanpools; and
- Provide a designated passenger loading and unloading and waiting areas that minimize on-site circulation impacts and traffic impacts on adjacent roadways.

For the purposes of obtaining a numerical quantification in GHG emissions reduction that would result from implementing the above mitigation measures, this analysis identified corresponding GHG reduction measures listed in the CAPCOA guidance, *Quantifying Greenhouse Gas Mitigation Measures*, and calculated reduction percentages using Westgate Specific Plan-specific assumptions. The corresponding CAPCOA measures, their descriptions, as well as GHG reduction percentages are shown below in **Table 4**, *Westgate Specific Plan GHG Reduction Plan: Required Mitigation Measures*. Details on the assumptions used in the calculations can be found in Appendix A of this GHGRP.

5.2.2 Optional/Recommended GHG Reduction Measures

Table 5, *Westgate Specific Plan GHG Reduction Plan: Optional Reduction Strategies*, lists additional GHG reduction measures that are feasible and applicable to the Westgate SP. A description of the measures, which would reduce GHG emissions associated with building energy, transportation, water, area landscaping, solid waste, vegetation, and land use planning, as well as the expected GHG reduction associated with each measure are also provided. Details on the assumptions used in the calculations can be found in Appendix A of this GHGRP.

5.3 GREENHOUSE GAS INVENTORY WITH REQUIRED REDUCTION MEASURES

The annual GHG emissions from buildout of the Westgate SP with the inclusion of required design features and mitigation measures, such as improved location efficiency, reduced water demand, and reduced energy consumption, are provided in **Table 6**, *Westgate Specific Plan Annual Greenhouse Gas Emissions – With Required Reduction Measures*. The level of GHG reductions is based on the CAPCOA guidance, *Quantifying Greenhouse Gas Mitigation Measures*.[31] The CAPCOA guidance provides methodologies for quantifying GHG

[31] *California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures, August 2010.*

Table 4

Westgate Specific Plan GHG Reduction Plan: Required Mitigation Measures

CAPCOA Measure[a]	Description/Methodology	Westgate SP Reduction
BE-1 Exceed Title 24 Building Envelope Energy Efficiency Standards by 15%	Title 24 Part 6 regulates energy uses including space heating and cooling, hot water heating, and ventilation. By committing to a percent improvement over Title 24, a development reduces its energy use and resulting GHG emissions.	7% reduction from Specific Plan energy-related GHG emissions
TRT-2 Commute Trip Reduction - Monitoring & Reporting Required	The intent of this measure is to reduce drive-alone travel mode share and encourage alternatives modes of travel. The critical components of this strategy are: established performance standards, required implementation, and regular monitoring and reporting.	2.1% reduction from Specific Plan mobile source GHG emissions
TRT-3 Provide Ride-Sharing Programs	Increasing the vehicle occupancy by ride sharing will result in a fewer cars driving the same trip and thus a decrease in VMT.	1% reduction from Specific Plan mobile source GHG emissions
TRT-6 Encourage Telecommuting and Alternative Work Schedules	Encouraging telecommuting and alternative work schedules reduces the number of commute trips and therefore VMT traveled by employees.	0.35% reduction from Specific Plan mobile source GHG emissions
TRT-10 Implement a School Carpool Program	School carpool programs help match parents to transport students to schools and reduce the number of vehicles used for school commutes.	1.13% reduction from Specific Plan mobile source GHG emissions
TRT-11 Provide Employer-Sponsored Vanpool/Shuttle	This project implements an employer-sponsored vanpool or shuttle program that entails the purchase/leasing of vans and the subsidizing the cost of program administration.	0.67% reduction from Specific Plan mobile source GHG emissions
TRT-13 Implement School Bus Program	The City will work with and encourage the school district to restore or expand school bus services in the project area and local community.	3.75% - 5.1% reduction from Specific Plan mobile source GHG emissions

[a] *According to the CAPCOA guidance, reductions associated with transportation measures is subject to a global maximum reduction based on the location setting of the project. The global maximum reduction establishes the maximum level of reductions that can be claimed even if the sum of the reductions from the individual transportation measures that are applicable to the project exceed the level. The global maximum reduction reflects the highest reduction levels justified by the literature for each location setting classification. The guidance provides criteria for classifying the location setting of a project as urban, compact infill, suburban center, or suburban. According to the guidance, a suburban center is described as:*

"A project typically involving a cluster of multi-use development within dispersed, low-density, automobile dependent land use patterns (a suburb)…The suburban center serves the population of the suburb with office, retail and housing which is denser than the surrounding suburb." (CAPCOA, 2010, p. 60)

The proposed project is consistent with the criteria for a suburban center. The CAPCOA guidance states that suburban center locations are typically 20 miles or more from a regional central business district (usually a downtown area) and have a balanced jobs-to-housing ratio, typical building heights of two stories, typical grid street patterns, typical setbacks of 0 to 20 feet, somewhat constrained on-street parking and ample off-street parking, low parking prices (if priced at all), and transit availability with 20 to 30 minute headways. The proposed project is generally consistent with these criteria. The project would be located in excess of 20 miles from downtown Los Angeles and would have a job-to-housing ration of 0.99 at full buildout. The project would generally meet the density criteria such as generally low-rise buildings, grid street patterns, moderate setbacks, and generally available and low cost parking (if priced at all). The project would also be served by bus and Metrolink service with 20 to 30 minute headways. The global maximum reduction for transportation measures for a suburban center project is 20 percent.

Source: California Air Pollution Control Officers Association (CAPCOA), Quantifying Greenhouse Gas Mitigation Measures, 2010; PCR Services Corporation, 2012.

Table 5

Westgate Specific Plan GHG Reduction Plan: Optional Reduction Strategies

CAPCOA Measure[a]	Description/Methodology	Westgate SP Reduction
AE-2 Establish On-Site Renewable Energy Systems – Solar Power	Using electricity generated from renewable or carbon-neutral power systems displaces electricity demand which would normally by supplied by the local utility. Carbon-neutral power systems, such as photovoltaic panels, do not emit GHGs and will be less carbon intense than the local utility. However, the actual reduction in GHG emissions would vary depending on individual end-user action.	Variable; up to 100% of GHG emissions from facility's electricity demand; requires data from individual projects
BE-2 Install Programmable Thermostat Timers	Residential programmable thermostat timers allow users to easily when the HVAC system will heat or cool a certain space, thereby saving energy. The energy savings from a programmable thermostat depend on the user. Because of the large variability in individual behavior, the actual reduction in the GHG emissions cannot be reasonably quantified. Therefore, this strategy should be adopted as a Best Management Practice.	Variable; Subject to end-user action
BE-3 Obtain Third-Party HVAC Commissioning and Verification of Energy Savings	Ensuring the proper installation and construction of energy reduction features is essential to achieving high thermal efficiency in a house. However, HVAC systems often do not operate at the designed efficiency due to errors in installation or adjustments. By obtaining third-party HVAC commissioning and verification of energy savings, a project will ensure that the energy and GHG emissions reductions in intended design features are actually realized. Because the actual emissions reductions vary depending on the individual HVAC system and are difficult to quantify, this strategy should be adopted as a Best Management Practice.	Enhances effectiveness of BE-1 (no reduction by itself); Best Management Practice
BE-4 Install Energy Efficient Appliances	Using energy-efficient appliances reduces a building's energy consumption as well as the associated GHG emissions from natural gas combustion and electricity production. Typical appliances include refrigerators, clothes washers and dishwashers for residential dwellings and refrigerators for commercial land uses such as grocery stores. In order to calculate the actual savings in energy use and GHG emissions, a project would need to account for the appliance's end use percentage, the project's electricity and natural gas demand, the carbon intensity of electricity as supplied by the local utility, the carbon intensity of natural gas use, and the size of the development.	1.1% - 2.3% reduction from total GHG emissions from Specific Plan residential uses
LE-1 Install High Efficacy Public Street Area Lighting	Public lighting sources, including streetlights, pedestrian pathway lights, area lighting for parks and parking lots, and outdoor lighting around public buildings, contribute to GHG emissions indirectly, via the production of the electricity that powers these lights. Different light fixtures have different efficacies, or the amount of lumens produced per watt of power supplied. Installing more efficacious lamps will use less electricity while producing the same amount of light and therefore reduces the associated indirect GHG emissions.	16% - 40% of GHG emissions from public area lighting energy using typical mercury cobrahead lights
LE-3 Replace Traffic Lights with LED Traffic Lights	As mentioned above, lighting sources contribute to GHG emissions indirectly, via the production of the electricity that powers these lights. Installing high efficiency traffic lights reduces energy demand and associated GHG emissions. Light-emitting diodes (LEDs) consume about 90% less energy than traditional incandescent traffic lights while still provide adequate light or lumens when viewed. The energy savings and subsequent GHG emissions reductions are greatest when	Up to 90% of GHG emissions from existing traditional incandescent traffic lighting

Table 5 (Continued)

Westgate Specific Plan GHG Reduction Plan: Optional Reduction Strategies

CAPCOA Measure[a]	Description/Methodology	Westgate SP Reduction
	retrofitting existing incandescent traffic lights with LEDs.	
WSW-2 Use Gray Water	Transporting water can require a significant amount of electricity, as does treating water to potable standards. Untreated wastewater from bathtubs, showers, bathroom wash basins, and washing machines is known as gray water and can be collected and distributed onsite for irrigation of landscape. Since gray water does not require treatment or energy to redistribute it, there are negligible GHG emissions associated with the use of gray water.	Variable; Subject to availability and local ordinances and regulations
WUW-1 Install Low-Flow Water Fixtures	Water use contributes to GHG emissions indirectly, via the production of electricity that is used to pump, treat, and distribute the water. Installing low-flow or high-efficiency water fixtures in buildings reduces water demand, energy demand, and associated indirect GHG emissions. This strategy accounts for GHG emissions reductions from the use of low-flow water toilets, urinals, showerheads and faucets as well as high-efficiency clothes washers and dishwashers in residential and commercial buildings. In order to calculate the indirect GHG emissions reduction, the total expected indoor water demand before and after installation of low-flow or high0efficiency water fixtures must be known.	20% of GHG emissions from indoor residential water use; 17% - 31% of GHG emissions from non-residential indoor water use
WUW-3 Design Water Efficient Landscapes	As mentioned above, water use contributes indirectly to GHG emissions. Designing water-efficient landscapes for a development reduces water consumption and the associated indirect GHG emissions. Examples of measures to be considered when designing landscapes are: reducing lawn sizes, planting vegetation with minimal water needs such as native Californian species, choosing vegetation appropriate for the climate of the development site, and choosing complimentary plants with similar water needs. The reduction in GHG emissions is based on comparison against standard California landscape plantings.	Up to 70% of GHG emissions from outdoor water use
WUW-4 Use Water-Efficient Landscape Irrigation Systems	As mentioned above, water use contributes indirectly to GHG emissions. Using water-efficient landscape irrigation techniques such as "smart" irrigation technology reduces outdoor water demand, energy demand, and the associated GHG emissions. "Smart" irrigation control systems use weather, climate, and/or soil moisture data to automatically adjust watering schedules. Thus, excessive watering is avoided.	6.1% of GHG emissions from outdoor water use
WUW-5 Reduce Turf in Landscapes and Lawns	As mentioned above, water use contributes indirectly to GHG emissions. Turf grass (i.e. lawn grass) has relatively high water needs compared to most other types of vegetation. For example, trees planted in turf generally do not need additional watering besides what is required for the turf. Reducing the turf size of landscapes and lawns reduces water consumption and the associated indirect GHG emissions.	Variable; subject to amount of reduction in turf

Table 5 (Continued)

Westgate Specific Plan GHG Reduction Plan: Optional Reduction Strategies

CAPCOA Measure[a]	Description/Methodology	Westgate SP Reduction
WUW-6 Plant Native or Drought-Resistant Trees and Vegetation	California native plants within their natural climate zone and ecotype need minimal watering beyond normal rainfall, so less water is needed for irrigating native plants than non-native species. Drought-resistant vegetation needs even less watering. Thus, planting native and drought-resistant vegetation reduces water use and the associated GHG emissions. However, since few scientific studies have quantified the actual water savings, this strategy should be adopted as a Best Management Practice.	Must be quantified with substantial evidence (may be included in WUW-3); Best Management Practice
A-1 Prohibit Gas Powered Landscape Equipment	Electric lawn mowers, leaf blowers and vacuums, shredders, trimmers, and chain saws are available. When they are used in place of conventional gas-powered equipment, direct GHG emissions from natural gas combustion are replaced with indirect GHG emissions associated with the electricity used to power the equipment, which are typically less significant. To quantify the actual reduction in GHG emissions, the CO2 emission factors, the horsepower, the load factors, and hours of operation per year of the gasoline and corresponding electric equipment must be known.	49.5% - 72.3% of GHG emissions from landscaping equipment, depending on horsepower rating of equipment
SW-1 Institute or Extend Recycling and Composting Services	The transport and decomposition of landfill waste and the flaring of landfill gas all produce GHG emissions. Decomposition of waste produces methane, and the transport waste from the site of generation to the landfill produces GHG emissions from the combustion of the fuel used to power the vehicle. Increasing recycling, reuse, and composting can all reduce landfill waste. Choosing waste management practices which reduce the amount of waste sent to landfills will thus reduce GHG emissions.	Varies depending on strategies selected; Best Management Practice
V-1 Urban Tree Planting	Planting trees sequesters CO_2 while the trees are actively growing. The amount of CO_2 sequestered depends on the type of tree. In most cases, the active growing period of a tree is 20 years and after this time the amount of carbon sequestered in biomass slows and will be completely offset by losses from clipping, pruning, and occasional death. Therefore, emissions only occur for a 20-year period and should be summed over all years to give a net one-time GHG benefit.	CO2 sequestration varies by the number and species of trees planted
GP-1 Fund Incentives for Energy Efficiency	By funding incentives for energy-efficient choices in equipment, fixtures in buildings, or energy sources, a project can promote reductions in GHG emissions associated with fuel combustion and electricity use. The project applicant should check with the local air district regarding participating in established programs. These energy funds may provide financial incentives or grants for energy efficiency measures including but not limited to: retrofitting or designing new buildings, parking lots, streets, and public areas with energy-efficient lighting; retrofitting or designing new buildings with low-flow water fixtures and high-efficiency appliances; retrofitting or purchasing new low-emissions equipment; purchasing electric or hybrid vehicles; and investing in renewable energy systems such as photovoltaics or wind turbines.	Varies depending on strategies selected; Best Management Practice

Table 5 (Continued)

Westgate Specific Plan GHG Reduction Plan: Optional Reduction Strategies

CAPCOA Measure[a]	Description/Methodology	Westgate SP Reduction
GP-2 Establish a Local Farmer's Market	Establishing a local farmer's market has the potential to reduce GHG emissions by providing project residents with a more local source of food, potentially resulting in a reduction in the number of trips and VMTs by both the food itself and the consumers to grocery stores and supermarkets. If the food sold at the local farmer's market is produced organically, it can also contribute to GHG reductions by displacing carbon-intensive food production practices. The emissions reductions cannot be reasonably quantified because they are based on several undefined and variable parameters: the relative locations of the farmer's market, supermarket, and supermarket produce suppliers; the carbon intensity of food production practices; and the role of the farmer's market in a development. Therefore, this strategy should be adopted as a Best Management Practice.	Varies depending on strategies selected; Best Management Practice
GP-3 Establish Community Gardens	Establishing a community garden has the potential to reduce GHG emissions by providing project residents with a local source of food, potentially resulting in a reduction in the number of trips and VMTs by both the food itself and the consumers to grocery stores and supermarkets. Community gardens can also contribute to GHG reductions by displacing carbon-intensive food production practices. As with GP-2, discussed above, the emissions reductions cannot be reasonably quantified due to the variable nature of the community garden's location and role within a development. Therefore, this strategy should be adopted as a Best Management Practice.	Varies depending on strategies selected; Best Management Practice
GP-4 Plant Urban Shade Trees	Planting shade trees around buildings has been shown to effectively lower the electricity cooling demand of buildings by blocking sunlight and reducing heat gain through windows, walls, and roofs. By reducing cooling demand, shade trees help reduce electricity demand from the local utility and therefore the indirect GHG emissions associated with the production of that electricity.	Best Management Practice; Roughly, up to 20% for residential buildings, 5% - 12% for office buildings, 10% - 17% for retail buildings
GP-5 Implement Strategies to Reduce Urban Heat-Island Effect	Urban areas tend to be warmer than its surrounding rural areas due to increased land surfaces which retain heat. Strategies such as planting urban shade trees, installing reflective roofs, and using light-colored or high-albedo pavements and surfaces have been shown to have a positive impact on reducing localized temperatures and the electricity demand.	Best Management Practice.

Source: California Air Pollution Control Officers Association (CAPCOA), Quantifying Greenhouse Gas Mitigation Measures, 2010. PCR Services Corporation, 2012.

Table 6

Westgate Specific Plan Annual GHG Emissions – With Required Reduction Measures

Emission Source	CO_2e (Metric Tons) Phase I (2018)	Phase I BAU (2018)	Buildout (2035)	Buildout BAU (2035)
Amortized Construction	454	454	1,814	1,814
Area Sources	464	464	1,659	1,659
Electricity [a]	4,522	4,835	21,014	22,710
Natural gas	1,950	2,478	7,185	9,081
Mobile Sources [b]	26,590	33,154	92,415	115,519
Solid Waste	625	625	2,060	2,060
Water	859	1,051	2,875	3,447
Total	**35,463**	**43,061**	**129,023**	**156,290**
AB-32 Reduction Target [c]	15.8%	–	15.8%	–
Percentage Reduction	**17.6%**	–	**17.4%**	–
Conflicts with Reduction Target?	**No**	–	**No**	–

[a] *Electricity Usage Rates from CalEEMod default values for Southern California Edison.*
[b] *Mobile source values were derived using CalEEMod and incorporate reductions in vehicle miles traveled from project design features and mitigation measures.*
[c] *Based on the updated ARB BAU estimate of 507 $MMTCO_2e$ by 2020, which requires a reduction of 80 $MMTCO_2e$, or a 15.8 percent reduction below the estimated BAU levels to return to 1990 levels (i.e., 427 $MMTCO_2e$) by 2020.*

Source: PCR Services Corporation, 2014

reductions from a variety of transportation, energy, water, and solid waste measures. According to the CAPCOA guidance, reductions associated with transportation measures is subject to a global maximum reduction based on the location setting of the project. The global maximum reduction establishes the maximum level of reductions that can be claimed even if the sum of the reductions from the individual transportation measures that are applicable to the project exceed the level. The global maximum reduction reflects the highest reduction levels justified by the literature for each location setting classification.[32] The guidance provides criteria for classifying the location setting of a project as urban, compact infill, suburban center, or suburban. According to the guidance, a suburban center is described as:[33]

> *A project typically involving a cluster of multi-use development within dispersed, low-density, automobile dependent land use patterns (a suburb)…The suburban center serves the population of the suburb with office, retail and housing which is denser than the surrounding suburb.*

The proposed project is consistent with the criteria for a suburban center. The CAPCOA guidance states that suburban center locations are typically 20 miles or more from a regional central business district (usually a

[32] *Ibid., page 58.*

[33] *Ibid., page 60.*

downtown area) and have a balanced jobs-to-housing ratio, typical building heights of two stories, typical grid street patterns, typical setbacks of 0 to 20 feet, somewhat constrained on-street parking and ample off-street parking, low parking prices (if priced at all), and transit availability with 20 to 30 minute headways. The proposed project is generally consistent with these criteria. The project would be located in excess of 20 miles from downtown Los Angeles and would have a job-to-housing ration of 0.99 at full buildout. The project would generally meet the density criteria such as generally low-rise buildings, grid street patterns, moderate setbacks, and generally available and low cost parking (if priced at all). The project would also be served by bus and Metrolink service with 20 to 30 minute headways. The global maximum reduction for transportation measures for a suburban center project is 20 percent. Based on the included transportation-related design features and mitigation measures, the project would reduce its transportation-related GHG emissions by 20 percent below BAU conditions.[34] Detailed information regarding the GHG emissions reductions for the proposed project is provided in Appendix A of this GHGRP.

The project also includes design features that would reduce its GHG emissions attributable to energy and water supply and conveyance below BAU conditions. By exceeding the Title 24 (2008) standards, the project would reduce its GHG emissions associated with electricity and natural gas consumption. The use of water efficient systems, recycled water, and reclaimed water would reduce Phase I water-related GHG emissions by approximately 18 percent and full buildout water-related GHG emissions by approximately 17 percent as compared to the respective BAU scenarios. Detailed information regarding the GHG emissions reductions for the proposed project is provided in Appendix A of this GHGRP.

As shown in Table 6, the project with mitigation would meet and exceed the GHG emissions reduction target of 15.8 percent. Therefore, with the implementation of mitigation measures, operation of the proposed Westgate Specific Plan would result in a less than significant impact with respect to GHG emissions. Furthermore, the Westgate SP would meet the goals of AB 32 and would not conflict with the state's plans to reduce GHG emissions.

5.4 OTHER MECHANISMS FOR ACHIEVING GHG REDUCTION STRATEGIES

Those individual projects that do not implement all of the required features and mitigation measures as shown in Tables 3 and 4 (also presented in Appendix A of this GHGRP) may implement optional/recommended GHG reduction strategies and/or other mitigation measures to reduce GHG emissions to achieve at least a 15.8 percent reduction below BAU emissions (as defined in this GHGRP). In addition, they must demonstrate that they would not conflict with or obstruct the achievement of GHG reduction goals set by Westgate SP GHGRP. If implementing optional/recommended GHG reduction strategies and/or other mitigation measures, a project-level analysis should be conducted in accordance with the following:

[34] *According to the Traffic Study, the project is conservatively estimated to result in a 10 percent internal capture rate due to the variety of land uses of the proposed development. As a result, the transportation-related GHG emissions reductions include a 10 percent reduction in VMT attributed to land use and location measures. In accordance with the CAPCOA guidance, Quantifying Greenhouse Gas Mitigation Measures (August 2010), the VMT reduction from land use and location measures is subject to a 10 percent maximum reduction. Therefore, consistent with the CAPCOA guidance, a maximum 10 percent reduction was applied to the land use and location measures category for the project. Other required design features and mitigation measures would achieve greater than 10 percent additional reductions in VMT; therefore, the total reduction in VMT would be limited to the 20 percent cap.*

1. GHG study must quantify the GHG emissions for the project, and must also include, at a minimum, an analysis of GHG emissions for each type of GHG emission identified in California Health & Safety Code §38505 for operational impacts, if any.

a. GHGs to which this section applies include carbon dioxide, methane, nitrous oxide, hydro-fluorocarbons, perfluorocarbons, sulfur hexafluoride and nitrogen trifluoride, per Health and Safety Code §38505 and any amendments thereto.

b. Analysis of GHGs must not only quantify emissions but also discuss their relative potential to affect global climate change. For example, methane has a global warming potential many times that of carbon dioxide, such that a given quantity of methane may have an equal or greater effect on global climate change than a lesser amount of carbon dioxide.

c. In quantifying GHG emissions, the analysis must address the total amount of GHGs emitted by all operational activities per year including, but not limited to, emissions from use of electricity, use of natural gas, and other energy consumption, emissions resulting from water demand, vehicular emissions, and other reasonably foreseeable emissions.

2. The GHG study must describe and analyze feasible mitigation measures for any potentially significant GHG emissions. All feasible mitigation measures must be adopted for potentially significant impacts. The types of mitigation measures that may be considered and shall be imposed, if feasible, depend on the type of project that is proposed. The project applicant shall demonstrate that the project has reduced GHG emissions by 15.8 percent or more below BAU (as defined in this GHGRP) and does not conflict with or obstruct achievement of any Westgate Specific Plan Area-wide performance standards.

6.0 MONITORING AND REPORTING

Success in meeting the Westgate SP's GHG emission reduction goal will depend on cooperation and participation by City departments, future residents, businesses, and cooperation of developers. The City anticipates that the Westgate SP will be able to meet or exceed the overall target of reducing GHG emissions by 15.8 percent below BAU levels. This can be accomplished because this GHGRP builds on a foundation of various activities that the City has already undertaken and incorporated into its planning process. This section outlines key monitoring and reporting requirements that the City will follow for the implementation of this GHGRP.

Prior to adoption of the Westgate SP and certification of the EIR, a Mitigation Monitoring and Reporting Program (MMRP) would be developed. Compliance with the required mitigation measures would be enforced by the City via the MMRP. Individual projects that are developed pursuant to the Westgate SP would be required to comply with the design features incorporated into the Westgate SP and the required mitigation measures. Compliance would be demonstrated through the public environmental review process in accordance with CEQA (e.g., Initial Study, Negative Declaration, etc.). Development projects that differ from those envisioned in the Westgate SP and analyzed in the EIR may be required to conduct additional environmental analysis in accordance with CEQA (e.g., Addendum, Supplemental EIR, etc.). If an individual project is required to implement additional feasible design features and/or mitigation measures, they would generally be enforced by the City as conditions of approval and/or MMRPs. The City would retain discretionary approval authority over individual projects that are proposed under the Westgate SP.

The City will establish a process of monitoring the implementation of the GHG reduction measures in the GHGRP to individual projects and amending the plan as necessary. The Planning Department (PD) will compile the monitoring results and report to the Planning Commission on Plan implementation progress as necessary. As the GHGRP is implemented and as technology changes, GHG emissions due to energy consumption, vehicle efficiency, water conservation, and waste diversion will change. If promising new strategies emerge, the City will evaluate how to incorporate these strategies into the GHGRP.

Further, state and federal action may also result in changes which will influence the level of the City's emissions and the reductions necessary to achieve future to-be-determined state goals. For example, Executive Order S-3-05 establishes a reduction target of 80 percent below 1990 levels by 2050. While the state has not yet adopted any regulations, plans, or strategies to achieve this target, it may do so in the future and a legal framework, similar to AB 32, may arise. Additionally, it is likely that the CEC will revise the Title 24 standards in the future to become more stringent compared to the current version of the Title 24 standards. Future projects would need to comply with the regulations in effect at the time of development, regardless of the requirements of the GHGRP. The City may therefore evaluate how to incorporate these changes in state and federal actions into the GHGRP in the future.

As noted above, monitoring of Plan implementation in order to track progress, to determine whether emissions are being reduced as forecasted, and to provide a platform for future revisions to the plan, if necessary, is essential to retain the benefits of CEQA streamlining and tiering of the analysis of GHG emissions as described in the CEQA Guidelines Section 15183.5. The PD will use development permit tracking to monitor and evaluate the utility and effectiveness of the reduction measures as they are applied

to new development permits. The emissions can be recorded and tracked by the City with permit tracking software currently used by the County. As part of the PD's monitoring review, an assessment will be made as to the function of the reduction measures and the effectiveness of mitigation. Recommendations for changes to the DRP process will then be made by the PD.

APPENDIX A
GREENHOUSE GAS WORKSHEETS AND OUTPUT FILES

Unmitigated Operational Greenhouse Gas Emissions ($MTCO_2e$/year)

Emissions Source	Phase I (2018)	Phase I BAU (2018)	Buildout (2035)	Buildout BAU (2035)
Amortized Construction	454	454	1,814	1,814
Area Sources	464	464	1,659	1,659
Electricity	4,522	4,835	21,014	22,710
Natural Gas	1,950	2,478	7,185	9,081
Mobile Sources [a]	29,050	33,154	101,218	115,519
Solid Waste	625	625	2,060	2,060
Water	859	1,051	2,875	3,447
Total	37,923	43,061	137,825	156,290
Significance Threshold	15.8%	–	15.8%	–
Percent Reduction from BAU	11.9%	–	11.8%	–
Conflicts with Reduction Target	**YES**	–	**YES**	–

Notes:

a. Mobile source emissions for the unmitigated project (Phase I and Buildout) include a 12.38% reduction to account for VMT-reducing project design features (see "Transportation Reduction Measures" for details).

Source: PCR Services Corporation, 2014; California Emissions Estimator Model, (version 2013.2.2)

Mitigated Operational Greenhouse Gas Emissions ($MTCO_2e$/year)

Emissions Source	Phase I (2018)	Phase I BAU (2018)	Buildout (2035)	Buildout BAU (2035)
Amortized Construction	454	454	1,814	1,814
Area Sources	464	464	1,659	1,659
Electricity	4,522	4,835	21,014	22,710
Natural Gas	1,950	2,478	7,185	9,081
Mobile Sources [a]	26,590	33,154	92,415	115,519
Solid Waste	625	625	2,060	2,060
Water	859	1,051	2,875	3,447
Total	35,463	43,061	129,023	156,290
Significance Threshold	15.8%	–	15.8%	–
Percent Reduction from BAU	17.6%	–	17.4%	–
Conflicts with Reduction Target	**NO**	–	**NO**	–

Notes:

a. Mobile source emissions for the unmitigated project (Phase I and Buildout) include a 19.80% reduction for Phase I and a 20.00% reduction for Buildout to account for VMT-reducing project design features (see "Transportation Reduction Measures" for details).

Source: PCR Services Corporation, 2014; California Emissions Estimator Model, (version 2013.2.2)

Westgate Specific Plan
Draft EIR
Greenhouse Gas Assessment

Construction Greenhouse Gas Emissions

Source	GHG Emissions ($MTCO_2e$) Modeled Phase I [a]	Total Phase I [b]	Buildout [c]
Construction (Total)	4,536	13,608	54,434
Construction (Amortized over 30 years)	151	454	1,814

Notes:

a. CalEEMod model run for construction is based on the assumption that the maximum amount of simultaneous construction activity would be equal to or less than approximately one-third of the Phase I development.

b. The total Phase I construction emissions are multiplied by three as per the assumption in note "a." above.

c. Phase I development would build out just over one-fourth of all land uses under the Specific Plan. Therefore, buildout construction emissions are based on four times the total Phase I emissions.

Source: PCR Services Corporation, 2014

Transportation Reduction Measures[a]

Code	Reduction Measure	VMT Reduction %	Explanation (assumptions in bold/underline)
	Project Features		
LUT-2	Increase Location Efficiency	10	Suburban center: 10% reduction
SDT-1	Provide Pedestrian Network Improvements	1	Extent of pedestrian accommodations within project site only
SDT-2	Provide Traffic Calming Measures	0.50	Assuming **50%** of streets and **50%** intersections
TST-3	Expand Transit Network	0.88	Assuming **100%** coverage (according to Traffic - Transportation section)
SUBTOTAL		**12.38**	
	Mitigation Measures		
TRT-2	Commute Trip Reduction - Monitoring & Reporting Required	2.10	% VMT reduction = % shift in vehicle mode share of commute trips(21)*% employees eligible (**50**)*% commute VMT of total (20)[b]
TRT-3	Provide Ride-Sharing Programs	1.00	% VMT reduction = % reduction in commute VMT (**10** for suburban center)*% employees eligible (**50**)*% commute VMT of total (20)[b]
TRT-6	Encourage Telecommuting and Alternative Work Schedules	0.35	At **25%** employee participation, a 9-day/80-hr work week = 1.75%*% commute VMT of total (20)[b]
TRT-10	Implement a School Carpool Program	1.13	% VMT reduction = % familities participating (**25**)*adjustment factor (45%)*% school VMT of total (10)[b]
TRT-11	Provide Employer-Sponsored Vanpool/Shuttle	0.67	% VMT reduction = % shift in vanpool mode share of commute trips (**10**)*% employees eligible (**50**)*adjustments from vanpool mode share to commute VMT(0.67)*% commute VMT of total (20)[b]
TRT-13	Implement School Bus Program	3.75-5.1	% VMT reduction = % participation (**50-68**)* conversion from school day VMT to annual school VMT (0.75)*% school VMT of total(5.8 [Phase I] or 10 [Buildout])[b]
SUBTOTAL[c]	Reduction Range (Buildout)	**9.00 - 10.35**	
	Reduction Range (Phase I)	**7.42 - 8.40**	

Notes:

a. Source: California Air Pollution Control Officers Association - Quantifying Greenhouse Gas Mitigation Measures, August 2010.

b. See "Vehicle Miles Traveled by Land Use Category" and "Work Commute Vehicle Miles Traveled" for percent work/school commute of total VMT.

c. A global maximum reduction of 20% of all VMT was taken for the project as a **suburban center**, per Chart 6-2 of Source (in note "a." above).

Westgate Specific Plan
Draft EIR
Greenhouse Gas Assessment

Vehicle Miles Traveled by Land Use Category

Land Use	Phase I Annual Total VMT	Phase I % of Total VMT	Buildout Annual Total VMT	Buildout % of Total VMT
Single-Family	13,598,078	17.3%	28,627,532	9.5%
Multi-Family	26,789,890	34.1%	114,892,849	38.1%
City Park	4,517,371	5.7%	6,442,494	2.1%
Elementary School	4,579,210	5.8%	9,158,420	3.0%
High School	-	0.0%	20,179,447	6.7%
Retail	17,650,680	22.5%	17,638,580	5.8%
Office	-	0.0%	83,260,360	27.6%
Industrial	-	0.0%	9,271,617	3.1%
Warehouse	11,484,007	14.6%	12,359,065	4.1%
Total	78,619,236	100.0%	301,830,364	100.0%
Total School	4,579,210	5.8%	29,337,867	9.7%

Work Commute Vehicle Miles Traveled

Land Use	Work Trip Length (miles)	% Work Trips	% Primary	% Diverted	% Pass-By	Phase I Units	Phase I Trip Rate (trips/unit)	Phase I Work VMT	Buildout Units	Buildout Trip Rate (trips/unit)	Buildout Work VMT
Single-Family	14.7	40.2%	86%	11%	3%	418	9.52	7,621,952	880	9.52	16,046,214
Multi-Family	14.7	40.2%	86%	11%	3%	1,373	5.71	15,016,185	5,530	6.08	64,399,379
Total Work Commute VMT (Home to Work)								22,638,137			80,445,593
Percent of Total VMT								28.8%			26.7%

Fontana Westgate SP - Phase 1 Construction

San Bernardino-South Coast County Annual

1.0 Pro ect Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	1,030.00	Student	12.00	86,111.47	0
Unrefrigerated Warehouse-No Rail	406.00	1000sqft	12.65	406,000.00	0
City Park	13.72	Acre	13.72	597,643.20	0
Condo/Townhouse	458.00	Dwelling Unit	74.90	458,000.00	1310
Single Family Housing	139.00	Dwelling Unit	24.00	250,200.00	398
Strip Mall	52.41	1000sqft	1.20	52,410.00	0
Other Asphalt Surfaces	15.00	Acre	15.00	653,400.00	0

1.2 Other Pro ect Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate one	10			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - [Draft EIR Section 2.0, Project Description]. Conservative assumption that up to approximately one-third of the Phase 1 land uses would be under construction at any given time.

Construction Phase - Site Preparation, Grading, Building Construction/Architectural Coating/Paving.

Off-road Equipment - 4 Air Compressors.

Off-road Equipment - 4 Cranes, 4 Forklifts, 4 Tractors/Loaders/Backhoes, 4 Welders, 4 Aerial Lifts, 4 Other Construction Equipment, 4 Other General Industrial Equipment.
Off-road Equipment - 4 Excavators, 4 Graders, 4 Rubber Tired Dozers, 4 Scrapers, 4 Tractors/Loaders Backhoes, 4 Other Material Handling Equipment, 4 Sweepers/Scrubbers.
Off-road Equipment - 4 Pavers, 4 Paving Equipment, 4 Rollers, 8 Cement and Mortar Mixers.

Off-road Equipment - 4 Rubber Tired Dozers, 4 Tractors/Loaders/Backhoes.

Grading -

Construction Off-road Equipment Mitigation - Use Water/Soil Stabilizers on exposed areas and unpaved roads three times daily; Limit vehicle speeds to 15 mph on unpaved roads.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	10
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	10
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	10
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	220.00	131.00
tblConstructionPhase	NumDays	3,100.00	305.00
tblConstructionPhase	NumDays	310.00	65.00
tblConstructionPhase	NumDays	220.00	87.00
tblConstructionPhase	NumDays	120.00	23.00
tblConstructionPhase	PhaseEndDate	7/3/2017	12/31/2016
tblConstructionPhase	PhaseEndDate	12/30/2016	12/31/2016
tblConstructionPhase	PhaseEndDate	10/30/2015	10/31/2015
tblConstructionPhase	PhaseEndDate	5/2/2017	12/31/2016
tblConstructionPhase	PhaseStartDate	1/1/2017	7/1/2016
tblConstructionPhase	PhaseStartDate	1/1/2017	9/1/2016
tblGrading	MaterialExported	0.00	108,450.00
tblLandUse	LotAcreage	1.98	12.00

tblLandUse	LotAcreage	9.32	12.65
tblLandUse	LotAcreage	28.63	74.90
tblLandUse	LotAcreage	45.13	24.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

2.1 Overall Construction

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	tons/yr										MT/yr					
2015	1.3146	13.6252	10.5657	0.0172	1.6565	0.6239	2.2804	0.7095	0.5777	1.2872	0.0000	1,560.4426	1,560.4426	0.2379	0.0000	1,565.4381
2016	18.3064	16.1558	19.3744	0.0356	1.5712	0.8466	2.4178	0.4214	0.8031	1.2245	0.0000	2,963.9813	2,963.9813	0.3207	0.0000	2,970.7161

Total	**19.6210**	**29.7809**	**29.9401**	**0.0528**	**3.2277**	**1.4705**	**4.6982**	**1.1309**	**1.3808**	**2.5117**	**0.0000**	**4 524.4239**	**4 524.4239**	**0.5586**	**0.0000**	**4 536.1542**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2015	7/31/2015	5	23	
2	Grading	Grading	8/1/2015	10/31/2015	5	65	
3	Building Construction	Building Construction	11/1/2015	12/31/2016	5	305	
4	Architectural Coating	Architectural Coating	7/1/2016	12/31/2016	5	131	
5	Paving	Paving	9/1/2016	12/31/2016	5	87	

Acres of Grading (Grading Phase): 390

Residential Indoor: 1 434 105 Residential Outdoor: 478 035 Non-Residential Indoor: 1 713 247 Non-Residential Outdoor: 571 082

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	4	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	4	8.00	162	0.38
Grading	Graders	4	8.00	174	0.41
Grading	Other Material Handling Equipment	4	8.00	167	0.40
Grading	Rubber Tired Dozers	4	8.00	255	0.40
Grading	Scrapers	4	8.00	361	0.48
Grading	Sweepers/Scrubbers	4	8.00	64	0.46
Grading	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Aerial Lifts	4		62	0.31
Building Construction	Cranes	4	7.00	226	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	4	8.00	84	0.74

Building Construction	Other Construction Equipment	4		171	0.42
Building Construction	Other General Industrial Equipment	4		87	0.34
Building Construction	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Building Construction	Welders	4	8.00	46	0.45
Architectural Coating	Air Compressors	4	6.00	78	0.48
Paving	Cement and Mortar Mixers	8		9	0.56
Paving	Pavers	4	8.00	125	0.42
Paving	Paving Equipment	4	8.00	130	0.36
Paving	Rollers	4	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	28	70.00	0.00	13,556.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	32	854.00	251.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	4	171.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	20	50.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2015

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	tons/yr										MT/yr					

Fugitive Dust					0.2770	0.0000	0.2770	0.1523	0.0000	0.1523	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0751	0.8197	0.6165	5.5000e-004		0.0432	0.0432		0.0398	0.0398	0.0000	52.6396	52.6396	0.0157	0.0000	52.9697
Total	**0.0751**	**0.8197**	**0.6165**	**5.5000e-004**	**0.2770**	**0.0432**	**0.3203**	**0.1523**	**0.0398**	**0.1921**	**0.0000**	**52.6396**	**52.6396**	**0.0157**	**0.0000**	**52.9697**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	1.4900e-003	0.0157	3.0000e-005	2.5200e-003	2.0000e-005	2.5400e-003	6.7000e-004	2.0000e-005	6.9000e-004	0.0000	2.3380	2.3380	1.3000e-004	0.0000	2.3408
Total	**9.9000e-004**	**1.4900e-003**	**0.0157**	**3.0000e-005**	**2.5200e-003**	**2.0000e-005**	**2.5400e-003**	**6.7000e-004**	**2.0000e-005**	**6.9000e-004**	**0.0000**	**2.3380**	**2.3380**	**1.3000e-004**	**0.0000**	**2.3408**

3.3 Grading - 2015

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	tons/yr										MT/yr					
Fugitive Dust					0.9958	0.0000	0.9958	0.4536	0.0000	0.4536	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.7288	8.1089	5.1441	6.0700e-003		0.4186	0.4186		0.3851	0.3851	0.0000	578.8224	578.8224	0.1728	0.0000	582.4513
Total	**0.7288**	**8.1089**	**5.1441**	**6.0700e-003**	**0.9958**	**0.4186**	**1.4144**	**0.4536**	**0.3851**	**0.8387**	**0.0000**	**578.8224**	**578.8224**	**0.1728**	**0.0000**	**582.4513**

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	tons/yr										MT/yr					

Hauling	0.1382	2.2367	1.6083	4.9700e-003	0.1161	0.0363	0.1524	0.0318	0.0334	0.0652	0.0000	459.0749	459.0749	3.6500e-003	0.0000	459.1515
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.8300e-003	0.0148	0.1551	3.0000e-004	0.0249	2.0000e-004	0.0251	6.6200e-003	1.8000e-004	6.8100e-003	0.0000	23.1257	23.1257	1.3100e-003	0.0000	23.1532
Total	**0.1480**	**2.2515**	**1.7634**	**5.2700e-003**	**0.1410**	**0.0365**	**0.1775**	**0.0385**	**0.0336**	**0.0720**	**0.0000**	**482.2006**	**482.2006**	**4.9600e-003**	**0.0000**	**482.3047**

3.4 Building Construction - 2015

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	tons/yr										MT/yr					
Off-Road	0.2240	1.7494	1.0515	1.6100e-003		0.1143	0.1143		0.1089	0.1089	0.0000	143.3580	143.3580	0.0326	0.0000	144.0420
Total	**0.2240**	**1.7494**	**1.0515**	**1.6100e-003**		**0.1143**	**0.1143**		**0.1089**	**0.1089**	**0.0000**	**143.3580**	**143.3580**	**0.0326**	**0.0000**	**144.0420**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0564	0.5723	0.6937	1.2000e-003	0.0341	9.6400e-003	0.0438	9.7700e-003	8.8600e-003	0.0186	0.0000	110.1012	110.1012	8.8000e-004	0.0000	110.1197
Worker	0.0812	0.1219	1.2808	2.4400e-003	0.2060	1.6400e-003	0.2076	0.0547	1.5000e-003	0.0562	0.0000	190.9828	190.9828	0.0108	0.0000	191.2101
Total	**0.1376**	**0.6942**	**1.9745**	**3.6400e-003**	**0.2401**	**0.0113**	**0.2514**	**0.0645**	**0.0104**	**0.0748**	**0.0000**	**301.0840**	**301.0840**	**0.0117**	**0.0000**	**301.3297**

3.4 Building Construction - 2016

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	tons/yr										MT/yr					

Off-Road	1.2300	9.8676	6.1380	9.5600e-003		0.6275	0.6275		0.5974	0.5974	0.0000	845.4804	845.4804	0.1873	0.0000	849.4127
Total	**1.2300**	**9.8676**	**6.1380**	**9.5600e-003**		**0.6275**	**0.6275**		**0.5974**	**0.5974**	**0.0000**	**845.4804**	**845.4804**	**0.1873**	**0.0000**	**849.4127**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2936	2.9943	3.8239	7.1000e-003	0.2025	0.0476	0.2501	0.0580	0.0437	0.1017	0.0000	645.6339	645.6339	4.7200e-003	0.0000	645.7331
Worker	0.4289	0.6472	6.8122	0.0145	1.2220	9.2400e-003	1.2312	0.3245	8.4900e-003	0.3330	0.0000	1,092.0833	1,092.0833	0.0587	0.0000	1,093.3151
Total	**0.7225**	**3.6414**	**10.6361**	**0.0216**	**1.4245**	**0.0568**	**1.4813**	**0.3825**	**0.0522**	**0.4347**	**0.0000**	**1 737.7172**	**1 737.7172**	**0.0634**	**0.0000**	**1 739.0482**

3.5 Architectural Coating - 2016

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	tons/yr										MT/yr					
Archit. Coating	16.0045					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0965	0.6215	0.4936	7.8000e-004		0.0515	0.0515		0.0515	0.0515	0.0000	66.8953	66.8953	7.8900e-003	0.0000	67.0609
Total	**16.1010**	**0.6215**	**0.4936**	**7.8000e-004**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**66.8953**	**66.8953**	**7.8900e-003**	**0.0000**	**67.0609**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0431	0.0650	0.6846	1.4500e-003	0.1228	9.3000e-004	0.1237	0.0326	8.5000e-004	0.0335	0.0000	109.7551	109.7551	5.9000e-003	0.0000	109.8789
Total	**0.0431**	**0.0650**	**0.6846**	**1.4500e-003**	**0.1228**	**9.3000e-004**	**0.1237**	**0.0326**	**8.5000e-004**	**0.0335**	**0.0000**	**109.7551**	**109.7551**	**5.9000e-003**	**0.0000**	**109.8789**

3.6 Paving - 2016

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	tons/yr										MT/yr					
Off-Road	0.1818	1.9476	1.2891	1.9400e-003		0.1097	0.1097		0.1009	0.1009	0.0000	182.8202	182.8202	0.0552	0.0000	183.9783
Paving	0.0197					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2015**	**1.9476**	**1.2891**	**1.9400e-003**		**0.1097**	**0.1097**		**0.1009**	**0.1009**	**0.0000**	**182.8202**	**182.8202**	**0.0552**	**0.0000**	**183.9783**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.3700e-003	0.0126	0.1330	2.8000e-004	0.0239	1.8000e-004	0.0240	6.3300e-003	1.7000e-004	6.5000e-003	0.0000	21.3131	21.3131	1.1400e-003	0.0000	21.3371
Total	**8.3700e-003**	**0.0126**	**0.1330**	**2.8000e-004**	**0.0239**	**1.8000e-004**	**0.0240**	**6.3300e-003**	**1.7000e-004**	**6.5000e-003**	**0.0000**	**21.3131**	**21.3131**	**1.1400e-003**	**0.0000**	**21.3371**

Fontana Westgate SP Buildout (Phase 1)

San Bernardino-South Coast County Annual

1.0 Pro ect Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	1,030.00	Student	12.00	86,111.47	0
Unrefrigerated Warehouse-No Rail	1,218.00	1000sqft	27.96	1,218,000.00	0
City Park	41.15	Acre	41.15	1,792,494.00	0
Condo/Townhouse	1,373.00	Dwelling Unit	74.90	1,373,000.00	3927
Single Family Housing	418.00	Dwelling Unit	72.00	752,400.00	1195
Strip Mall	157.24	1000sqft	3.61	157,235.00	0

1.2 Other Pro ect Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate one	10			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Draft EIR Section 2.0, Project Description

Vehicle Trips - Kunzman Associates, Inc. ,Westgate Specific Plan Traffic Impact Analysis, (2013)

Woodstoves - No Wood Burning

Water And Wastewater - Reference- Draft EIR Section 4.O.1

Solid Waste - Reference: Draft EIR 4.O.3 Solid Waste

Energy Mitigation - CEC 2013- 25% better than 2008; Exceed Title 24: 25%

Water Mitigation - Reduction Indoor: 20%; Outdoor reclaimed water use based on projected 2035 recycled water supply as a % of total supplies (FWC, WSA, Jan 2014 update).

Waste Mitigation - Waste Mitigation - Waste Diversion Rate: 50%

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	1,167.05	1,373.00
tblFireplaces	NumberGas	355.30	418.00
tblFireplaces	NumberNoFireplace	137.30	0.00
tblFireplaces	NumberNoFireplace	41.80	0.00
tblFireplaces	NumberWood	68.65	0.00
tblFireplaces	NumberWood	20.90	0.00
tblLandUse	LandUseSquareFeet	157,240.00	157,235.00
tblLandUse	LotAcreage	1.98	12.00
tblLandUse	LotAcreage	85.81	74.90
tblLandUse	LotAcreage	135.71	72.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblSolidWaste	SolidWasteGenerationRate	3.54	3.70
tblSolidWaste	SolidWasteGenerationRate	631.58	661.40
tblSolidWaste	SolidWasteGenerationRate	187.97	196.80
tblSolidWaste	SolidWasteGenerationRate	489.95	513.30
tblSolidWaste	SolidWasteGenerationRate	165.10	172.90
tblSolidWaste	SolidWasteGenerationRate	1,144.92	1,198.97
tblVehicleTrips	ST_TR	1.59	38.15
tblVehicleTrips	ST_TR	7.16	5.71
tblVehicleTrips	ST_TR	0.00	1.29
tblVehicleTrips	ST_TR	10.08	9.52
tblVehicleTrips	ST_TR	42.04	59.00
tblVehicleTrips	ST_TR	2.59	2.20

tblVehicleTrips	SU_TR	1.59	38.15
tblVehicleTrips	SU_TR	6.07	5.71
tblVehicleTrips	SU_TR	0.00	1.29
tblVehicleTrips	SU_TR	8.77	9.52
tblVehicleTrips	SU_TR	20.43	59.00
tblVehicleTrips	SU_TR	2.59	2.20
tblVehicleTrips	WD_TR	1.59	38.15
tblVehicleTrips	WD_TR	6.59	5.71
tblVehicleTrips	WD_TR	9.57	9.52
tblVehicleTrips	WD_TR	44.32	59.00
tblVehicleTrips	WD_TR	2.59	2.20
tblWater	IndoorWaterUseRate	89,456,477.18	37,759,621.00
tblWater	IndoorWaterUseRate	2,496,967.20	1,053,975.00
tblWater	IndoorWaterUseRate	27,234,382.71	11,495,665.00
tblWater	IndoorWaterUseRate	11,647,163.28	4,916,127.00
tblWater	IndoorWaterUseRate	281,662,500.00	118,890,489.00
tblWater	OutdoorWaterUseRate	49,029,457.54	20,695,382.00
tblWater	OutdoorWaterUseRate	56,396,474.74	23,805,001.00
tblWater	OutdoorWaterUseRate	6,420,772.80	2,710,215.00
tblWater	OutdoorWaterUseRate	17,169,502.14	7,247,265.00
tblWater	OutdoorWaterUseRate	7,138,583.94	3,013,114.00
tblWoodstoves	NumberCatalytic	68.65	0.00
tblWoodstoves	NumberCatalytic	20.90	0.00
tblWoodstoves	NumberNoncatalytic	68.65	0.00
tblWoodstoves	NumberNoncatalytic	20.90	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

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	tons/yr										MT/yr					
Area	24.6593	0.2162	18.6346	9.8000e-004		0.1317	0.1317		0.1313	0.1313	0.0000	460.3167	460.3167	0.0383	7.8800e-003	463.5655
Energy	0.2489	2.1382	0.9862	0.0136		0.1720	0.1720		0.1720	0.1720	0.0000	7,279.3431	7,279.3431	0.2686	0.0910	7,313.1824
Mobile	15.2705	50.7318	177.4549	0.4401	29.7843	0.6807	30.4650	7.9671	0.6270	8.5941	0.0000	33,129.0318	33,129.0318	1.2031	0.0000	33,154.2957
Waste						0.0000	0.0000		0.0000	0.0000	557.6304	0.0000	557.6304	32.9550	0.0000	1,249.6856
Water						0.0000	0.0000		0.0000	0.0000	55.2389	831.5052	886.7442	5.7118	0.1419	1,050.6724
Total	**40.1788**	**53.0862**	**197.0758**	**0.4547**	**29.7843**	**0.9844**	**30.7687**	**7.9671**	**0.9304**	**8.8974**	**612.8693**	**41 700.1969**	**42 313.0662**	**40.1768**	**0.2407**	**43 231.4017**

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	tons/yr										MT/yr					
Area	24.6593	0.2162	18.6346	9.8000e-004		0.1317	0.1317		0.1313	0.1313	0.0000	460.3167	460.3167	0.0383	7.8800e-003	463.5655
Energy	0.1958	1.6819	0.7742	0.0107		0.1353	0.1353		0.1353	0.1353	0.0000	6,442.8498	6,442.8498	0.2442	0.0784	6,472.2740
Mobile	15.2705	50.7318	177.4549	0.4401	29.7843	0.6807	30.4650	7.9671	0.6270	8.5941	0.0000	33,129.0318	33,129.0318	1.2031	0.0000	33,154.2957
Waste						0.0000	0.0000		0.0000	0.0000	278.8152	0.0000	278.8152	16.4775	0.0000	624.8428
Water						0.0000	0.0000		0.0000	0.0000	44.1912	683.7332	727.9244	4.5703	0.1137	859.1395
Total	**40.1257**	**52.6299**	**196.8637**	**0.4518**	**29.7843**	**0.9477**	**30.7320**	**7.9671**	**0.8937**	**8.8607**	**323.0063**	**40 715.9315**	**41 038.9378**	**22.5334**	**0.1999**	**41 574.1175**

	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	N20	CO2e
Percent Reduction	**0.13**	**0.86**	**0.11**	**0.64**	**0.00**	**3.73**	**0.12**	**0.00**	**3.94**	**0.41**	**47.30**	**2.36**	**3.01**	**43.91**	**16.95**	**3.83**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	tons/yr										MT/yr					
Mitigated	15.2705	50.7318	177.4549	0.4401	29.7843	0.6807	30.4650	7.9671	0.6270	8.5941	0.0000	33,129.0318	33,129.0318	1.2031	0.0000	33,154.2957
Unmitigated	15.2705	50.7318	177.4549	0.4401	29.7843	0.6807	30.4650	7.9671	0.6270	8.5941	0.0000	33,129.0318	33,129.0318	1.2031	0.0000	33,154.2957

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	1,569.87	1,569.87	1569.87	4,517,371	4,517,371
Condo/Townhouse	7,839.83	7,839.83	7839.83	26,789,890	26,789,890
Elementary School	1,328.70	1,328.70	1328.70	4,579,210	4,579,210
Single Family Housing	3,979.36	3,979.36	3979.36	13,598,078	13,598,078
Strip Mall	9,277.16	9,277.16	9277.16	17,650,680	17,650,680
Unrefrigerated Warehouse-No Rail	2,679.60	2,679.60	2679.60	11,484,007	11,484,007
Total	26,674.52	26,674.52	26,674.52	78,619,237	78,619,237

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.470490	0.065594	0.173154	0.156076	0.056237	0.009050	0.016623	0.041711	0.001119	0.001337	0.004965	0.000700	0.002944

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,504.8479	4,504.8479	0.2071	0.0428	4,522.4777
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,815.8847	4,815.8847	0.2214	0.0458	4,834.7317
NaturalGas Mitigated	0.1958	1.6819	0.7742	0.0107		0.1353	0.1353		0.1353	0.1353	0.0000	1,938.0019	1,938.0019	0.0372	0.0355	1,949.7963
NaturalGas Unmitigated	0.2489	2.1382	0.9862	0.0136		0.1720	0.1720		0.1720	0.1720	0.0000	2,463.4585	2,463.4585	0.0472	0.0452	2,478.4507

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	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
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	786198	4.2400e-003	0.0385	0.0324	2.3000e-004		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003	0.0000	41.9545	41.9545	8.0000e-004	7.7000e-004	42.2098
Single Family Housing	1.41146e+007	0.0761	0.6504	0.2768	4.1500e-003		0.0526	0.0526		0.0526	0.0526	0.0000	753.2073	753.2073	0.0144	0.0138	757.7912
Strip Mall	364785	1.9700e-003	0.0179	0.0150	1.1000e-004		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003	0.0000	19.4663	19.4663	3.7000e-004	3.6000e-004	19.5848
Unrefrigerated Warehouse-No Rail	2.60652e+006	0.0141	0.1278	0.1073	7.7000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003	0.0000	139.0938	139.0938	2.6700e-003	2.5500e-003	139.9403
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	2.82914e+007	0.1526	1.3036	0.5547	8.3200e-003		0.1054	0.1054		0.1054	0.1054	0.0000	1,509.7365	1,509.7365	0.0289	0.0277	1,518.9245
Total		**0.2489**	**2.1382**	**0.9862**	**0.0136**		**0.1720**	**0.1720**		**0.1720**	**0.1720**	**0.0000**	**2 463.4585**	**2 463.4585**	**0.0472**	**0.0452**	**2 478.4507**

Mitigated

	NaturalGas Use	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
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	628183	3.3900e-003	0.0308	0.0259	1.8000e-004		2.3400e-003	2.3400e-003		2.3400e-003	2.3400e-003	0.0000	33.5223	33.5223	6.4000e-004	6.1000e-004	33.7263
Single Family Housing	1.12077e+007	0.0604	0.5164	0.2198	3.3000e-003		0.0418	0.0418		0.0418	0.0418	0.0000	598.0866	598.0866	0.0115	0.0110	601.7264
Strip Mall	285382	1.5400e-003	0.0140	0.0118	8.0000e-005		1.0600e-003	1.0600e-003		1.0600e-003	1.0600e-003	0.0000	15.2290	15.2290	2.9000e-004	2.8000e-004	15.3217
Unrefrigerated Warehouse-No Rail	1.96403e+006	0.0106	0.0963	0.0809	5.8000e-004		7.3200e-003	7.3200e-003		7.3200e-003	7.3200e-003	0.0000	104.8079	104.8079	2.0100e-003	1.9200e-003	105.4457
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	2.22315e+007	0.1199	1.0244	0.4359	6.5400e-003		0.0828	0.0828		0.0828	0.0828	0.0000	1,186.3562	1,186.3562	0.0227	0.0218	1,193.5762
Total		**0.1958**	**1.6819**	**0.7742**	**0.0107**		**0.1353**	**0.1353**		**0.1353**	**0.1353**	**0.0000**	**1 938.0019**	**1 938.0019**	**0.0371**	**0.0355**	**1 949.7963**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	6.69543e+006	1,916.0117	0.0881	0.0182	1,923.5100
Elementary School	782753	223.9981	0.0103	2.1300e-003	224.8747
Single Family Housing	3.21009e+006	918.6213	0.0422	8.7400e-003	922.2164
Strip Mall	2.4623e+006	704.6288	0.0324	6.7000e-003	707.3863
Unrefrigerated Warehouse-No Rail	3.67836e+006	1,052.6248	0.0484	0.0100	1,056.7443
Total		**4 815.8847**	**0.2214**	**0.0458**	**4 834.7317**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	6.23827e+006	1,785.1860	0.0821	0.0170	1,792.1723
Elementary School	709559	203.0522	9.3300e-003	1.9300e-003	203.8468
Single Family Housing	3.0107e+006	861.5618	0.0396	8.1900e-003	864.9336
Strip Mall	2.24217e+006	641.6351	0.0295	6.1000e-003	644.1462
Unrefrigerated Warehouse-No Rail	3.54133e+006	1,013.4128	0.0466	9.6400e-003	1,017.3788
Total		**4 504.8479**	**0.2071**	**0.0428**	**4 522.4777**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	tons/yr										MT/yr					
Mitigated	24.6593	0.2162	18.6346	9.8000e-004		0.1317	0.1317		0.1313	0.1313	0.0000	460.3167	460.3167	0.0383	7.8800e-003	463.5655
Unmitigated	24.6593	0.2162	18.6346	9.8000e-004		0.1317	0.1317		0.1313	0.1313	0.0000	460.3167	460.3167	0.0383	7.8800e-003	463.5655

6.2 Area by SubCategory

Unmitigated

	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
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.6016					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	19.4379					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0435	0.0000	2.3700e-003	0.0000		0.0300	0.0300		0.0297	0.0297	0.0000	430.0856	430.0856	8.2400e-003	7.8800e-003	432.7030
Landscaping	0.5764	0.2162	18.6322	9.8000e-004		0.1016	0.1016		0.1016	0.1016	0.0000	30.2311	30.2311	0.0301	0.0000	30.8625
Total	**24.6593**	**0.2162**	**18.6346**	**9.8000e-004**		**0.1317**	**0.1317**		**0.1313**	**0.1313**	**0.0000**	**460.3167**	**460.3167**	**0.0383**	**7.8800e-003**	**463.5655**

Mitigated

	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
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.6016					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	19.4379					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0435	0.0000	2.3700e-003	0.0000		0.0300	0.0300		0.0297	0.0297	0.0000	430.0856	430.0856	8.2400e-003	7.8800e-003	432.7030
Landscaping	0.5764	0.2162	18.6322	9.8000e-004		0.1016	0.1016		0.1016	0.1016	0.0000	30.2311	30.2311	0.0301	0.0000	30.8625
Total	**24.6593**	**0.2162**	**18.6346**	**9.8000e-004**		**0.1317**	**0.1317**		**0.1313**	**0.1313**	**0.0000**	**460.3167**	**460.3167**	**0.0383**	**7.8800e-003**	**463.5655**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Reclaimed Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	727.9244	4.5703	0.1137	859.1395
Unmitigated	886.7442	5.7118	0.1419	1,050.6724

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 20.6954	65.7971	3.0200e-003	6.3000e-004	66.0546
Condo/Townhouse	37.7596 / 23.805	228.3621	1.2403	0.0311	264.0535
Elementary School	1.05398 / 2.71021	12.8783	0.0349	9.3000e-004	13.9000
Single Family Housing	11.4957 / 7.24726	69.5233	0.3776	9.4700e-003	80.3893
Strip Mall	4.91613 / 3.01311	29.4577	0.1615	4.0500e-003	34.1035
Unrefrigerated Warehouse-No Rail	118.89 / 0	480.7257	3.8944	0.0957	592.1716
Total		**886.7442**	**5.7118**	**0.1419**	**1 050.6724**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 20.6954	65.7971	3.0200e-003	6.3000e-004	66.0546
Condo/Townhouse	30.2077 / 23.805	193.9196	0.9928	0.0250	222.5167
Elementary School	0.84318 / 2.71021	11.9169	0.0280	7.6000e-004	12.7406
Single Family Housing	9.19653 / 7.24726	59.0375	0.3023	7.6100e-003	67.7437
Strip Mall	3.9329 / 3.01311	24.9734	0.1292	3.2500e-003	28.6956
Unrefrigerated Warehouse-No Rail	95.1124 / 0	372.2798	3.1150	0.0764	461.3883
Total		**727.9244**	**4.5703**	**0.1137**	**859.1395**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	278.8152	16.4775	0.0000	624.8428
Unmitigated	557.6304	32.9550	0.0000	1,249.6856

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	3.7	0.7511	0.0444	0.0000	1.6832
Condo/Townhouse	661.4	134.2582	7.9344	0.0000	300.8813
Elementary School	196.8	39.9486	2.3609	0.0000	89.5274
Single Family Housing	513.3	104.1953	6.1578	0.0000	233.5083
Strip Mall	172.9	35.0971	2.0742	0.0000	78.6550
Unrefrigerated Warehouse-No Rail	1198.97	243.3801	14.3834	0.0000	545.4304
Total		**557.6304**	**32.9550**	**0.0000**	**1 249.6856**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	1.85	0.3755	0.0222	0.0000	0.8416
Condo/Townhouse	330.7	67.1291	3.9672	0.0000	150.4407
Elementary School	98.4	19.9743	1.1805	0.0000	44.7637
Single Family Housing	256.65	52.0976	3.0789	0.0000	116.7542
Strip Mall	86.45	17.5486	1.0371	0.0000	39.3275
Unrefrigerated Warehouse-No Rail	599.485	121.6900	7.1917	0.0000	272.7152
Total		**278.8152**	**16.4775**	**0.0000**	**624.8428**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Fontana Westgate SP Buildout

San Bernardino-South Coast County Annual

1.0 Pro ect Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	2,156.00	1000sqft	49.49	2,156,000.00	0
Elementary School	1,030.00	Student	12.00	86,111.47	0
Elementary School	1,030.00	Student	12.00	86,111.47	0
High School	2,500.00	Student	60.00	331,652.44	0
General Light Industry	303.00	1000sqft	6.96	303,000.00	0
Unrefrigerated Warehouse-No Rail	1,299.00	1000sqft	29.82	1,299,000.00	0
City Park	58.35	Acre	58.35	2,541,726.00	0
Condo/Townhouse	5,530.00	Dwelling Unit	229.70	5,530,000.00	21954
Single Family Housing	880.00	Dwelling Unit	120.00	1,584,000.00	3494
Strip Mall	602.00	1000sqft	302.40	602,000.00	0

1.2 Other Pro ect Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate one	10			**Operational Year**	2035
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Population based on 3.97 persons/DU (Multi-family: 21,954; Single-family: 3,494). Land Uses from Draft EIR Section 2.0, Project Description.

Vehicle Trips - Kunzman Associates, Inc., Westgate Specific Plan Traffic Impact Analysis, (2013).

Woodstoves - No wood burning fireplaces.

Water And Wastewater - Reference: Based on factors from Draft EIR Section 4.O.1, Water Supply.

Solid Waste - Reference: Based on factors from Draft EIR, Section 4.O.3, Solid Waste.

Energy Mitigation - CEC 2013- 25% better than 2008; Exceed Title 24: 25%

Water Mitigation - Reduction Indoor: 20%; Outdoor reclaimed water use based on projected 2035 recycled water supply as a % of total supplies (FWC, WSA, Jan 2014 update).
Waste Mitigation - Waste Diversion Rate: 50%

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	3,850.50	5,530.00
tblFireplaces	NumberGas	748.00	880.00
tblFireplaces	NumberNoFireplace	453.00	0.00
tblFireplaces	NumberNoFireplace	88.00	0.00
tblFireplaces	NumberWood	226.50	0.00
tblFireplaces	NumberWood	44.00	0.00
tblLandUse	LotAcreage	1.98	12.00
tblLandUse	LotAcreage	1.98	12.00
tblLandUse	LotAcreage	7.61	60.00
tblLandUse	LotAcreage	345.63	229.70
tblLandUse	LotAcreage	285.71	120.00
tblLandUse	LotAcreage	13.82	302.40
tblLandUse	Population	15,816.00	21,954.00
tblLandUse	Population	2,517.00	3,494.00
tblProjectCharacteristics	OperationalYear	2014	2035
tblSolidWaste	SolidWasteGenerationRate	5.02	5.25
tblSolidWaste	SolidWasteGenerationRate	2,083.80	2,663.90
tblSolidWaste	SolidWasteGenerationRate	375.95	393.69
tblSolidWaste	SolidWasteGenerationRate	419.12	393.45

tblSolidWaste	SolidWasteGenerationRate	456.25	477.80
tblSolidWaste	SolidWasteGenerationRate	2,247.81	2,099.71
tblSolidWaste	SolidWasteGenerationRate	1,031.97	1,080.69
tblSolidWaste	SolidWasteGenerationRate	632.10	661.94
tblSolidWaste	SolidWasteGenerationRate	1,221.06	1,278.70
tblVehicleTrips	ST_TR	1.59	38.37
tblVehicleTrips	ST_TR	7.16	6.08
tblVehicleTrips	ST_TR	0.00	1.29
tblVehicleTrips	ST_TR	1.32	6.91
tblVehicleTrips	ST_TR	0.61	1.89
tblVehicleTrips	ST_TR	1.64	11.43
tblVehicleTrips	ST_TR	10.08	9.52
tblVehicleTrips	ST_TR	42.04	15.40
tblVehicleTrips	ST_TR	2.59	2.22
tblVehicleTrips	SU_TR	1.59	38.37
tblVehicleTrips	SU_TR	6.07	6.08
tblVehicleTrips	SU_TR	0.00	1.29
tblVehicleTrips	SU_TR	0.68	6.91
tblVehicleTrips	SU_TR	0.25	1.89
tblVehicleTrips	SU_TR	0.76	11.43
tblVehicleTrips	SU_TR	8.77	9.52
tblVehicleTrips	SU_TR	20.43	15.40
tblVehicleTrips	SU_TR	2.59	2.22
tblVehicleTrips	WD_TR	1.59	38.37
tblVehicleTrips	WD_TR	6.59	6.08
tblVehicleTrips	WD_TR	6.97	6.91
tblVehicleTrips	WD_TR	1.71	1.89
tblVehicleTrips	WD_TR	11.42	11.43
tblVehicleTrips	WD_TR	9.57	9.52
tblVehicleTrips	WD_TR	44.32	15.40

tblVehicleTrips	WD_TR	2.59	2.22
tblWater	IndoorWaterUseRate	295,147,736.07	152,083,759.76
tblWater	IndoorWaterUseRate	4,993,934.40	2,107,945.06
tblWater	IndoorWaterUseRate	78,162,500.00	29,576,094.48
tblWater	IndoorWaterUseRate	11,012,400.00	4,648,345.84
tblWater	IndoorWaterUseRate	429,582,468.90	161,746,581.54
tblWater	IndoorWaterUseRate	57,335,542.55	24,201,393.97
tblWater	IndoorWaterUseRate	44,591,657.93	18,822,186.61
tblWater	IndoorWaterUseRate	300,393,750.00	126,796,523.86
tblWater	OutdoorWaterUseRate	69,522,936.75	29,345,706.12
tblWater	OutdoorWaterUseRate	186,071,398.82	95,878,892.05
tblWater	OutdoorWaterUseRate	12,841,545.60	5,420,430.16
tblWater	OutdoorWaterUseRate	28,317,600.00	11,952,889.31
tblWater	OutdoorWaterUseRate	263,292,480.94	99,135,001.59
tblWater	OutdoorWaterUseRate	36,146,320.30	15,257,400.54
tblWater	OutdoorWaterUseRate	27,330,370.99	11,536,178.89
tblWoodstoves	NumberCatalytic	226.50	0.00
tblWoodstoves	NumberCatalytic	44.00	0.00
tblWoodstoves	NumberNoncatalytic	226.50	0.00
tblWoodstoves	NumberNoncatalytic	44.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

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	tons/yr										MT/yr					
Area	65.9174	0.7610	65.9942	3.5000e-003		0.4745	0.4745		0.4733	0.4733	0.0000	1,647.4818	1,647.4818	0.1329	0.0282	1,659.0203
Energy	0.9121	7.8689	3.8662	0.0498		0.6302	0.6302		0.6302	0.6302	0.0000	31,647.5648	31,647.5648	1.2128	0.3806	31,791.0261
Mobile	33.0183	94.9057	409.7209	1.7575	114.4886	2.5110	116.9996	30.6332	2.3161	32.9493	0.0000	115,457.6541	115,457.6541	2.8978	0.0000	115,518.5086
Waste						0.0000	0.0000		0.0000	0.0000	1,838.1096	0.0000	1,838.1096	108.6292	0.0000	4,119.3220
Water						0.0000	0.0000		0.0000	0.0000	164.9666	2,791.2792	2,956.2458	17.0720	0.4266	3,447.0098
Total	**99.8477**	**103.5357**	**479.5813**	**1.8108**	**114.4886**	**3.6156**	**118.1042**	**30.6332**	**3.4196**	**34.0528**	**2 003.0761**	**151 543.9800**	**153 547.0561**	**129.9446**	**0.8355**	**156 534.8867**

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	tons/yr										MT/yr					
Area	65.9174	0.7610	65.9942	3.5000e-003		0.4745	0.4745		0.4733	0.4733	0.0000	1,647.4818	1,647.4818	0.1329	0.0282	1,659.0203
Energy	0.7216	6.2274	3.0703	0.0394		0.4986	0.4986		0.4986	0.4986	0.0000	28,073.4272	28,073.4272	1.0991	0.3300	28,198.8066
Mobile	33.0183	94.9057	409.7209	1.7575	114.4886	2.5110	116.9996	30.6332	2.3161	32.9493	0.0000	115,457.6541	115,457.6541	2.8978	0.0000	115,518.5086
Waste						0.0000	0.0000		0.0000	0.0000	919.0548	0.0000	919.0548	54.3146	0.0000	2,059.6610
Water						0.0000	0.0000		0.0000	0.0000	131.9733	2,349.9702	2,481.9434	13.6629	0.3424	2,875.0123
Total	**99.6573**	**101.8941**	**478.7854**	**1.8004**	**114.4886**	**3.4841**	**117.9726**	**30.6332**	**3.2880**	**33.9212**	**1 051.0280**	**147 528.5333**	**148 579.5613**	**72.1073**	**0.7006**	**150 311.0088**

	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	N20	CO2e
Percent Reduction	**0.19**	**1.59**	**0.17**	**0.57**	**0.00**	**3.64**	**0.11**	**0.00**	**3.85**	**0.39**	**47.53**	**2.65**	**3.24**	**44.51**	**16.14**	**3.98**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	tons/yr										MT/yr					
Mitigated	33.0183	94.9057	409.7209	1.7575	114.4886	2.5110	116.9996	30.6332	2.3161	32.9493	0.0000	115,457.6541	115,457.6541	2.8978	0.0000	115,518.5086
Unmitigated	33.0183	94.9057	409.7209	1.7575	114.4886	2.5110	116.9996	30.6332	2.3161	32.9493	0.0000	115,457.6541	115,457.6541	2.8978	0.0000	115,518.5086

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	2,238.89	2,238.89	2238.89	6,442,494	6,442,494
Condo/Townhouse	33,622.40	33,622.40	33622.40	114,892,849	114,892,849
Elementary School	1,328.70	1,328.70	1328.70	4,579,210	4,579,210
Elementary School	1,328.70	1,328.70	1328.70	4,579,210	4,579,210
General Light Industry	2,093.73	2,093.73	2093.73	9,271,617	9,271,617
High School	4,725.00	4,725.00	4725.00	20,179,447	20,179,447
Office Park	24,643.08	24,643.08	24643.08	83,260,360	83,260,360
Single Family Housing	8,377.60	8,377.60	8377.60	28,627,532	28,627,532
Strip Mall	9,270.80	9,270.80	9270.80	17,638,580	17,638,580
Unrefrigerated Warehouse-No Rail	2,883.78	2,883.78	2883.78	12,359,065	12,359,065
Total	90,512.68	90,512.68	90,512.68	301,830,364	301,830,364

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.445160	0.068315	0.180257	0.161061	0.057208	0.009197	0.016142	0.050774	0.001074	0.001468	0.004084	0.000577	0.004683

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	20,931.9424	20,931.9424	0.9622	0.1991	21,013.8600
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	22,621.2825	22,621.2825	1.0398	0.2151	22,709.8113
NaturalGas Mitigated	0.7216	6.2274	3.0703	0.0394		0.4986	0.4986		0.4986	0.4986	0.0000	7,141.4847	7,141.4847	0.1369	0.1309	7,184.9466
NaturalGas Unmitigated	0.9121	7.8689	3.8662	0.0498		0.6302	0.6302		0.6302	0.6302	0.0000	9,026.2823	9,026.2823	0.1730	0.1655	9,081.2148

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	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
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	786198	8.4800e-003	0.0771	0.0648	4.6000e-004		5.8600e-003	5.8600e-003		5.8600e-003	5.8600e-003	0.0000	83.9090	83.9090	1.6100e-003	1.5400e-003	84.4197
General Light Industry	1.00869e+007	0.0544	0.4945	0.4153	2.9700e-003		0.0376	0.0376		0.0376	0.0376	0.0000	538.2738	538.2738	0.0103	9.8700e-003	541.5496
High School	3.02799e+006	0.0163	0.1484	0.1247	8.9000e-004		0.0113	0.0113		0.0113	0.0113	0.0000	161.5849	161.5849	3.1000e-003	2.9600e-003	162.5683
Office Park	6.61892e+006	0.0357	0.3245	0.2725	1.9500e-003		0.0247	0.0247		0.0247	0.0247	0.0000	353.2108	353.2108	6.7700e-003	6.4800e-003	355.3604
Single Family Housing	2.97149e+007	0.1602	1.3692	0.5826	8.7400e-003		0.1107	0.1107		0.1107	0.1107	0.0000	1,585.6997	1,585.6997	0.0304	0.0291	1,595.3500
Strip Mall	1.39664e+006	7.5300e-003	0.0685	0.0575	4.1000e-004		5.2000e-003	5.2000e-003		5.2000e-003	5.2000e-003	0.0000	74.5300	74.5300	1.4300e-003	1.3700e-003	74.9836
Unrefrigerated Warehouse-No Rail	2.77986e+006	0.0150	0.1363	0.1145	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	148.3439	148.3439	2.8400e-003	2.7200e-003	149.2467
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	1.13949e+008	0.6144	5.2506	2.2343	0.0335		0.4245	0.4245		0.4245	0.4245	0.0000	6,080.7302	6,080.7302	0.1166	0.1115	6,117.7365
Total		**0.9121**	**7.8689**	**3.8662**	**0.0498**		**0.6302**	**0.6302**		**0.6302**	**0.6302**	**0.0000**	**9 026.2823**	**9 026.2823**	**0.1730**	**0.1655**	**9 081.2148**

Mitigated

	NaturalGas Use	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
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	628183	6.7700e-003	0.0616	0.0517	3.7000e-004		4.6800e-003	4.6800e-003		4.6800e-003	4.6800e-003	0.0000	67.0445	67.0445	1.2900e-003	1.2300e-003	67.4525
General Light Industry	8.86275e+006	0.0478	0.4345	0.3649	2.6100e-003		0.0330	0.0330		0.0330	0.0330	0.0000	472.9501	472.9501	9.0600e-003	8.6700e-003	475.8284
High School	2.4194e+006	0.0131	0.1186	0.0996	7.1000e-004		9.0100e-003	9.0100e-003		9.0100e-003	9.0100e-003	0.0000	129.1086	129.1086	2.4700e-003	2.3700e-003	129.8944
Office Park	4.96419e+006	0.0268	0.2433	0.2044	1.4600e-003		0.0185	0.0185		0.0185	0.0185	0.0000	264.9081	264.9081	5.0800e-003	4.8600e-003	266.5203
Single Family Housing	2.35952e+007	0.1272	1.0872	0.4627	6.9400e-003		0.0879	0.0879		0.0879	0.0879	0.0000	1,259.1296	1,259.1296	0.0241	0.0231	1,266.7925
Strip Mall	1.09263e+006	5.8900e-003	0.0536	0.0450	3.2000e-004		4.0700e-003	4.0700e-003		4.0700e-003	4.0700e-003	0.0000	58.3069	58.3069	1.1200e-003	1.0700e-003	58.6617
Unrefrigerated Warehouse-No Rail	2.09464e+006	0.0113	0.1027	0.0863	6.2000e-004		7.8000e-003	7.8000e-003		7.8000e-003	7.8000e-003	0.0000	111.7778	111.7778	2.1400e-003	2.0500e-003	112.4581
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	8.95412e+007	0.4828	4.1259	1.7557	0.0263		0.3336	0.3336		0.3336	0.3336	0.0000	4,778.2591	4,778.2591	0.0916	0.0876	4,807.3388
Total		**0.7216**	**6.2274**	**3.0703**	**0.0394**		**0.4986**	**0.4986**		**0.4986**	**0.4986**	**0.0000**	**7 141.4847**	**7 141.4847**	**0.1369**	**0.1309**	**7 184.9466**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	2.6967e+007	7,717.0754	0.3547	0.0734	7,747.2763
Elementary School	782753	447.9961	0.0206	4.2600e-003	449.7494
General Light Industry	3.35421e+006	959.8639	0.0441	9.1300e-003	963.6203
High School	3.01472e+006	862.7132	0.0397	8.2000e-003	866.0895
Office Park	2.40394e+007	6,879.2803	0.3162	0.0654	6,906.2025
Single Family Housing	6.75808e+006	1,933.9397	0.0889	0.0184	1,941.5082
Strip Mall	9.42732e+006	2,697.7869	0.1240	0.0257	2,708.3447
Unrefrigerated Warehouse-No Rail	3.92298e+006	1,122.6270	0.0516	0.0107	1,127.0204
Total		**22 621.2825**	**1.0398**	**0.2151**	**22 709.8113**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	2.51257e+007	7,190.1518	0.3305	0.0684	7,218.2906
Elementary School	709559	406.1043	0.0187	3.8600e-003	407.6936
General Light Industry	3.15044e+006	901.5523	0.0414	8.5700e-003	905.0806
High School	2.73282e+006	782.0415	0.0360	7.4400e-003	785.1020
Office Park	2.20181e+007	6,300.8655	0.2896	0.0599	6,325.5241
Single Family Housing	6.33831e+006	1,813.8143	0.0834	0.0173	1,820.9127
Strip Mall	8.58452e+006	2,456.6054	0.1129	0.0234	2,466.2194
Unrefrigerated Warehouse-No Rail	3.77684e+006	1,080.8073	0.0497	0.0103	1,085.0370
Total		**20 931.9424**	**0.9622**	**0.1991**	**21 013.8600**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	tons/yr										MT/yr					
Mitigated	65.9174	0.7610	65.9942	3.5000e-003		0.4745	0.4745		0.4733	0.4733	0.0000	1,647.4818	1,647.4818	0.1329	0.0282	1,659.0203
Unmitigated	65.9174	0.7610	65.9942	3.5000e-003		0.4745	0.4745		0.4733	0.4733	0.0000	1,647.4818	1,647.4818	0.1329	0.0282	1,659.0203

6.2 Area by SubCategory

Unmitigated

	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
SubCategory	tons/yr										MT/yr					
Architectural Coating	11.3153					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	52.4666					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1555	1.0000e-005	8.4800e-003	0.0000		0.1075	0.1075		0.1063	0.1063	0.0000	1,539.2791	1,539.2791	0.0295	0.0282	1,548.6468
Landscaping	1.9800	0.7610	65.9857	3.5000e-003		0.3670	0.3670		0.3670	0.3670	0.0000	108.2028	108.2028	0.1034	0.0000	110.3734
Total	**65.9174**	**0.7610**	**65.9942**	**3.5000e-003**		**0.4745**	**0.4745**		**0.4733**	**0.4733**	**0.0000**	**1 647.4818**	**1 647.4818**	**0.1329**	**0.0282**	**1 659.0203**

Mitigated

	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
SubCategory	tons/yr										MT/yr					
Architectural Coating	11.3153					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	52.4666					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1555	1.0000e-005	8.4800e-003	0.0000		0.1075	0.1075		0.1063	0.1063	0.0000	1,539.2791	1,539.2791	0.0295	0.0282	1,548.6468
Landscaping	1.9800	0.7610	65.9857	3.5000e-003		0.3670	0.3670		0.3670	0.3670	0.0000	108.2028	108.2028	0.1034	0.0000	110.3734
Total	**65.9174**	**0.7610**	**65.9942**	**3.5000e-003**		**0.4745**	**0.4745**		**0.4733**	**0.4733**	**0.0000**	**1 647.4818**	**1 647.4818**	**0.1329**	**0.0282**	**1 659.0203**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Reclaimed Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2,481.9434	13.6629	0.3424	2,875.0123
Unmitigated	2,956.2458	17.0720	0.4266	3,447.0098

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 29.3457	93.2992	4.2900e-003	8.9000e-004	93.6644
Condo/Townhouse	152.084 / 95.8789	919.7696	4.9957	0.1253	1,063.5232
Elementary School	2.10795 / 5.42043	25.7566	0.0698	1.8600e-003	27.8000
General Light Industry	29.5761 / 0	119.5890	0.9688	0.0238	147.3131
High School	4.64835 / 11.9529	56.7973	0.1540	4.1000e-003	61.3033
Office Park	161.747 / 99.135	969.1928	5.3127	0.1332	1,122.0447
Single Family Housing	24.2014 / 15.2574	146.3648	0.7950	0.0199	169.2406
Strip Mall	18.8222 / 11.5362	112.7834	0.6182	0.0155	130.5705
Unrefrigerated Warehouse-No Rail	126.797 / 0	512.6932	4.1534	0.1021	631.5501
Total		**2 956.2458**	**17.0720**	**0.4266**	**3 447.0098**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 29.3457	93.2992	4.2900e-003	8.9000e-004	93.6644
Condo/Townhouse	121.667 / 95.8789	781.0464	3.9987	0.1007	896.2263
Elementary School	1.68636 / 5.42043	23.8338	0.0560	1.5200e-003	25.4812
General Light Industry	23.6609 / 0	92.6111	0.7749	0.0190	114.7784
High School	3.71868 / 11.9529	52.5573	0.1235	3.3500e-003	56.1899
Office Park	129.397 / 99.135	821.6556	4.2523	0.1070	944.1183
Single Family Housing	19.3611 / 15.2574	124.2895	0.6363	0.0160	142.6183
Strip Mall	15.0577 / 11.5362	95.6147	0.4948	0.0125	109.8655
Unrefrigerated Warehouse-No Rail	101.437 / 0	397.0358	3.3221	0.0815	492.0699
Total		**2 481.9434**	**13.6629**	**0.3424**	**2 875.0123**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	919.0548	54.3146	0.0000	2,059.6610
Unmitigated	1,838.1096	108.6292	0.0000	4,119.3220

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	5.25	1.0657	0.0630	0.0000	2.3883
Condo/Townhouse	2663.9	540.7476	31.9573	0.0000	1,211.8503
Elementary School	393.69	79.9155	4.7229	0.0000	179.0958
General Light Industry	393.45	79.8668	4.7200	0.0000	178.9866
High School	477.8	96.9891	5.7319	0.0000	217.3588
Office Park	2099.71	426.2222	25.1890	0.0000	955.1913
Single Family Housing	1080.69	219.3703	12.9644	0.0000	491.6230
Strip Mall	661.94	134.3678	7.9409	0.0000	301.1270
Unrefrigerated Warehouse-No Rail	1278.7	259.5645	15.3398	0.0000	581.7009
Total		**1 838.1095**	**108.6292**	**0.0000**	**4 119.3220**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	2.625	0.5329	0.0315	0.0000	1.1942
Condo/Townhouse	1331.95	270.3738	15.9786	0.0000	605.9251
Elementary School	196.845	39.9578	2.3614	0.0000	89.5479
General Light Industry	196.725	39.9334	2.3600	0.0000	89.4933
High School	238.9	48.4945	2.8660	0.0000	108.6794
Office Park	1049.86	213.1111	12.5945	0.0000	477.5957
Single Family Housing	540.345	109.6852	6.4822	0.0000	245.8115
Strip Mall	330.97	67.1839	3.9705	0.0000	150.5635
Unrefrigerated Warehouse-No Rail	639.35	129.7823	7.6699	0.0000	290.8504
Total		**919.0548**	**54.3146**	**0.0000**	**2 059.661 0**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Appendix G - Hazardous Materials Assessment

HAZARDOUS MATERIALS ASSESSMENT
WESTGATE SPECIFIC PLAN
FONTANA, CALIFORNIA

PREPARED FOR:
PCR Services Corporation
One Venture, Suite 150
Irvine, California 92618

PREPARED BY:
Ninyo & Moore
Geotechnical and Environmental Sciences Consultants
475 Goddard, Suite 200
Irvine, California 92618

July 12, 2012
Project No. 208578001

July 12, 2012
Project No. 208578001

Mr. David A. Crook
PCR Services Corporation
One Venture, Suite 150
Irvine, California 92618

Subject: Hazardous Materials Assessment
Westgate Specific Plan
Fontana, California

Dear Mr. Crook:

In accordance with your request and authorization, Ninyo & Moore has performed a hazardous materials assessment of the proposed Westgate Specific Plan project near the intersection of Interstate 15 and State Route 210 in Fontana, San Bernardino County, California. Our assessment was conducted in general accordance with the scope of services presented in our Proposal for Geotechnical and Environmental Consulting Services, dated August 10, 2010. We understand that the results of this assessment will be utilized in the preparation of an Environmental Impact Report for the proposed project.

We appreciate the opportunity to provide environmental consulting services for this project.

Sincerely,
NINYO & MOORE

Jesus Villanueva
Senior Staff Engineer

Javier Perez, REA
Project Environmental Scientist

John Jay Roberts, PG, CEG
Senior Geologist

JEV/JP/JJR/mlc/sc

Distribution: (2) Addressee (1 via e-mail, 1 hard-copy)

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Appendix A – Photographic Documentation
Appendix B – Relevant Assessment Documentation
Appendix C – Environmental Database Search

EXECUTIVE SUMMARY

PCR Services Corporation (PCR) authorized Ninyo & Moore to perform a Hazardous Materials Assessment (HMA) of the proposed Westgate Specific Plan (WSP) project located near the Interstate 15 (I-15) and State Route 210 in Fontana, California (Figure 1). The purpose of this HMA is to evaluate the likelihood that hazardous substances, which may be present in soil or groundwater beneath the WSP project study area, may be encountered as a result of on-site or off-site activities associated with the construction. To evaluate the likelihood of encountering hazardous substances during construction activities, Ninyo & Moore also performed a limited evaluation of properties adjoining the project study area (Figure 2) with regard to the potential presence of hazardous substances. A limited scope of the ASTM International (ASTM) 2005 standard was used to evaluate the project, which did not include interviews or user questionnaires. A site reconnaissance and database radii search of $^{1}/_{8}$-mile was used to assess potential impacts to the project.

The proposed WSP project involves a new specific plan for the development of approximately 964 acres to include commercial/light industrial zoned land, residential dwelling units, open space and recreation areas, a new high school, and two new elementary schools (City of Fontana, 2010). Other components of the proposed development include a network of pedestrian trails and bikeways, utility infrastructure improvements and roadway improvements. The plan area is roughly located southeast of the Interstate 15, north of Baseline Avenue, and west of Cherry Avenue, San Sevaine Road and Lytle Creek Road. A site reconnaissance of the project study area was performed by Ninyo & Moore on May 8, 2012 to evaluate the environmental conditions within the project study area and adjacent properties. Photographs of the project study areas and adjoining properties are included in Appendix A. The WSP area is divided into four study areas: 1) Western Village, 2) Western Village East, 3) Westgate Center (Golden Triangle), and 4) Falcon Ridge Village (3A through 3D).

The following findings and conclusions were noted during this assessment.

- The proposed WSP project is located in an area historically used for agricultural purposes. The project study areas of Westgate Village East, Golden Triangle, and portions of the Westgate Village were likely applied with commercial pesticides. Concentrations of these substances may still be present. Based on our experience with historical agricultural use sites, we consider this to be a potential environmental concern for the project.

- I-15 freeway runs parallel to the western portion of the WSP and SR-210 bisects the WSP between the Westgate Center (Golden Triangle) study area on the north and the Westgate Village East study area on the south. The close proximity of the I-15 and SR-201 freeways and the historical vehicle emissions during the era of leaded gasoline present the potential for aerially deposited lead (ADL) to be present in areas of exposed soil within 50 feet of I-15 and SR-210 freeways.

- A dry oil well identified as "Laurabel 1" is located approximately 1,363 feet northeast of the Golden Triangle study area. A review of the State of California Department of Conservation Division of Oil, Gas, and Geothermal Resources website indicates that the owner operator of the well is E. H Brawner The presence of this dry well is not considered a potential environmental concern.

- A high pressure natural gas pipeline owned and operated by Southern California Gas runs through each of the project study areas approximately 2,800 feet east and parallel to the I-15 freeway.

- A transmission line corridor with steel lattice transmission towers was observed passing through each of the project study areas, roughly parallel to the I-15 freeway.

- During the site reconnaissance there were no observed leaks, spills or stains, or indications of wastes with the exception of piles of dumped materials, including soil, brick and concrete pieces, wood, and other trash and construction debris, which were observed in parts of the southeast corner of Golden Triangle study area along Sierra Lakes Parkway. Based on these observations, these items are considered an environmental concern for the project.

- Three properties are listed on the EnviroStor database. One property is located within the Westgate Village East study area, and two properties are located within 1/8-mile of the project area boundaries. These three facilities have been evaluated or are in the initial stages of evaluation through the Department of Toxic Substances Control (DTSC's) school evaluation program. Based on information reviewed on the DTSC's EnviroStor website these facilities would not be considered an environmental concern for the project.

- One facility, Falcon Ridge Cleaners & Shirt Laundry, located at 15218 Summit Avenue within in the Falcon Ridge Town Center on the western portion of the Falcon Ridge Village study area was listed on the dry cleaners database. This facility is listed as active with a de-

scription of power laundries, family and commercial. This facility is considered a potential environmental concern for the site.

- Two facilities located within $^{1}/_{8}$-mile of the project study area boundaries are listed on the permitted underground storage tank database. The two listing on this database are not listed on the leaking underground storage tank (LUST) database, these listings would not be considered an environmental concern.

- Three properties are listed on the database. The following properties, one within the Falcon Ridge Village study area and two within $^{1}/_{8}$-mile of the project area boundaries were listed on this database (one listed as small quantity generator and two listed as large quantity generators). These property listings are not listed on the spills or releases databases. Therefore, it is unlikely that these facilities have impacted the environmental integrity of the project. The Resource Conservation and Recovery Act (RCRA) Generator listings are not considered an environmental concern for the project.

Based upon the findings and conclusions of this assessment, the following recommendations are provided to evaluate the potential for construction worker exposure and for waste characterization purposes.

- The proposed WSP includes the development of one high school and two elementary schools on approximately 84 acres within the project area. Development of a school site within the project area should include Phase I Environmental Site Assessment in accordance with ASTM Standard E1527-05 and the DTSC's school site evaluation program.

- There is a potential that concentrations of commercial pesticides likely applied on portions of the Westgate Village East, Golden Triangle, and the Westgate Village may still be present in on site soils. Soil samples should be collected in accordance with the DTSC's Interim Guidance for Sampling Agricultural Properties (Third Revision) dated August 7, 2008 and analyzed for the presence of organochlorine pesticides and arsenic.

- ADL may be present in the soil as a result of historical vehicle emissions during the era of leaded gasoline. An ADL survey should be conducted within the project area in areas of exposed soil which will be disturbed during construction within 50 feet of the Interstate 15 freeway and the Interstate 210 freeway. ADL borings should be located along the shoulders and medians where earth will be disturbed at no more than 300-foot horizontal intervals. The borings should be advanced up to 4 feet below ground surface or the maximum anticipated construction depth, whichever is shallower.

- Ninyo & Moore recommends that the contractor develop a soil management plan (SMP) prior to construction activities to address potentially impacted soils that may be uncovered during the construction phase of this project. The SMP should include: potential chemicals of concern, a health and safety plan, identification of individuals responsible for the imple-

mentation of the SMP, dust and odor suppression control methods, procedure for notification and identification of unknown environmental features, site specific soil-management protocols, cleanup criteria, and soil reuse options. In accordance with the SMP, such soil generated during construction activities would be characterized for disposal using new laboratory data representative of the soil being excavated and disposed.

- Piles of dumped materials, including soil, brick and concrete pieces, wood, and other trash and construction debris, were observed on the southeast corner of Golden Triangle study area along Sierra Lakes Parkway. Soil piles and construction debris should be analyzed for volatile organic compounds, total petroleum hydrocarbons, and arsenic to characterize the disposal of the unknown debris on the study area.

- Records available for the Falcon Ridge Cleaners & Shirt Laundry (15218 Summit Avenue) at the San Bernardino County Fire Department, Hazardous Materials Division should be reviewed for compliance with this facilities Consolidated Unified Program Agency (CUPA) permit.

1. INTRODUCTION

PCR Services Corporation (PCR) authorized Ninyo & Moore to perform a Hazardous Materials Assessment (HMA) of the proposed Westgate Specific Plan (WSP) project located near the Interstate 15 (I-15) and State Route 210 in Fontana, California (Figure 1). The purpose of this HMA is to evaluate the likelihood that hazardous substances, which may be present in soil or groundwater beneath the WSP project study area, may be encountered as a result of on-site or off-site activities associated with the construction. To evaluate the likelihood of encountering hazardous substances during construction activities, Ninyo & Moore also performed a limited evaluation of properties adjoining the project study area (Figure 2) with regard to the potential presence of hazardous substances. A limited scope of the ASTM International (ASTM) 2005 standard was used to evaluate the project, which did not include interviews or user questionnaires. A site reconnaissance and an environmental regulatory agency database search of 1/8-mile was used to assess potential impacts to the project.

2. APPROACH AND LIMITATIONS

The emphasis of our evaluation included properties within the project study area and properties within $^{1}/_{8}$-mile of the project study area boundaries.

2.1. Approach

The properties were evaluated according to the degree of impact as follows:

- **Considered Free of Significant Hazardous Waste** – Property which uses or stores hazardous materials but with no significant violations, known releases, or evidence of inadequate chemical-handling practices. Example properties would be active underground storage tank (UST) or dry cleaning properties with no documented releases or properties that are not adjacent to the project study area boundaries and remediation of previous releases has been completed.

- **Further Investigation is Required** – Property with potential or suspected impact within the project study area. Examples of properties in this category would be leaking underground storage tank (LUST) properties in the vicinity of the project area that are in final stages of remediation or in post-remediation monitoring. LUST properties adjacent to the project study area boundaries are considered to be in this category, regardless of case status (unless ranked higher), as deed restrictions may exist for closed LUST cases. A second example would be a property within or adjoining the project study area with known use or storage of hazardous materials, which had received violation notices

from an inspecting agency or where visual evidence of inadequate chemical and storage practices (such as significant staining) was observed but where no environmental assessments had occurred. Also included in this category are properties within or adjoining the project area where USTs are likely present, but that appeared to be abandoned by their former owner or operators.

- **Contamination Indicated on Property** – Property with known or probable contamination within the project study area. An example of a property in this category would be a LUST property where remediation had not been started or was not yet finished.

2.2. Limitations and Exceptions of Assessment

The scope of this evaluation did not include an evaluation of radon levels, lead, or asbestos. Properties within and adjoining the project areas were visually observed from available public rights-of-way only. Observations were made from readily accessible vantage points. Although reasonable effort was made to view relevant site features, some features may have been concealed or otherwise not readily viewable. This assessment did not include a detailed evaluation of geologic and hydrogeologic conditions within the project study area.

3. PROJECT AREA AND VICINITY DESCRIPTION

The proposed WSP project involves a new specific plan for the development of approximately 964 acres to include commercial/light industrial zoned land, residential dwelling units, open space and recreation areas, a new high school, and two new elementary schools (City of Fontana, 2009). Other components of the proposed development include a network of pedestrian trails and bikeways, utility infrastructure improvements and roadway improvements. The plan area is roughly located southeast of the Interstate 15, north of Baseline Avenue, and west of Cherry Avenue, San Sevaine Road and Lytle Creek Road, as shown on Figure 1. A site reconnaissance of the project study area was performed by Ninyo & Moore on May 8, 2012 to evaluate the environmental conditions within the project study area and adjacent properties. Photographs of the project study areas and adjoining properties are included in Appendix A. The WSP area is divided into four study areas: 1) Western Village, 2) Western Village East, 3) Westgate Center (Golden Triangle), and 4) Falcon Ridge Village (Figures 2 and 3A through 3D).

The following provides a brief description of each study area.

3.1. Westgate Village

Westgate Village is the southernmost portion of the WSP located west of Cherry Avenue, north of Baseline Avenue, east of the I-15 freeway, and south of SR-210, totaling approximately 423 acres. The project study area is generally vacant land with the northern portion of the study area used for agricultural purposes. A California Department of Transportation (Caltrans) facility is located on the western portion of the site study area at 13970 Victoria Street. The site vicinity is developed with commercial properties to south and residential properties. To the west is the I-15 freeway beyond which is developed with residential properties. To the east is the Westgate Village East and southeast is developed with residential properties.

3.2. Westgate Village East

Westgate Village East is located east of Cherry Avenue, west of San Sevaine Road, south of SR-210 freeway, and north of Walnut Avenue, totaling approximately 190 acres. The project study area is generally vacant land used for agricultural purposes. The site vicinity is developed with residential properties to the east and south. The Westgate Village study area is located to the east.

3.3. Westgate Center (Golden Triangle)

The Golden Triangle (approximately 221 acres) is the central portion of the WSP, located southeast of I-15 freeway, north of the SR-210 freeway, and west of San Sevaine Road with a portion of Golden Triangle study area extending east of San Sevaine Road. The study area is generally vacant land used for agricultural purposes with a commercial business plaza located along the central west portion of the study area at 6101 Cherry Avenue. The site vicinity is generally vacant land with residential and commercial developments.

A list of businesses located inside the commercial business plaza at 6101 Cherry Avenue is presented in Table 1.

Table 1 – 6101 Cherry Avenue

Business Name	
Intex Properties Corporation	Quick X Transportation
Water of Life	Sweetgrace Home Health
Reliable Mortgage	Victoria Community Church
Platinum I. G.I	Help-U-Sell
Farmers Insurance	AMR

3.4. Falcon Ridge Village

Falcon Ridge Village is the northern most portion of the WSP project study area, bound by Summit Avenue to the south, Lytle Creek Road to the east, and I-15 freeway to the northeast, totaling approximately 130 acres. The project study area is generally vacant land with the southwestern portion of the study area developed with a retail/commercial shopping center at 15218 Summit Avenue. The site vicinity is developed primarily with residential and commercial properties.

A list of businesses located inside the retail/commercial shopping center at 15218 Summit Avenue is presented in Table 2.

Table 2 – Falcon Ridge Town Center (15218 Summit Avenue)

Business Name	
24 Hour Fitness	Party City
Blockbuster Video	Payless Shoes
Chase Bank	Pier 1 Imports
Chili's	Quiznos
China One	Ross Dress For Less
CVS	Sports Authority
Del Taco	Starbucks
EB Games	Stater Brothers
El Ranchero	Summit Beach Tanning
Facelogic	Summit Optometric Center
Falcon Ridge Dry Cleaners	Summit Orthodontics
Famous Footwear	Supercuts
GNC	Target
H & R Block	The UPS Store
Hair Charisma	Wells Fargo Bank
Hoan-Vu Truong D.M.D	Access Home
Michael's	C Store
ONO Hawaiian BBQ	Carwash
Panera Bread	Verizon Wireless

4. SITE AND VICINITY HISTORICAL LAND USE

The site is currently mostly open space areas that were formerly used for agriculture (Figures 3A through 3D). Commercial developments are located on the western side of the Westgate Village Study Area (Figure 3A), and in the southwest part of the Falcon Ridge Village Study Area (Figure 3D). Some paved access roads pass through the project study areas. A transmission line corridor with steel lattice transmission towers passes through each of the project study areas, roughly parallel to the I-15 freeway. The open space areas generally contain old vineyards, grassy fields, scattered trees and bushes, unpaved roadways, fencing, and drainage features consisting of both unlined and concrete-lined drainage channels. Piles of dumped materials, including soil, brick and concrete pieces, wood, and other trash and construction debris, were observed in parts of the southeast corner of Golden Triangle study area along Sierra Lakes Parkway during our reconnaissance.

4.1. Regional Geology

The project area is located within the Peninsular Ranges Geomorphic Province of southern California. This geomorphic province encompasses an area that extends approximately 125 miles from the Transverse Ranges and the Los Angeles Basin south to the Mexican border, and beyond another approximately 775 miles to the tip of Baja California. The Peninsular Ranges province varies in width from approximately 30 to 100 miles and is characterized by northwest-trending mountain range blocks separated by similarly trending northwest-trending faults (Norris and Webb, 1990).

The predominant rock type that underlies the Peninsular Ranges province is a Cretaceous-age igneous rock (granitic rock) referred to as the Southern California batholith. Older Jurassic-age metavolcanic and metasedimentary rocks and older Paleozoic limestone, altered schist, and gneiss are present within the province. Cretaceous-age marine sedimentary rocks and younger Tertiary-age rocks consisting of volcanic, marine, and non-marine sediments overlie the older rocks (Norris and Webb, 1990). More recent Quaternary sediments, primarily of alluvial origin, exist with the low-lying valley and drainage areas within the region, including the area where the WSP project site is located.

Active northwest-trending fault zones in the Peninsular Ranges province include the San Jacinto fault zone, Elsinore fault zone (Whittier fault), and Newport-Inglewood fault zone. The northern boundary of the Province is formed by the Transverse Ranges Southern Boundary fault system (Dolan, 2000). The active San Andreas fault zone is located northeast of the province within the adjacent Colorado Desert Geomorphic Province. The predominant major tectonic activity associated with these and other faults within this regional tectonic framework is right-lateral, strike-slip movement (Norris and Webb, 1990).

4.2. Regional Hydrogeology

The site is located within the northern edge of the Chino groundwater basin. Based on a depth to groundwater contour map of groundwater levels in the fall of 2006, the groundwater depth in the WSP project area is approximately 600 feet deep (Chino Basin Watermaster, 2006). Resent well data from the State Water Resources Control Board GeoTracker website indicate that groundwater levels in the vicinity of the WSP project area are roughly 300 to 400 feet deep. Groundwater levels may be influenced by seasonal variations, precipitation, irrigation, soil/rock types, groundwater pumping, and other factors and are subject to fluctuations. Shallow perched conditions may be present.

4.3. Oil and Gas Maps

The State of California Department of Conservation Division of Oil, Gas, and Geothermal Resources (DOGGR) Wildcat Map W1-4 and Reference K map was reviewed to determine the existence of past or present oil wells within or adjacent to the project study area boundaries. According to Wildcat Map W1-4 and Reference K map, one dry oil well within one mile of the project study area was identified. The dry hole is identified as “Laurabel 1” operated by E. H Brawner is located approximately 1,363 feet northeast of the Golden Triangle study area. A copy of the Wildcat Map W1-4 and Reference K map are included in Appendix B.

5. ENVIRONMENTAL DATABASE AREA STUDY

An environmental database search was performed for Ninyo & Moore by Environmental Data Resources, Inc. (EDR), on May 3, 2012 for the properties within the project area and those properties within $^{1}/_{8}$-mile radii of the project area boundaries. A copy of the EDR environmental database report is included as Appendix C. The following is a summary of the environmental databases searched, their search radii, and the search results. Based on the State Water Resources Control Board (SWRCB) GeoTracker database, groundwater is expected to flow south in the vicinity of the project area. Groundwater is expected to occur at a depth of approximately 300 to 400 feet and flow in a southerly direction.

The following sections include the results and a discussion of the computerized environmental database searches of state and federal standard environmental records sources and regulatory agency inquiries.

5.1. National Priorities List (NPL)

This list identifies hazardous material sites slated for cleanup under the federally sponsored, United States Environmental Protection Agency (EPA) Superfund program. These sites receive remedial funding under the Comprehensive Environmental Response, Compensation and Liability Act.

No properties within the project area or within a 1-mile of the project area boundaries were listed on this database. Therefore, NPL sites would not be considered an environmental concern for the project.

5.2. Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)

This list is a federally maintained database and contains data on potentially hazardous waste facilities that have been reported to the EPA by states, municipalities, private companies, and private persons. CERCLIS contains facilities, which are either proposed to or on the NPL, and sites which are in the screening and assessment phase for possible inclusion on this database.

No properties within the project area or within a 1/8-mile radius of the project area boundaries were listed on this database, and therefore not an environmental concern for the project.

5.3. Resource Conservation and Recovery Act (RCRA) – Treatment, Storage, and Disposal (TSD) Properties List

The RCRA TSD database is EPA's comprehensive information system, providing access to data supporting the RCRA of 1976 and the Hazardous and Solid Waste Amendments of 1984. The database includes selective information on facilities which generate, transport, store, treat and/or dispose of hazardous waste as defined by the RCRA. Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, dispose of the waste. TSDF facilities treat, store, or dispose of hazardous waste.

No properties within the project area or within a ½-mile radius of the project area boundaries were listed on this database, and therefore not an environmental concern for the project.

5.4. Resource Conservation and Recovery Act (RCRA) Generators List

EPA's RCRA program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Generators List is a compilation by the EPA of properties which generate hazardous waste. Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 and 1,000 kg of hazardous waste per month. Conditionally exempt small quantity generators generate less than 100 kg of hazardous waste or 1 kg of acutely hazardous waste per month.

Three properties are listed on this database. The following properties, one within the Falcon Ridge Village study area and two within $^{1}/_{8}$-mile of the project area boundaries were listed on this database (one listed as SQG and two listed as LQGs).

Table 3 – Resource Conservation and Recovery Act (RCRA) Generators List

Facility and Address	Distance/ Direction from Site	Groundwater Gradient	SQG/LQG	Waste	Environmental Concern (Y/N)
Target #1958 15272 Summit Avenue	Northern portion of the Falcon Ridge Village	within study area boundaries	LQG	Waste: Lead, Methyl Ethyl Ketone, Benzopyran, Hydroxy, Benzeneethanamine, Alpha-Dimethyl, Nicotine, Salts, Acetone, Acetic acid	N
Chevron #211869 15160 Summit Avenue	330 ft south of Falcon Ridge Village	down-gradient	LQG	Not Available	N
Chevron Station No 209515 14526 Baseline Road	1,920 ft southwest of Westgate Village	down-gradient	SQG	Not Available	N

Note:
ft – feet
SQG – Small Quantity Generator
LQG – Large Quantity Generator

These properties are not listed on the spills or releases databases. Therefore, it is unlikely that these facilities have impacted the environmental integrity of the project. The RCRA Generator listings are not considered an environmental concern for the project.

5.5. Emergency Response Notification System

The Emergency Response Notification System is a national database used to collect information on reported releases of oil and hazardous substances. The database contains information from spill reports made to federal authorities including the EPA, the United States Coast Guard, the National Response Center, and the Department of Transportation.

No properties within the project area or within a $^{1}/_{8}$-mile radius of the project area boundaries were listed on this database.

5.6. EnviroStor State NPL and CERCLIS Equivalents

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies facilities that have known con-

tamination or facilities for which there may be reasons to investigate further. The database includes the following types: Federal Superfund sites NPL, State Response (including Military Facilities and State Superfund), Voluntary Cleanup Program; and Schools. EnviroStor provides similar information to the information that was available in CalSites, and provides additional information, including, but not limited to, identification of formerly contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Three properties are listed on this database. One property is located within the Westgate Village East study area, and two properties are located within 1/8-mile of the project area boundaries.

Table 4 – EnviroStor

Facility, Address, Assessor's Parcel Number	Distance/ Direction from Site	Groundwater Gradient	Site Type	Status	Environmental Concern (Y/N)
High School No. 9 San Sevaine Road/Walnut Avenue	Westgate Village East study area	within study area boundaries	No further action	March 2, 2004	N
Lytle Creek High School Lytle Creek Road/Summit Avenue	330 ft east of Falcon Ridge Village	Crossgradient	No further action	June 27, 2000	N
Etiwanda High School Expansion Victoria Avenue/East Avenue	3,300 ft west of Westgate Village	Crossgradient	Need Evaluation	Inactive, November 16, 2004	N
Note: ft – feet					

These three facilities have been evaluated or are in the initial stages of evaluation through the DTSC's school evaluation program. Based on information reviewed on the DTSC's EnviroStor website (http://www.envirostor.dtsc.ca.gov) these facilities would not be considered an environmental concern for the project.

5.7. Leaking Underground Storage Tank (LUST) Lists

The LUST incident reports contain an inventory of reported LUST incidents. This information was obtained from the SWRCB's LUST Information System.

No properties within the project area or within a $^{1}/_{8}$-mile radius of the project area boundaries were listed on this database.

5.8. State Landfills and/or Solid Waste Disposal Sites

As legislated under the Solid Waste Management and Resource Recovery Act of 1972, the California Integrated Waste Management Board maintains lists of active solid waste disposal sites, inactive or closed solid waste disposal sites, and transfer properties.

One property located within 1/8-mile of the project area boundaries is listed on this database. Etiwanda Disposal Site at Etiwanda (in Rancho Cucamonga), located approximately 1,000 feet west of the Westgate Village study area is listed on this database. This property is a solid waste disposal site for the County of San Bernardino. Ninyo & Moore reviewed records available on the Department of Resources Recycling and Recovery website (http://www.calrecycle.ca.gov/SWFacilities/Directory/36-CR-0021/Detail/). Two inspections on July 12 and November 2, 2011 were conducted at the site and no violations or areas of concern were reported. Based on the distance of the Etiwanda Disposal Site to the project study area this facility would not be considered an environmental concern for the project.

5.9. State and Tribal Registered Underground Storage Tanks (USTs)

State and tribal registered storage tank databases were reviewed. This list identifies properties which have historically contained or currently contain registered USTs. Listings are related to permitting records and are not necessarily indicative of a release.

The following two facilities located within 1/8-mile of the project study area boundaries are listed on this database (Table 5):

Table 5 – Underground Storage Tank

Facility, Address, Assessor's Parcel Number	Distance/ Direction from Site	Groundwater Gradient (General for Vicinity Flow)	Tank Status	Tank Contents	Environmental Concern (Y/N)
AG-6-M Egg Ranch 4850 Lytle Creek Road	3,300 ft north of Falcon Ridge Village	upgradient	Status not available	Not Available	N
Big 5 Sporting Goods 7351 McGuire Avenue	1,925 southeast of Westgate Village	downgradient	Status not available	Not Available	N

The two listings on this database are not listed on the LUST database, these listings would not be considered an environmental concern.

5.10. Spills, Leaks, Investigations, and Cleanup (SLIC) Database

The RWQCB maintains reports of properties that have records of SLIC. Three properties (each listed twice) were listed within 1/8-mile of the project area boundaries. The following two properties (each listed twice) located within the project area were listed on the SLIC database.

No properties within the project area or within a $^{1}/_{8}$-mile radius of the project area boundaries were listed on this database.

5.11. Dry Cleaners

This database is a list of dry cleaners related facilities that have EPA ID numbers. There are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaners' agents; linen supply; coin-operated laundries and cleaning; dry cleaning plants except rugs; carpet and upholstery cleaning; industrial launderers; laundry and garment services.

One property is listed on this database. Falcon Ridge Cleaners & Shirt Laundry located at 15218 Summit Avenue is located in the Falcon Ridge Town Center on the west portion of the Falcon Ridge Village study area. This facility is considered a potential environmental concern for the site based on its listing as a dry cleaner and its active status with the San Bernardino County Fire Department, Hazardous Materials Division as a "special generator."

6. SITE RECONNAISSANCE

On May 8, 2012, a site reconnaissance was conducted by Mr. Jesus Villanueva of Ninyo & Moore. The reconnaissance involved a tour of the four project study areas: 1) Westgate Village, 2) Westgate Village East, 3) Westgate Center (Golden Triangle), 4) Falcon Ridge Village, and visual observations of the adjoining properties. Individual property observations and interviews were not conducted at the commercial and retail facilities within the southern portion of the Falcon Ridge Town Center at the Falcon Ridge Village and the western portion of the Golden Triangle.

6.1. Polychlorinated Biphenyls (PCBs)

Pole-mounted and pad-mounted transformers were not observed within the project study areas. PCBs are not considered an environmental concern for the project.

6.2. Hazardous Substances

Hazardous substances were not observed within the project study areas, nor were they observed from available public right-of-ways on adjoining properties during the site reconnaissance. Physical evidence of storage or mishandling of hazardous substances was not observed and is not anticipated to be an environmental concern for the project.

6.3. Solid Waste Disposal

Evidence of disposal of hazardous materials, petroleum products or evidence of illegal dumping was not observed within the project study areas with the exception of piles of dumped materials, including soil, brick and concrete pieces, wood, and other trash and construction debris, were observed in parts of the southeast corner of Golden Triangle study area along Sierra Lakes Parkway. Solid waste disposal would be considered an environmental concern for the project.

6.4. Additional Observations

Evidence of agricultural use was observed on the Westgate Village East, Golden Triangle, and Westgate Village study areas. Historical and potential current use of pesticides on these parcels is considered a potential environmental concern for the project.

High pressure natural gas pipeline post markers were observed on Victoria Street within the northeast portion of the Westgate Village study area and on Frontage Street along the west portion of the Golden Triangle study area. A review of the National Pipeline Mapping System website (www.npms.phmsa.dot.gov) indicates the two high pressure gas lines owned and operated by Southern California Gas runs through each of the project study areas approximately 2,798 feet east and parallel to the I-15 freeway.

A transmission line corridor with steel lattice transmission towers was observed passing through each of the project study areas, roughly parallel to the I-15 freeway.

7. FINDINGS AND CONCLUSIONS

The following findings and conclusions were noted during this assessment.

- The proposed WSP project is located in an area historically used for agricultural purposes. The project study areas of Westgate Village East, Westgate Center (Golden Triangle), and portions of the Westgate Village were likely applied with commercial pesticides. Concentrations of these substances may still be present. Based on our experience with historical agricultural use sites, we consider this to be a potential environmental concern for the project.

- I-15 freeway runs parallel to the western portion of the WSP and SR-210 bisects the WSP between the Westgate Center (Golden Triangle) study area on the north and the Westgate Village East study area on the south. The close proximity of the I-15 and SR-201 freeways and the historical vehicle emissions during the era of leaded gasoline present the potential for aerially deposited lead (ADL) to be present in areas of exposed soil within 50 feet of I-15 and SR-210 freeways.

- A dry oil well identified as "Laurabel 1" is located approximately 1,363 feet northeast of the Golden Triangle study area. A review of the DOGGR website indicates that the owner operator of the well is E. H Brawner The presence of this dry well is not considered a potential environmental concern.

- A high pressure natural gas pipeline owned and operated by Southern California Gas runs through each of the project study areas approximately 2,800 feet east and parallel to the I-15 freeway.

- A transmission line corridor with steel lattice transmission towers was observed passing through each of the project study areas, roughly parallel to the I-15 freeway.

- During the site reconnaissance there were no observed leaks, spills or stains, or indications of wastes with the exception of piles of dumped materials, including soil, brick and concrete pieces, wood, and other trash and construction debris, which were observed in parts of the southeast corner of Golden Triangle study area along Sierra Lakes Parkway. Based on these observations, these items are considered an environmental concern for the project.

- Three properties are listed on the EnviroStor database. One property is located within the Westgate Village East study area, and two properties are located within 1/8-mile of the project area boundaries. These three facilities have been evaluated or are in the initial stages of evaluation through the DTSC's school evaluation program. Based on information reviewed on the DTSC's EnviroStor website these facilities would not be considered an environmental concern for the project.

- Two facilities located within 1/8-mile of the project study area boundaries are listed on the permitted UST database. The two listing on this database are not listed on the LUST database, these listings would not be considered an environmental concern.

- Three properties are listed on the database. The following properties, one within the Falcon Ridge Village study area and two within 1/8-mile of the project area boundaries were listed on this database (one listed as SQGs and two listed as LQG). These property listings are not listed on the spills or releases databases. Therefore, it is unlikely that these facilities have impacted the environmental integrity of the project. The Resource Conservation and Recovery Act (RCRA) Generator listings are not considered an environmental concern for the project.

- One facility, Falcon Ridge Cleaners & Shirt Laundry, Located at 15218 Summit Avenue within the Falcon Ridge Town Center on the western portion of the Falcon Ridge Village study area was listed on the dry cleaner database. This facility is listed as active with a description of power laundries, family and commercial. This facility is considered a potential environmental concern for the site.

8. RECOMMENDATIONS

Based upon the findings and conclusions of this assessment, the following recommendations are provided to evaluate the potential for construction worker exposure and for waste characterization purposes.

- The proposed WSP includes the development of one high school and two elementary schools on approximately 84 acres within the project area. Development of a school site within the project area should include Phase I Environmental Site Assessment in accordance with ASTM Standard E1527-05 and the DTSC's school site evaluation program.

- There is a potential that concentrations of commercial pesticides likely applied on portions of the Westgate Village East, Golden Triangle, and the Westgate Village may still be present in on site soils. Soil samples should be collected in accordance with the DTSC's Interim Guidance for Sampling Agricultural Properties (Third Revision) dated August 7, 2008 and analyzed for the presence of organochlorine pesticides, and arsenic.

- ADL may be present in the soil as a result of historical vehicle emissions during the era of leaded gasoline. An ADL survey should be conducted within the project area in areas of exposed soil which will be disturbed during construction within 50 feet of the Interstate 15 freeway and the Interstate 210 freeway. ADL borings should be located along the shoulders and medians where earth will be disturbed at no more than 300-foot horizontal intervals. The borings should be advanced up to 4 feet below ground surface or the maximum anticipated construction depth, whichever is shallower.

- Ninyo & Moore recommends that the contractor develop a soil management plan (SMP) prior to construction activities to address potentially impacted soils that may be uncovered during the construction phase of this project. The SMP should include: potential chemicals of concern, a health and safety plan, identification of individuals responsible for the implementation of the SMP, dust and odor suppression control methods, procedure for notification and identification of unknown environmental features, site specific soil-management protocols, cleanup criteria, and soil reuse options. In accordance with the SMP, such soil generated during construction activities would be characterized for disposal using new laboratory data representative of the soil being excavated and disposed.

- Piles of dumped materials, including soil, brick and concrete pieces, wood, and other trash and construction debris, were observed on the southeast corner of Golden Triangle study area along Sierra Lakes Parkway. Soil piles and construction debris should be analyzed for volatile organic compounds, total petroleum hydrocarbons, and arsenic to characterize the disposal of the unknown debris on the study area.

- Records available for the Falcon Ridge Cleaners & Shirt Laundry (15218 Summit Avenue) at the San Bernardino County Fire Department, Hazardous Materials Division should be reviewed for compliance with this facilities Consolidated Unified Program Agency (CUPA) permit.

9. LIMITATIONS AND EXCEPTIONS OF THE ASSESSMENT

The opinions and recommendations presented in this report are based upon the results of our site reconnaissance, review of an environmental database search, and review of Division of Oil and Gas maps. Further assessment of possible adverse environmental impacts from past activities adjoining the site and surrounding properties may be accomplished by a more comprehensive

assessment, which would likely include additional inquiry, soil borings, completion of soil sampling and analysis, and installation of groundwater monitoring wells.

The opinions presented herein apply to site conditions existing at the time this HMA was conducted and cannot be taken to apply to site changes or conditions which we are not aware and/or have not had the opportunity to evaluate.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires any additional information, or has questions regarding project information, or the content, interpretations presented, or completeness of this document.

Opinions and judgments expressed herein, which are based on our understanding and interpretation of current regulatory standards, should not be construed as legal opinions. In the event conditions change from those described in this HMA, Ninyo & Moore reserves the right to review such conditions and to modify, as appropriate, the assessments and conclusions provided in this report. We cannot state with certainty that shallow soil beneath the site has not been impacted. A greater level of certainty can be attained through additional subsurface assessment of the soil.

10. REFERENCES

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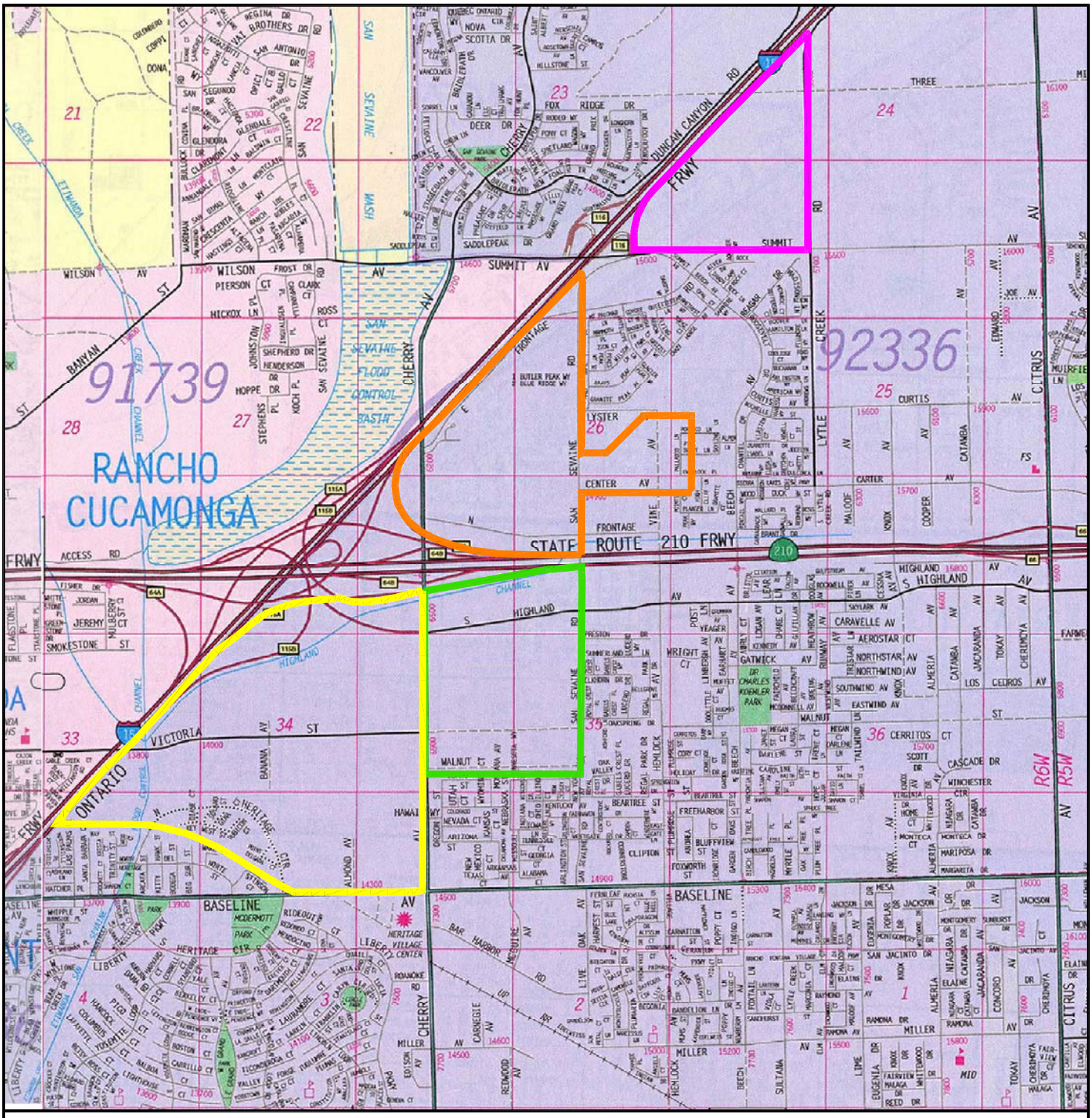


208578_A1.DWG.....-G.K.

REFERENCE: 2007 THOMAS GUIDE FOR LOS ANGELES/ORANGE COUNTIES, STREET GUIDE AND DIRECTORY

N

SCALE IN FEET

0 2400 4800

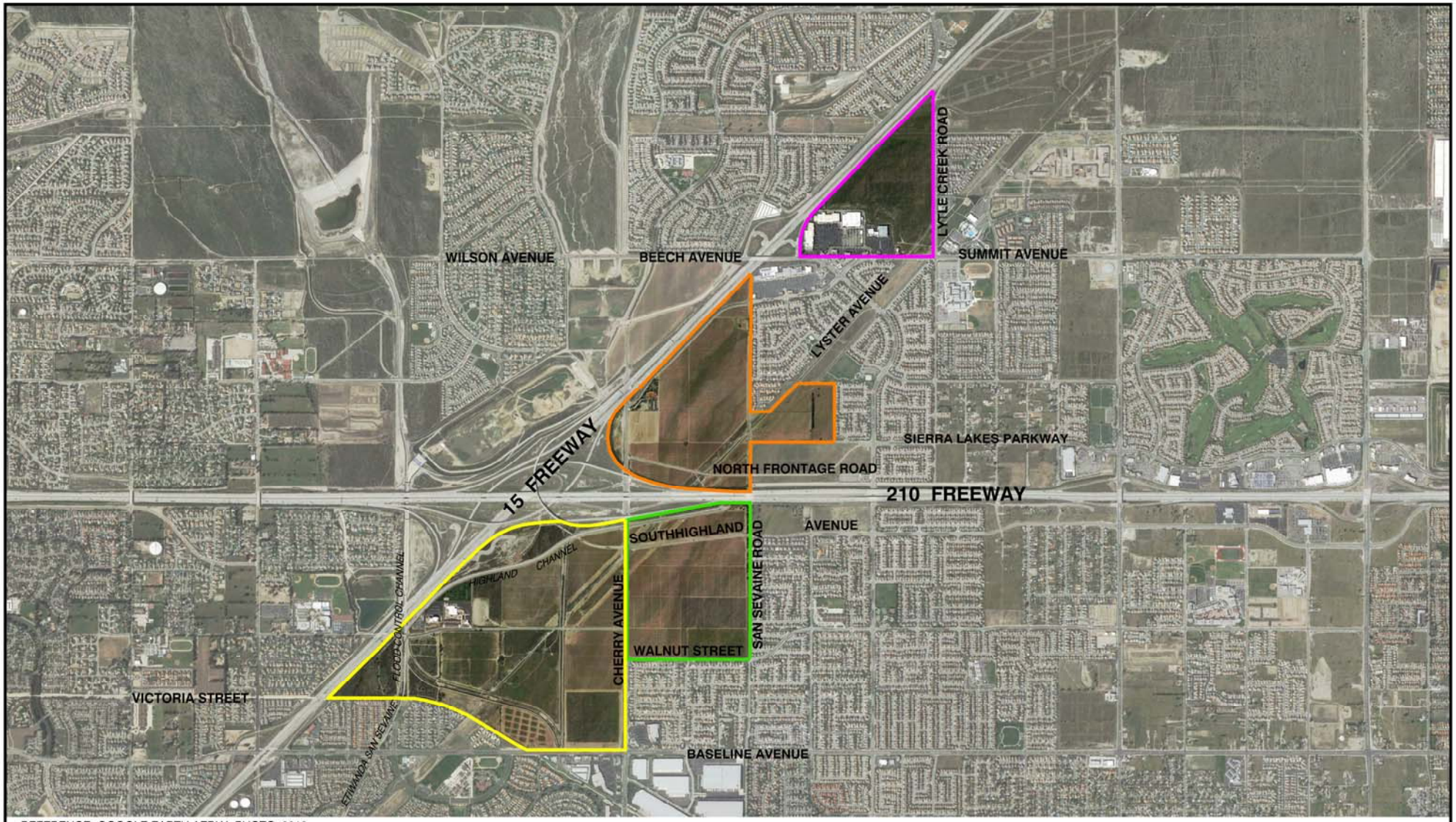
NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Map © Rand McNally, R.L.07-S-129

LEGEND

- FALCON RIDGE VILLAGE
- WESTGATE CENTER (GOLDEN TRIANGLE)
- WESTGATE VILLAGE EAST
- WESTGATE VILLAGE

Ninyo & Moore	SITE LOCATION	FIGURE
PROJECT NO. 208578001 / DATE 7/12	WESTGATE SPECIFIC PLAN FONTANA, CALIFORNIA	1



REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2012.

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SCALE IN FEET

0 3,000 6,000

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

LEGEND

- FALCON RIDGE VILLAGE
- WESTGATE CENTER (GOLDEN TRIANGLE)
- WESTGATE VILLAGE EAST
- WESTGATE VILLAGE

Ninyo & Moore

PROJECT AREA BOUNDARIES

PROJECT NO.	DATE
208578001	7/12

WESTGATE SPECIFIC PLAN
FONTANA, CALIFORNIA

FIGURE
2

REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2012.

N

SCALE IN FEET

0 1,000 2,000

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

LEGEND

WESTGATE VILLAGE

Ninyo & Moore

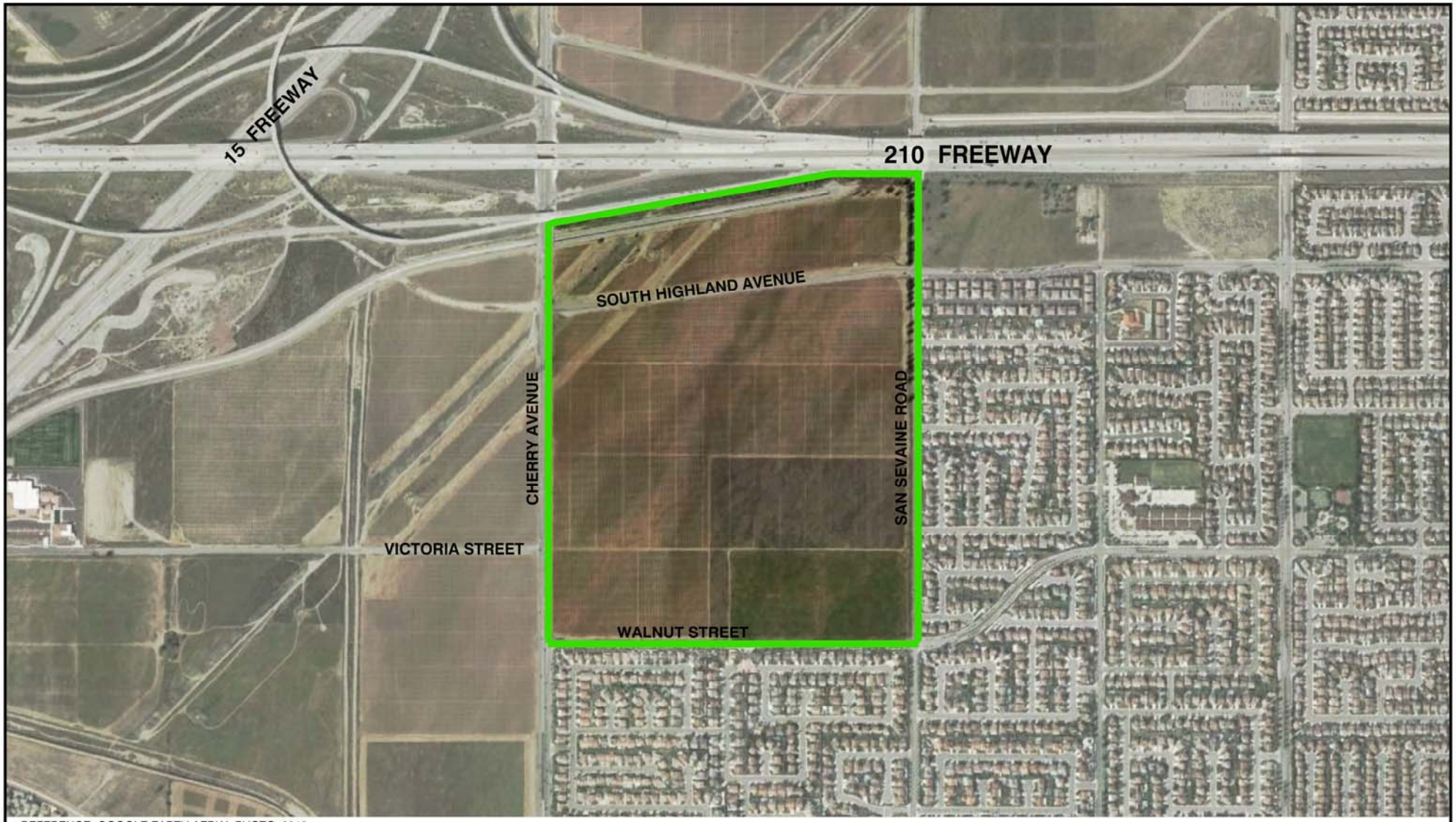
WESTGATE VILLAGE STUDY AREA

PROJECT NO.	DATE
208578001	7/12

WESTGATE SPECIFIC PLAN
FONTANA, CALIFORNIA

FIGURE

3A



REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2012.

N

SCALE IN FEET

0 1,000 2,000

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

LEGEND

WESTGATE VILLAGE EAST

Ninyo & Moore		WESTGATE VILLAGE EAST STUDY AREA	FIGURE
PROJECT NO.	DATE	WESTGATE SPECIFIC PLAN FONTANA, CALIFORNIA	3B
208578001	7/12		

REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2012.

N

SCALE IN FEET

0 1,000 2,000

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

LEGEND

WESTGATE CENTER (GOLDEN TRIANGLE)

Ninyo & Moore

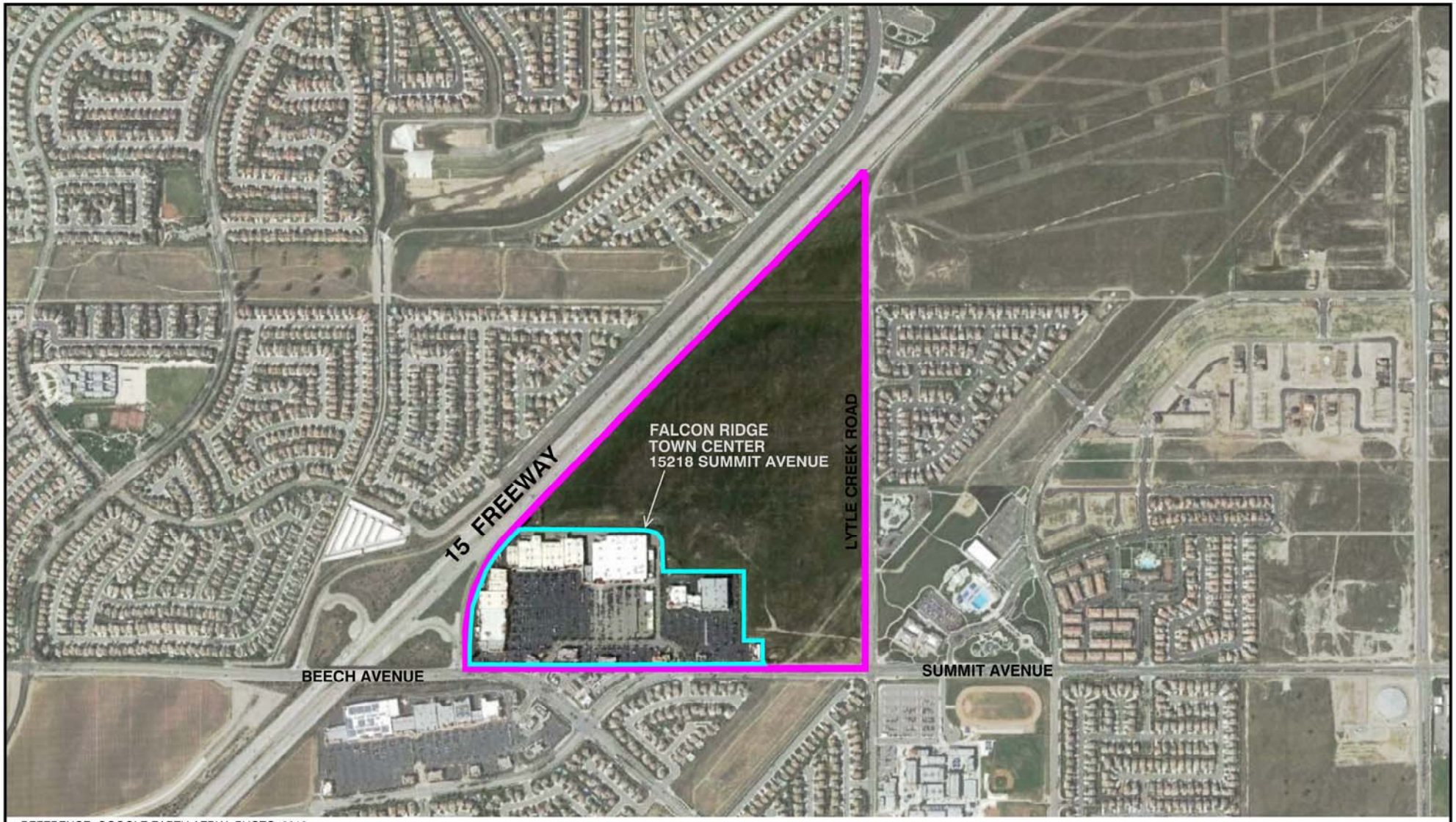
PROJECT NO.	DATE
208578001	7/12

WESTGATE CENTER (GOLDEN TRIANGLE) STUDY AREA

WESTGATE SPECIFIC PLAN
FONTANA, CALIFORNIA

FIGURE

3C



REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2012.

N

SCALE IN FEET

0 1,000 2,000

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

LEGEND

FALCON RIDGE VILLAGE

Ninyo & Moore

PROJECT NO.	DATE
208578001	7/12

FALCON RIDGE VILLAGE STUDY AREA

WESTGATE SPECIFIC PLAN
FONTANA, CALIFORNIA

FIGURE

3D

APPENDIX A

PHOTOGRAPHIC DOCUMENTATION

Photograph 1: **Looking North at the West Village Site**

Photograph 2: **Looking West at the Westgate Village Site**

Photograph 3: **Looking North along Victoria Street to Westgate Village Site**

Photograph 4: **Looking South along Victoria Street to Westgate Village Site**

Photograph 5: **Looking east at construction site located along on-ramp of I-210E from I-15N located on Westgate Village Site**

Photograph 6: **Looking North along Walnut Street to Westgate Village East Site**

Photograph 7: **Looking East at adjacent properties of the Westgate Village East Site**

Photograph 8: **Looking southwest at Westgate Center (Golden Triangle) Site**

Photograph 9: **Looking west at the Westgate Center (Golden Triangle) Site**

Photograph 10: **Looking north at Westgate Center (Golden Triangle) Site**

Photograph 11: **Looking southwest at Westgate Center (Golden Triangle) along Frontage Street**

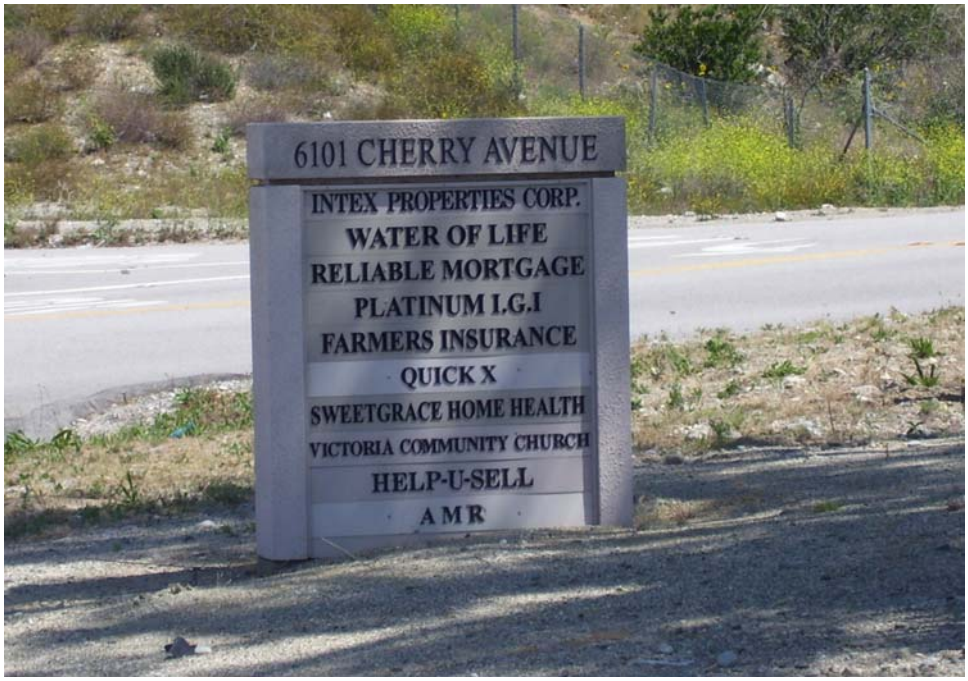
Photograph 12: **Looking south at Westgate Center (Golden Triangle) along Frontage Street**

Photograph 13: **Looking east at Westgate Center (Golden Triangle) along San Sevaine Road**

Photograph 14: **Soil piles and Debris located at the southeast corner of Sierra Lakes Parkway on the Golden Triangle study area.**

Photograph 15: **Looking west at Westgate Center (Golden Triangle) along Cherry Avenue**

Photograph 16: **Looking northeast at business center located on the intersection of Cherry Avenue and Summit Avenue**



Photograph 17: **Looking north and business center sign located in the intersection of Cherry Avenue and Summit Avenue**

Photograph 18: **Looking east at shopping located on Falcon Ridge Village Site**

Photograph 19: **Looking southwest at Falcon Ridge Village Site and Summit Avenue**

Photograph 20: **Looking north at Falcon Ridge Village Site from intersection of Summit Avenue and Lytle Creek Avenue**

Photograph 21: **Looking east at adjacent properties at Falcon Ridge Village Site from intersection of Summit Avenue and Lytle Creek Avenue**

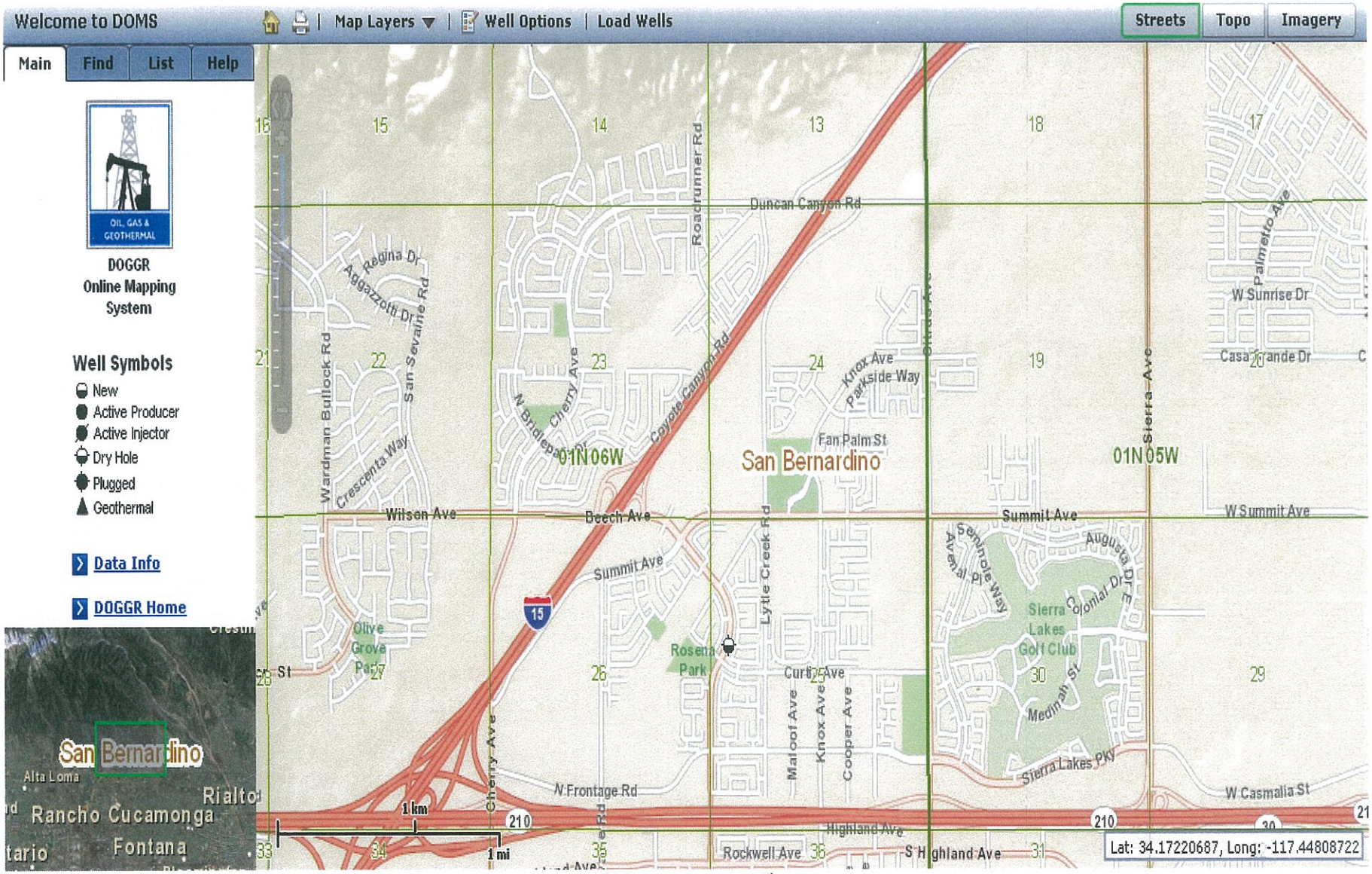
Photograph 22: **Looking south at adjacent properties at Falcon Ridge Village Site from intersection of Summit Avenue and Lytle Creek Avenue**

Photograph 23: **Looking west at shopping center sign located on Falcon Ridge Village Site**

APPENDIX B

RELEVANT ASSESSMENT DOCUMENTATION

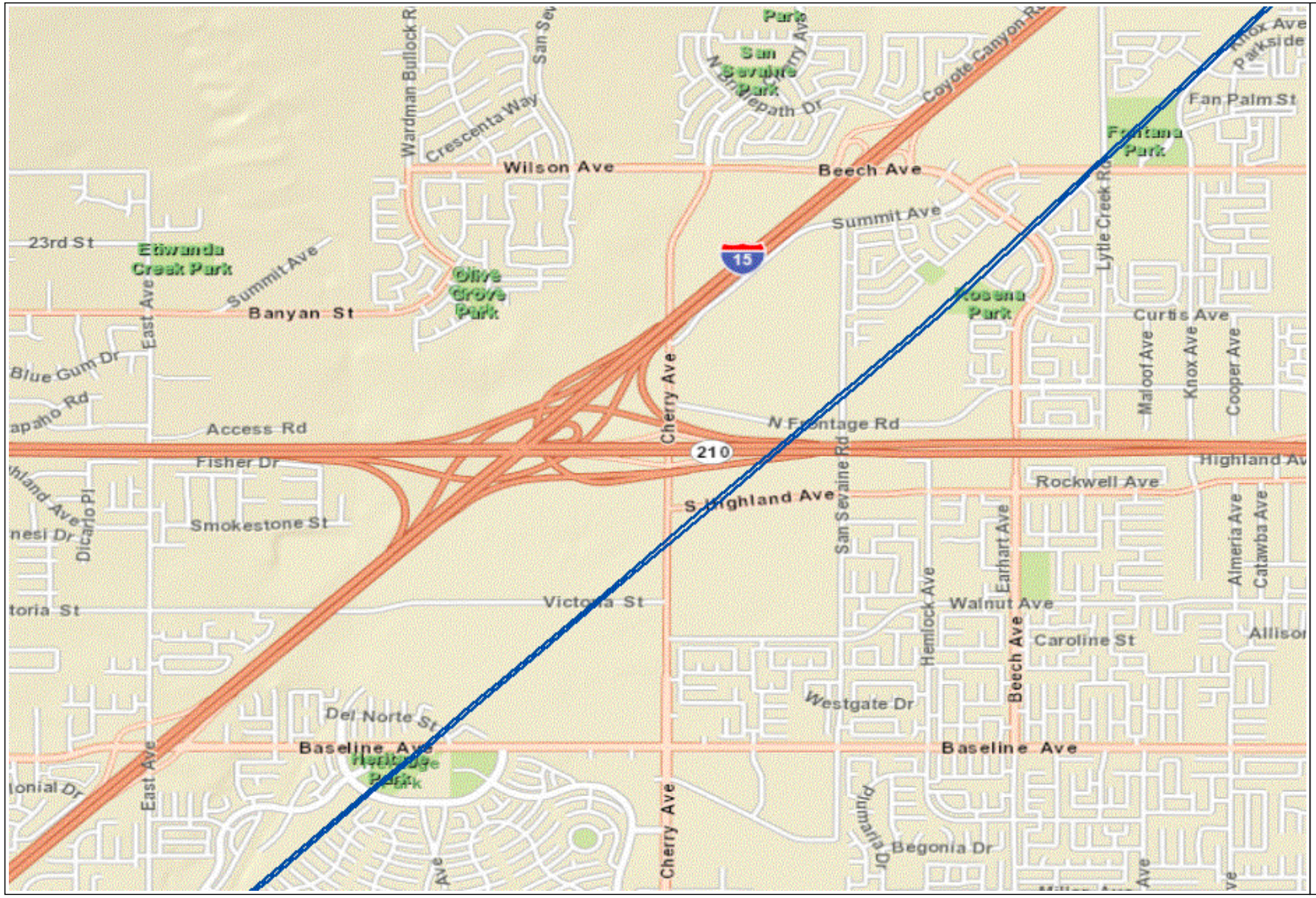
State of California
Department of Conservation



Oil well: "Laurabel" 1
operator: E. H. Brawner
API: 07100025

Pipeline and Hazardous Materials Safety Administration

NATIONAL PIPELINE MAPPING SYSTEM



Legend

- Gas Transmission Pipelines
- Hazardous Liquid Pipelines
- LNG Plants
- Breakout Tanks

0 0.2 Miles

Pipelines depicted on this map represent gas transmission and hazardous liquid lines only. Gas gathering and gas distribution systems are not represented.

This map should never be used as a substitute for contacting a one-call center prior to excavation activities. Please call 811 before any digging occurs.

Questions regarding this map or its contents can be directed to npms-nr@mbakercorp.com.

Projection: Geographic

Datum: NAD83

Map produced by the NPMS Public Viewer at www.npms.phmsa.dot.gov

Date Printed: May 22, 2012

811 Know what's below. Call before you dig.

APPENDIX C

ENVIRONMENTAL DATABASE SEARCH

Westgate Specific Plan
Fontana, CA 92336

Inquiry Number: 3309848.1s
May 03, 2012

EDR DataMap™ Area Study

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

TARGET PROPERTY INFORMATION

ADDRESS

FONTANA, CA 92336
FONTANA, CA 92336

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records within the requested search area for the following databases:

FEDERAL RECORDS

NPL	National Priority List
Delisted NPL	National Priority List Deletions
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP	CERCLIS No Further Remedial Action Planned
CORRACTS	Corrective Action Report
RCRA-TSDF	RCRA - Treatment, Storage and Disposal
US ENG CONTROLS	Engineering Controls Sites List
US INST CONTROL	Sites with Institutional Controls
ERNS	Emergency Response Notification System
US BROWNFIELDS	A Listing of Brownfields Sites
FUDS	Formerly Used Defense Sites
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
SSTS	Section 7 Tracking Systems
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing

STATE AND LOCAL RECORDS

HIST Cal-Sites	Historical Calsites Database
Toxic Pits	Toxic Pits Cleanup Act Sites
LUST	Geotracker's Leaking Underground Fuel Tank Report
SLIC	Statewide SLIC Cases
HIST UST	Hazardous Substance Storage Container Database
LIENS	Environmental Liens Listing
AST	Aboveground Petroleum Storage Tank Facilities
VCP	Voluntary Cleanup Program Properties
ENF	Enforcement Action Listing
RESPONSE	State Response Sites

TRIBAL RECORDS

INDIAN RESERV	Indian Reservations
INDIAN ODI	Report on the Status of Open Dumps on Indian Lands

EXECUTIVE SUMMARY

EDR PROPRIETARY RECORDS

Manufactured Gas Plants..... EDR Proprietary Manufactured Gas Plants
EDR Historical Auto Stations.. EDR Proprietary Historic Gas Stations
EDR Historical Cleaners..... EDR Proprietary Historic Dry Cleaners

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

FEDERAL RECORDS

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 11/10/2011 has revealed that there are 2 RCRA-LQG sites within the searched area.

Site	Address	Map ID	Page
CHEVRON #211869	***15160 SUMMIT AVE.***	***4***	***4***
TARGET #1958	15272 SUMMIT AVE	4	10

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 11/10/2011 has revealed that there is 1 RCRA-SQG site within the searched area.

Site	Address	Map ID	Page
CHEVRON STATION NO 209515	***14526 BASELINE RD***	***10***	***20***

EXECUTIVE SUMMARY

STATE AND LOCAL RECORDS

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.

A review of the SWF/LF list, as provided by EDR, and dated 02/20/2012 has revealed that there is 1 SWF/LF site within the searched area.

Site	Address	Map ID	Page
ETIWANDA DISPOSAL SITE	X	8	17

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, and dated 01/20/2012 has revealed that there are 2 UST sites within the searched area.

Site	Address	Map ID	Page
AG-6-M EGG RANCH	4850 LYTLE CREEK RD	1	2
BIG 5 SPORTING GOODS	7351 MCGUIRE AVE	14	24

DRYCLEANERS: A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaners' agents; linen supply; coin-operated laundries and cleaning; drycleaning plants except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

A review of the DRYCLEANERS list, as provided by EDR, and dated 01/19/2012 has revealed that there is 1 DRYCLEANERS site within the searched area.

Site	Address	Map ID	Page
FALCON RIDGE CLEANERS & SHIRT	***15218 SUMMIT AVE***	***4***	***7***

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 03/14/2012 has revealed that there are 3 ENVIROSTOR sites within the searched area.

EXECUTIVE SUMMARY

Site	Address	Map ID	Page
LYTLE CREEK HIGH SCHOOL NO. 4 Status: No Further Action	LYTLE CREEK ROAD/SUMMIT	3	3
ETIWANDA HIGH SCHOOL EXPANSION Status: Inactive - Needs Evaluation	VICTORIA AVENUE/EAST AV	7	15
HIGH SCHOOL NO. 9 Status: No Further Action	SAN SEVAINE ROAD/WALNUT	9	18

EXECUTIVE SUMMARY

Please refer to the end of the findings report for unmapped orphan sites due to poor or inadequate address information.

MAP FINDINGS SUMMARY

Database	Total Plotted
FEDERAL RECORDS	
NPL	0
Delisted NPL	0
CERCLIS	0
CERC-NFRAP	0
CORRACTS	0
RCRA-TSDF	0
RCRA-LQG	2
RCRA-SQG	1
US ENG CONTROLS	0
US INST CONTROL	0
ERNS	0
US BROWNFIELDS	0
FUDS	0
ROD	0
UMTRA	0
TRIS	0
TSCA	0
SSTS	0
SCRD DRYCLEANERS	0
STATE AND LOCAL RECORDS	
HIST Cal-Sites	0
Toxic Pits	0
SWF/LF	1
LUST	0
SLIC	0
UST	2
HIST UST	0
LIENS	0
AST	0
VCP	0
DRYCLEANERS	1
ENF	0
RESPONSE	0
ENVIROSTOR	3
TRIBAL RECORDS	
INDIAN RESERV	0
INDIAN ODI	0
EDR PROPRIETARY RECORDS	
Manufactured Gas Plants	0
EDR Historical Auto Stations	0
EDR Historical Cleaners	0

NOTES:

Sites may be listed in more than one database

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number
1	**AG-6-M EGG RANCH** **4850 LYTLE CREEK RD** **FONTANA, CA 92336**	**UST**	**U003879322** **N/A**

UST:
- Facility ID: 14496
- Latitude: 34.16609
- Longitude: -117.46231

2	**WEST VALLEY WATER DIST WELL #54** **5101 N DUNCAN CANYON RD** **FONTANA, CA 92336**	**San Bern. Co. Permit**	**S111456358** **N/A**

San Bern. Co. Permit:
- Region: SAN BERNARDINO
- Facility ID: FA0010851
- Owner: WEST VALLEY WATER DISTRICT
- Permit Number: PT0018636
- Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
- Facility Status: ACTIVE
- Expiration Date: 2012-05-31 00:00:00

3	**SUMMIT HIGH SCHOOL** **15551 SUMMIT AVE** **FONTANA, CA 92336**	**San Bern. Co. Permit**	**S108985862** **N/A**

San Bern. Co. Permit:
- Region: SAN BERNARDINO
- Facility ID: FA0011351
- Owner: FONTANA SCHOOL DISTRICT
- Permit Number: PT0019621
- Permit Category: SPECIAL GENERATOR
- Facility Status: ACTIVE
- Expiration Date: 2013-01-31 00:00:00

- Region: SAN BERNARDINO
- Facility ID: FA0011351
- Owner: FONTANA SCHOOL DISTRICT
- Permit Number: PT0019622
- Permit Category: SPECIAL HANDLER
- Facility Status: ACTIVE
- Expiration Date: 2013-01-31 00:00:00

3	**FONTANA PARK - AQUATIC CTR** **15590 SUMMIT AVE** **FONTANA, CA 92336**	**San Bern. Co. Permit**	**S109927792** **N/A**

San Bern. Co. Permit:
- Region: SAN BERNARDINO
- Facility ID: FA0012673
- Owner: CITY OF FONTANA
- Permit Number: PT0022161
- Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
- Facility Status: ACTIVE
- Expiration Date: 2011-09-30 00:00:00

3 **LYTLE CREEK HIGH SCHOOL NO. 4** **ENVIROSTOR** **S105628825**
LYTLE CREEK ROAD/SUMMIT AVENUE **N/A**
FONTANA, CA 92336

ENVIROSTOR:

Site Type:	School Investigation
Site Type Detailed:	School
Acres:	9.2
NPL:	NO
Regulatory Agencies:	DTSC
Lead Agency:	DTSC
Program Manager:	Not reported
Supervisor:	Javier Hinojosa
Division Branch:	Southern California Schools & Brownfields Outreach
Facility ID:	36010008
Site Code:	404048
Assembly:	63
Senate:	32
Special Program:	Not reported
Status:	No Further Action
Status Date:	06/27/2000
Restricted Use:	NO
Site Mgmt. Req.:	NONE SPECIFIED
Funding:	School District
Latitude:	34.06029
Longitude:	-117.4512
APN:	NONE SPECIFIED
Past Use:	AGRICULTURAL - ROW CROPS
Potential COC:	, 30001
Confirmed COC:	NONE SPECIFIED
Potential Description:	NMA
Alias Name:	FONTANA UNIFIED SCHOOL DISTRICT
Alias Type:	Alternate Name
Alias Name:	FONTANA USD-PROP. HIGH SCH-LYTLE CRK/VCA
Alias Type:	Alternate Name
Alias Name:	HIGH SCHOOL NO. 4 (PROPOSED)
Alias Type:	Alternate Name
Alias Name:	LYTLE CREEK HIGH SCHOOL #4
Alias Type:	Alternate Name
Alias Name:	404048
Alias Type:	Project Code (Site Code)
Alias Name:	36010008
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Inspections/Visit (Non LUR)
Completed Date:	02/22/2000
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Environmental Oversight Agreement
Completed Date:	06/27/2000
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Inspections/Visit (Non LUR)

LYTLE CREEK HIGH SCHOOL NO. 4 (Continued) **S105628825**

Completed Date:	03/07/2000
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	09/18/2000
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Workplan
Completed Date:	05/02/2000
Comments:	Approval letter prepared per DL.
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

---

4 **CHEVRON #211869** **RCRA-LQG** **1007370131**
15160 SUMMIT AVE. **San Bern. Co. Permit** **CAR000153031**
FONTANA, CA 92336

RCRA-LQG:

Date form received by agency:	06/25/2010
Facility name:	CHEVRON #211869
Facility address:	15160 SUMMIT AVE. FONTANA, CA 92336
EPA ID:	CAR000153031
Mailing address:	PO BOX 6004 SAN RAMON, CA 94583
Contact:	BEVERLY STRIPLIN
Contact address:	PO BOX 6004 SAN RAMON, CA 94583
Contact country:	US
Contact telephone:	(925) 842-2150
Contact email:	NAWTDESK@CHEVRON.COM
EPA Region:	09
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

CHEVRON #211869 (Continued) **1007370131**

Owner/Operator Summary:

Owner/operator name:	CHEVRON PRODUCTS CO.
Owner/operator address:	PO BOX 6004
	SAN RAMON, CA 94583
Owner/operator country:	US
Owner/operator telephone:	(925) 842-2150
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	08/01/2004
Owner/Op end date:	Not reported

Owner/operator name:	CHEVRON PRODUCTS CO
Owner/operator address:	Not reported
	Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	05/05/2004
Owner/Op end date:	Not reported

Owner/operator name:	CHEVRON PRODUCTS CO.
Owner/operator address:	Not reported
	Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	08/01/2004
Owner/Op end date:	Not reported

Owner/operator name:	CHEVRON PRODUCTS CO
Owner/operator address:	Not reported
	Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	05/05/2004
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No

CHEVRON #211869 (Continued) **1007370131**

Used oil transporter: No

Historical Generators:
Date form received by agency: 05/07/2004
Facility name: CHEVRON #211869
Site name: CHEVRON 211869
Classification: Small Quantity Generator

Hazardous Waste Summary:
Waste code: 134
Waste name: 134

Waste code: 223
Waste name: 223

Waste code: 343
Waste name: 343

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D018
Waste name: BENZENE

Waste code: D018
Waste name: BENZENE

Biennial Reports:

Last Biennial Reporting Year: 2011

Annual Waste Handled:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Amount (Lbs): 4423

Waste code: D018
Waste name: BENZENE
Amount (Lbs): 4568

Violation Status: No violations found

San Bern. Co. Permit:
Region: SAN BERNARDINO

CHEVRON #211869 (Continued) **1007370131**

Facility ID: FA0008367
Owner: CHEVRON PRODUCTS CO
Permit Number: PT0015068
Permit Category: HAZMAT HANDLER - UST ONLY
Facility Status: ACTIVE
Expiration Date: 2012-09-30 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0008367
Owner: CHEVRON PRODUCTS CO
Permit Number: PT0015069
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 2012-09-30 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0008367
Owner: CHEVRON PRODUCTS CO
Permit Number: PT0015070
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 2012-09-30 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0008367
Owner: CHEVRON PRODUCTS CO
Permit Number: PT0022888
Permit Category: WASTE INCIDENTAL UST OPERATION ONLY
Facility Status: ACTIVE
Expiration Date: 2012-09-30 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0008367
Owner: CHEVRON PRODUCTS CO
Permit Number: PT0015071
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: INACTIVE
Expiration Date: 2004-09-30 00:00:00

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4 **FALCON RIDGE CLEANERS & SHIRT LAUNDRY** **DRYCLEANERS** **S106661689**
15218 SUMMIT AVE **San Bern. Co. Permit** **N/A**
FONTANA, CA 92336

DRYCLEANERS:
EPA Id: CAL000287847
NAICS Code: 81232
NAICS Description: Drycleaning and Laundry Services (except Coin-Operated)
SIC Code: 7211
SIC Description: Power Laundries, Family and Commercial
Create Date: 11/03/2004
Facility Active: Yes
Inactive Date: Not reported
Facility Addr2: Not reported
Mailing Name: JIGNESH M PATEL
Mailing Address: 5449 ROTARY DR
Mailing Address 2: Not reported
Mailing State: CA
Mailing Zip: 917502377

FALCON RIDGE CLEANERS & SHIRT LAUNDRY (Continued) **S106661689**

Owner Name: JIGNESH M PATEL
Owner Address: 15218 SUMMIT AVE
Owner Address 2: Not reported
Owner Telephone: 9094630826
Contact Name: JIGNESH M PATEL
Contact Address: 5449 ROTARY DR
Contact Address 2: Not reported
Contact Telephone: 9099464633

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0009699
Owner: PATEL, JIGNESH
Permit Number: PT0016669
Permit Category: SPECIAL GENERATOR
Facility Status: ACTIVE
Expiration Date: 2012-05-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0009699
Owner: PATEL, JIGNESH
Permit Number: PT0016670
Permit Category: SPECIAL HANDLER
Facility Status: ACTIVE
Expiration Date: 2012-05-31 00:00:00

---

4 **STATER BROTHERS** **San Bern. Co. Permit** **S108755728**
15222 SUMMIT AVE **N/A**
FONTANA, CA 92336

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0011462
Owner: STATER BROS. MARKETS
Permit Number: PT0019912
Permit Category: HAZMAT HANDLER 26-50 EMPLOYEES
Facility Status: ACTIVE
Expiration Date: 2012-03-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0011462
Owner: STATER BROS. MARKETS
Permit Number: PT0024975
Permit Category: LIMITED QUANTITY GENERATOR
Facility Status: ACTIVE
Expiration Date: 2012-03-31 00:00:00

4 **CHILI'S GRILL & BAR** **San Bern. Co. Permit** **S106911369**
15252 SUMMIT AVE **N/A**
FONTANA, CA 92336

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0009637
Owner: BRINKER RESTAURANT CORP
Permit Number: PT0022849
Permit Category: BULK CO2 AT RETAIL FOOD FACILITIES
Facility Status: ACTIVE
Expiration Date: 2010-04-30 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0009637
Owner: BRINKER RESTAURANT CORP
Permit Number: PT0016540
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: INACTIVE
Expiration Date: 2010-04-30 00:00:00

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4 **7 ELEVEN INC #33656** **San Bern. Co. Permit** **S109254326**
15264 SUMMIT AVE **N/A**
FONTANA, CA 92336

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0010318
Owner: 7 ELEVEN, INC
Permit Number: PT0020529
Permit Category: HAZMAT HANDLER - UST ONLY
Facility Status: ACTIVE
Expiration Date: 2013-01-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0010318
Owner: 7 ELEVEN, INC
Permit Number: PT0020530
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 2013-01-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0010318
Owner: 7 ELEVEN, INC
Permit Number: PT0020531
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 2013-01-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0010318
Owner: 7 ELEVEN, INC
Permit Number: PT0020532
Permit Category: WASTE INCIDENTAL UST OPERATION ONLY
Facility Status: ACTIVE
Expiration Date: 2013-01-31 00:00:00

4 **TARGET 1958** **San Bern. Co. Permit** **S108222067**
15272 SUMMIT AVE **N/A**
FONTANA, CA 92336

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0009482
Owner:	TARGET CORPORATION
Permit Number:	PT0018202
Permit Category:	GENERATOR - 11-25 EMPLOYEES
Facility Status:	ACTIVE
Expiration Date:	2012-04-30 00:00:00

Region:	SAN BERNARDINO
Facility ID:	FA0009482
Owner:	TARGET CORPORATION
Permit Number:	PT0016539
Permit Category:	HAZMAT HANDLER 11-25 EMPLOYEES (W/GEN PRMT)
Facility Status:	ACTIVE
Expiration Date:	2012-04-30 00:00:00

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4 **TARGET #1958** **RCRA-LQG** **1009398278**
15272 SUMMIT AVE **CAR000172650**
FONTANA, CA 92336

RCRA-LQG:

Date form received by agency:	06/24/2010
Facility name:	TARGET #1958
Facility address:	15272 SUMMIT AVE FONTANA, CA 92336
EPA ID:	CAR000172650
Mailing address:	P.O. BOX 111 MINNEAPOLIS, MN 55440
Contact:	JANNA ADAIR-POTTS
Contact address:	P.O. BOX 111 MINNEAPOLIS, MN 55440
Contact country:	US
Contact telephone:	(800) 587-2228
Contact email:	CORPORATE.COMPLIANCE@TARGET.COM
EPA Region:	09
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	TARGET CORPORATION
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported

TARGET #1958 (Continued) **1009398278**

Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 03/02/2005
Owner/Op end date: Not reported

Owner/operator name: TARGET CORPORATION
Owner/operator address: PO BOX 111
MINNEAPOLIS, MN 55440
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 03/02/2005
Owner/Op end date: Not reported

Owner/operator name: TARGET CORPORATION
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 03/02/2005
Owner/Op end date: Not reported

Owner/operator name: TARGET COPORATION
Owner/operator address: 1000 NICOLLET MALL
MINNEAPOLIS, MN 55403
Owner/operator country: US
Owner/operator telephone: (800) 587-2228
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 03/02/2005
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 04/05/2006
Facility name: TARGET #1958

TARGET #1958 (Continued) **1009398278**

Site name: TARGET STORE NO 1958 HAUL SITE
Classification: Small Quantity Generator

Hazardous Waste Summary:
Waste code: 122
Waste name: 122

Waste code: 123
Waste name: 123

Waste code: 141
Waste name: 141

Waste code: 214
Waste name: 214

Waste code: 291
Waste name: 291

Waste code: 311
Waste name: 311

Waste code: 331
Waste name: 331

Waste code: 561
Waste name: 561

Waste code: 791
Waste name: 791

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D008
Waste name: LEAD

Waste code: D035
Waste name: METHYL ETHYL KETONE

Waste code: P001
Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS,

TARGET #1958 (Continued) **1009398278**

WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

Waste code: P046
Waste name: BENZENEETHANAMINE, ALPHA,ALPHA-DIMETHYL-

Waste code: P075
Waste name: NICOTINE, & SALTS

Waste code: U002
Waste name: ACETONE (I)

Waste code: U240
Waste name: ACETIC ACID, (2,4-DICHLOROPHENOXY)-, SALTS & ESTERS

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D011
Waste name: SILVER

Biennial Reports:

Last Biennial Reporting Year: 2011

Annual Waste Handled:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Amount (Lbs): 1591

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

TARGET #1958 (Continued) **1009398278**

Amount (Lbs): 1591

Waste code: D008
Waste name: LEAD
Amount (Lbs): 1591

Waste code: D035
Waste name: METHYL ETHYL KETONE
Amount (Lbs): 1591

Waste code: P001
Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%
Amount (Lbs): 5

Waste code: P046
Waste name: BENZENEETHANAMINE, ALPHA,ALPHA-DIMETHYL-
Amount (Lbs): 5

Waste code: P075
Waste name: NICOTINE, & SALTS
Amount (Lbs): 5

Waste code: U002
Waste name: ACETONE (I)
Amount (Lbs): 1591

Waste code: U240
Waste name: ACETIC ACID, (2,4-DICHLOROPHENOXY)-, SALTS & ESTERS
Amount (Lbs): 1591

Violation Status: No violations found

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4 **CVS PHARMACY #8589** **San Bern. Co. Permit** **S108724360**
15286 SUMMIT AVE **N/A**
FONTANA, CA 92336

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0011169
Owner: CVS CAREMARK
Permit Number: PT0019245
Permit Category: HAZMAT HANDLER 11-25 EMPLOYEES
Facility Status: ACTIVE
Expiration Date: 2012-08-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0011169
Owner: CVS CAREMARK
Permit Number: PT0019247
Permit Category: LIMITED QUANTITY GENERATOR
Facility Status: ACTIVE
Expiration Date: 2012-08-31 00:00:00

4 **DEL TACO #758** **San Bern. Co. Permit** **S109849277**
15300 SUMMIT AVE **N/A**
FONTANA, CA 92336

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0012554
Owner: DEL TACO INC
Permit Number: PT0021955
Permit Category: BULK CO2 AT RETAIL FOOD FACILITIES
Facility Status: ACTIVE
Expiration Date: 2010-05-31 00:00:00

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5 **AT&T MOBILITY ETIWANDA #13828** **San Bern. Co. Permit** **S106718031**
6101 CHERRY AVE **N/A**
FONTANA, CA 92336

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0008986
Owner: NEW CINGULAR WIRELESS PCS, LLC
Permit Number: PT0015853
Permit Category: HAZMAT HANDLER - UNSTAFFED REMOTE FACILITY
Facility Status: ACTIVE
Expiration Date: 2012-08-31 00:00:00

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6 **CAL TRANS MATERIALS TESTING FACILITY** **San Bern. Co. Permit** **S111160550**
13970 VICTORIA AVE **N/A**
FONTANA, CA 92336

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0013996
Owner: CALTRANS
Permit Number: PT0024581
Permit Category: HAZMAT HANDLER 11-25 EMPLOYEES
Facility Status: ACTIVE
Expiration Date: 2012-09-30 00:00:00

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7 **ETIWANDA HIGH SCHOOL EXPANSION** **ENVIROSTOR** **S106153061**
VICTORIA AVENUE/EAST AVENUE **N/A**
RANCHO CUCAMONGA, CA 91739

ENVIROSTOR:
Site Type: School Investigation
Site Type Detailed: School
Acres: 8
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Not reported
Supervisor: Shahir Haddad
Division Branch: Southern California Schools & Brownfields Outreach
Facility ID: 36010049
Site Code: 404488
Assembly: 63
Senate: 31

ETIWANDA HIGH SCHOOL EXPANSION (Continued) **S106153061**

Special Program: Not reported
Status: Inactive - Needs Evaluation
Status Date: 11/16/2004
Restricted Use: NO
Site Mgmt. Req.: NONE SPECIFIED
Funding: School District
Latitude: 34.1297
Longitude: -117.5132
APN: NONE SPECIFIED
Past Use: AGRICULTURAL - ROW CROPS
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: CHAFFEY JOINT UNION HIGH SCHOOL DISTRICT
Alias Type: Alternate Name
Alias Name: CHAFFEY JUHSD-ETIWANDA HS PRKING LOT ACQ
Alias Type: Alternate Name
Alias Name: ETIWANDA HIGH SCHOOL EXPANSION
Alias Type: Alternate Name
Alias Name: 404488
Alias Type: Project Code (Site Code)
Alias Name: 36010049
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 12/26/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 03/15/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 11/16/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 02/11/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 08/19/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1

ETIWANDA HIGH SCHOOL EXPANSION (Continued) **S106153061**

Completed Date: 10/15/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 03/05/2004
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

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8 **ETIWANDA DISPOSAL SITE** **SWF/LF** **S105964606**
X **N/A**
ETIWANDA (IN RANCHO CUCAMONGA), CA

SWF/LF (SWIS):
Region: STATE
Facility ID: 36-CR-0021
Lat/Long: 34.1281400 / -117.50472
Owner Name: San Bernardino County Flood District
Owner Telephone: Not reported
Owner Address: Not reported
Owner Address2: Not reported
Owner City,St,Zip: Not reported
Operator: Not reported
Operator Phone: Not reported
Operator Address: Not reported
Operator Address2: Not reported
Operator City,St,Zip: Not reported
Operator's Status: Closed
Permit Date: Not reported
Permit Status: Not reported
Permitted Acreage: 0
Activity: Solid Waste Disposal Site
Regulation Status: Pre-regulations
Landuse Name: Not reported
GIS Source: External
Category: Disposal
Unit Number: 01
Inspection Frequency: Biennial
Accepted Waste: Not reported
Closure Date: Not reported
Closure Type: Not reported
Disposal Acreage: 0
SWIS Num: 36-CR-0021
Waste Discharge Requirement Num: Not reported
Program Type: Not reported
Permitted Throughput with Units: 0
Actual Throughput with Units: Not reported
Permitted Capacity with Units: 0

ETIWANDA DISPOSAL SITE (Continued) **S105964606**

Remaining Capacity: 0
Remaining Capacity with Units: Not reported

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9 **HIGH SCHOOL NO. 9** **ENVIROSTOR** **S106568117**
SAN SEVAINE ROAD/WALNUT AVENUE **N/A**
FONTANA, CA 92336

ENVIROSTOR:
Site Type: School Investigation
Site Type Detailed: School
Acres: 60
NPL: NO
Regulatory Agencies: DTSC
Lead Agency: DTSC
Program Manager: Not reported
Supervisor: Shahir Haddad
Division Branch: Southern California Schools & Brownfields Outreach
Facility ID: 36010054
Site Code: 404523
Assembly: 62
Senate: 32
Special Program: Not reported
Status: No Further Action
Status Date: 03/02/2004
Restricted Use: NO
Site Mgmt. Req.: NONE SPECIFIED
Funding: School District
Latitude: 34.13040
Longitude: -117.4810
APN: NONE SPECIFIED
Past Use: AGRICULTURAL - ROW CROPS
Potential COC: 30001, 30008
Confirmed COC: NONE SPECIFIED
Potential Description: SOIL
Alias Name: CHAFFEY JOINT UNION HIGH SCHOOL DISTRICT
Alias Type: Alternate Name
Alias Name: CHAFFEY JUHSD-HIGH SCHOOL SITE NO. 9
Alias Type: Alternate Name
Alias Name: HIGH SCHOOL NO. 9
Alias Type: Alternate Name
Alias Name: 404523
Alias Type: Project Code (Site Code)
Alias Name: 36010054
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 05/19/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 03/02/2004
Comments: Not reported

HIGH SCHOOL NO. 9 (Continued) **S106568117**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 11/16/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 09/16/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 02/20/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 05/12/2004
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

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10 **RALPHS GROCERY CO #114** **San Bern. Co. Permit** **S105857361**
14574 BASELINE AVE **N/A**
FONTANA, CA 92336

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0007781
Owner: RALPHS GROCERY COMPANY
Permit Number: PT0013423
Permit Category: HAZMAT HANDLER 26-50 EMPLOYEES
Facility Status: ACTIVE
Expiration Date: 2012-10-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0007781
Owner: RALPHS GROCERY COMPANY
Permit Number: PT0024791
Permit Category: LIMITED QUANTITY GENERATOR
Facility Status: ACTIVE
Expiration Date: 2012-10-31 00:00:00

10 CHEVRON STATION NO 209515 | **RCRA-SQG** | **1006804938**
14526 BASELINE RD | **San Bern. Co. Permit** | **CAR000118554**
FONTANA, CA 92336

RCRA-SQG:

Date form received by agency:	05/16/2002
Facility name:	CHEVRON STATION NO 209515
Facility address:	14526 BASELINE RD FONTANA, CA 92336
EPA ID:	CAR000118554
Mailing address:	P O BOX 6004 SAN RAMON, CA 94583
Contact:	KATHY NORRIS
Contact address:	P O BOX 6004 SAN RAMON, CA 94583
Contact country:	US
Contact telephone:	(925) 842-5931
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	CHEVRON PRODUCTS CO
Owner/operator address:	P O BOX 6004 SAN RAMON, CA 94583
Owner/operator country:	Not reported
Owner/operator telephone:	(925) 842-5931
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS

CHEVRON STATION NO 209515 (Continued) **1006804938**

CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D018
Waste name: BENZENE

Violation Status: No violations found

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0001881
Owner: CHEVRON PRODUCTS CO
Permit Number: PT0000992
Permit Category: HAZMAT HANDLER - UST ONLY
Facility Status: ACTIVE
Expiration Date: 2012-08-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0001881
Owner: CHEVRON PRODUCTS CO
Permit Number: PT0012593
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 2012-08-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0001881
Owner: CHEVRON PRODUCTS CO
Permit Number: PT0012594
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 2012-08-31 00:00:00

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11 **AT&T MOBILITY-HERITAGE PARK #50905** **San Bern. Co. Permit** **S110168935**
14011 BASELINE AVE **N/A**
FONTANA, CA 92335

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0011550
Owner: NEW CINGULAR WIRELESS PCS, LLC
Permit Number: PT0022668
Permit Category: HAZMAT HANDLER - UNSTAFFED REMOTE FACILITY
Facility Status: ACTIVE
Expiration Date: 2012-04-30 00:00:00

12 **AUTOZONE #2891** **San Bern. Co. Permit** **S106230255**
14343 BASELINE AVE **N/A**
FONTANA, CA 92336

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0008041
Owner: AUTOZONE INC
Permit Number: PT0014190
Permit Category: HAZMAT HANDLER - USED OIL COLLECTION CENTERS
Facility Status: INACTIVE
Expiration Date: 2006-12-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0008041
Owner: AUTOZONE INC
Permit Number: PT0018286
Permit Category: GENERATOR - 0-10 EMPLOYEES
Facility Status: ACTIVE
Expiration Date: 2012-12-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0008041
Owner: AUTOZONE INC
Permit Number: PT0018287
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES (W/GEN PRMT)
Facility Status: ACTIVE
Expiration Date: 2012-12-31 00:00:00

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12 **MOUNTAIN VIEW TIRE & SERVICE INC** **San Bern. Co. Permit** **S108214418**
14373 BASELINE AVE **N/A**
FONTANA, CA 92336

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0009398
Owner: MITSOS, NICK
Permit Number: PT0016178
Permit Category: SPECIAL GENERATOR
Facility Status: ACTIVE
Expiration Date: 2013-02-28 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0009398
Owner: MITSOS, NICK
Permit Number: PT0016179
Permit Category: SPECIAL HANDLER
Facility Status: ACTIVE
Expiration Date: 2013-02-28 00:00:00

13 **VONS #1742** **San Bern. Co. Permit** **S109849253**
7390 CHERRY AVE **N/A**
FONTANA, CA 92336

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0012434
Owner: THE VONS COMPANIES, INC
Permit Number: PT0022101
Permit Category: HAZMAT HANDLER 26-50 EMPLOYEES
Facility Status: ACTIVE
Expiration Date: 2012-09-30 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0012434
Owner: THE VONS COMPANIES, INC
Permit Number: PT0022102
Permit Category: LIMITED QUANTITY GENERATOR
Facility Status: ACTIVE
Expiration Date: 2012-09-30 00:00:00

---

13 **HERITAGE VILLAGE SHELL** **San Bern. Co. Permit** **S105482035**
7330 CHERRY AVE **N/A**
FONTANA, CA 92335

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0003752
Owner: PROHAS ENTERPRISES, INC.
Permit Number: PT0010121
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: ACTIVE
Expiration Date: 2012-05-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0003752
Owner: PROHAS ENTERPRISES, INC.
Permit Number: PT0010555
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 2013-05-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0003752
Owner: PROHAS ENTERPRISES, INC.
Permit Number: PT0010554
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 2012-05-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0003752
Owner: PROHAS ENTERPRISES, INC.
Permit Number: PT0010556
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 2012-05-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0003752

HERITAGE VILLAGE SHELL (Continued) **S105482035**

Owner: PROHAS ENTERPRISES, INC.
Permit Number: PT0023834
Permit Category: WASTE INCIDENTAL UST OPERATION ONLY
Facility Status: ACTIVE
Expiration Date: 2012-05-31 00:00:00

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14 **BIG 5 SPORTING GOODS** **UST** **U003785164**
7351 MCGUIRE AVE **N/A**
FONTANA, CA 92336

UST:
Facility ID: 15159
Latitude: 34.12186
Longitude: -117.48414

Count: 15 records

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
ETIWANDA	S109521222	BILL JIMENEZ	12993 ARROW RTE	91739	San Bern. Co. Permit
FONTANA	S109548211	PROPOSED MIDDLE SCHOOL NO. 8.75	BETWEEN SOUTH HIGHLAND AND WAL AVE	92336	ENVIROSTOR
FONTANA	1010313496	FONTANA VALVE STATION	NW CORNER OF CITRUS AVE	92336	RCRA-LQG
FONTANA	S110168927	STATION #79	5075 COYOTE CANYON RD	92336	San Bern. Co. Permit
FONTANA	S111456383	VERIZON WIRELESS- ALMOND	7871 E EAST AVE	92336	San Bern. Co. Permit
FONTANA	S108407557	PROPOSED MIDDLE SCHOOL 8.5 SITE	NE INTERSECTION BETWEEN HEMLOCK A DR	92336	ENVIROSTOR
FONTANA	S108195928	PROPOSED ELEMENTARY SCHOOL #35	LYTLE CREEK RD & THREE MILE RD	92336	ENVIROSTOR
FONTANA	S106910654	SCE-STRIP SUBSTATION	NE SAN BERNARDINO & CALABASH	92336	AST, San Bern. Co. Permit
MT BALDY	U004050830	MT BALDY SKI LIFTS INC	8401 MOUNT BALDY RD	91759	UST
MT BALDY	S105857388	MT BALDY SKI LIFTS INC	8401 MOUNT BALDY RD	91759	San Bern. Co. Permit
MT BALDY	S104532863	MT BALDY VISTORS CENTER	1 MOUNT BALDY RD	91759	San Bern. Co. Permit
MT BALDY	S102440607	USDA FOREST SERVICE, MT. BALDY	9000 MOUNT BALDY RD N	91759	LUST
RANCHO CUCAMONGA	A100346127	SHEA-KENNY	8348 ETIWANDA AVE	91739	AST
RANCHO CUCAMONGA	1003879838	PACIFIC RECYCLING ENTERPRISES	13012 WHITTRAM AVE	91739	CERC-NFRAP
RANCHO CUCAMONGA	S107448054	MCI	14008 WILSON AVE	91739	San Bern. Co. Permit

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

FEDERAL RECORDS

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 09/07/2011
Date Data Arrived at EDR: 10/12/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 141

Source: EPA
Telephone: N/A
Last EDR Contact: 04/05/2012
Next Scheduled EDR Contact: 07/23/2012
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 09/07/2011
Date Data Arrived at EDR: 10/12/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 141

Source: EPA
Telephone: N/A
Last EDR Contact: 04/05/2012
Next Scheduled EDR Contact: 07/23/2012
Data Release Frequency: Quarterly

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 12/27/2011
Date Data Arrived at EDR: 02/27/2012
Date Made Active in Reports: 03/12/2012
Number of Days to Update: 14

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 04/05/2012
Next Scheduled EDR Contact: 06/11/2012
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 12/28/2011
Date Data Arrived at EDR: 02/27/2012
Date Made Active in Reports: 03/12/2012
Number of Days to Update: 14

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 04/05/2012
Next Scheduled EDR Contact: 06/11/2012
Data Release Frequency: Quarterly

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 08/19/2011
Date Data Arrived at EDR: 08/31/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 132

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 02/13/2012
Next Scheduled EDR Contact: 05/28/2012
Data Release Frequency: Quarterly

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 11/10/2011
Date Data Arrived at EDR: 01/05/2012
Date Made Active in Reports: 03/12/2012
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 04/04/2012
Next Scheduled EDR Contact: 07/16/2012
Data Release Frequency: Quarterly

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 11/10/2011
Date Data Arrived at EDR: 01/05/2012
Date Made Active in Reports: 03/12/2012
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 04/04/2012
Next Scheduled EDR Contact: 07/16/2012
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 11/10/2011
Date Data Arrived at EDR: 01/05/2012
Date Made Active in Reports: 03/12/2012
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 04/04/2012
Next Scheduled EDR Contact: 07/16/2012
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 12/30/2011
Date Data Arrived at EDR: 12/30/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 03/12/2012
Next Scheduled EDR Contact: 06/25/2012
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 12/30/2011
Date Data Arrived at EDR: 12/30/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 03/12/2012
Next Scheduled EDR Contact: 06/25/2012
Data Release Frequency: Varies

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 10/03/2011
Date Data Arrived at EDR: 10/04/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 38

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 04/03/2012
Next Scheduled EDR Contact: 07/16/2012
Data Release Frequency: Annually

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/27/2011
Date Data Arrived at EDR: 06/27/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 78

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 04/03/2012
Next Scheduled EDR Contact: 07/09/2012
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 08/12/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 112

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 03/12/2012
Next Scheduled EDR Contact: 06/25/2012
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 09/28/2011
Date Data Arrived at EDR: 12/14/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 27

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 03/14/2012
Next Scheduled EDR Contact: 06/25/2012
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 02/28/2012
Next Scheduled EDR Contact: 06/11/2012
Data Release Frequency: Varies

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 09/01/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 131

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/28/2012
Next Scheduled EDR Contact: 06/11/2012
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/28/2012
Next Scheduled EDR Contact: 07/09/2012
Data Release Frequency: Every 4 Years

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/30/2012
Next Scheduled EDR Contact: 08/13/2012
Data Release Frequency: Annually

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 03/01/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 62

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 02/27/2012
Next Scheduled EDR Contact: 06/11/2012
Data Release Frequency: Biennially

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 04/23/2012
Next Scheduled EDR Contact: 08/06/2012
Data Release Frequency: Varies

STATE AND LOCAL RECORDS

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/20/2012
Date Data Arrived at EDR: 02/20/2012
Date Made Active in Reports: 03/29/2012
Number of Days to Update: 38

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 02/20/2012
Next Scheduled EDR Contact: 06/04/2012
Data Release Frequency: Quarterly

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST: Geotracker's Leaking Underground Fuel Tank Report
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 01/20/2012
Date Data Arrived at EDR: 01/20/2012
Date Made Active in Reports: 02/21/2012
Number of Days to Update: 32

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 03/21/2012
Next Scheduled EDR Contact: 07/02/2012
Data Release Frequency: Quarterly

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Quarterly

SLIC: Statewide SLIC Cases
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 01/20/2012
Date Data Arrived at EDR: 01/20/2012
Date Made Active in Reports: 02/21/2012
Number of Days to Update: 32

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/21/2012
Next Scheduled EDR Contact: 07/02/2012
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36
Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11
Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 01/20/2012
Date Data Arrived at EDR: 01/20/2012
Date Made Active in Reports: 02/22/2012
Number of Days to Update: 33
Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 03/21/2012
Next Scheduled EDR Contact: 07/02/2012
Data Release Frequency: Semi-Annually

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/23/2009
Date Data Arrived at EDR: 09/23/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 8
Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 12/05/2012
Next Scheduled EDR Contact: 06/18/2012
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database
The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18
Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 03/12/2012
Date Data Arrived at EDR: 03/13/2012
Date Made Active in Reports: 04/02/2012
Number of Days to Update: 20

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 03/12/2012
Next Scheduled EDR Contact: 06/25/2012
Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities
Registered Aboveground Storage Tanks.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 09/10/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 916-327-5092
Last EDR Contact: 01/23/2012
Next Scheduled EDR Contact: 04/23/2012
Data Release Frequency: Quarterly

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 03/14/2012
Date Data Arrived at EDR: 03/15/2012
Date Made Active in Reports: 04/02/2012
Number of Days to Update: 18

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 03/15/2012
Next Scheduled EDR Contact: 05/21/2012
Data Release Frequency: Quarterly

DRYCLEANERS: Cleaner Facilities
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 01/19/2012
Date Data Arrived at EDR: 01/19/2012
Date Made Active in Reports: 02/21/2012
Number of Days to Update: 33

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 03/12/2012
Next Scheduled EDR Contact: 06/25/2012
Data Release Frequency: Annually

ENF: Enforcement Action Listing
A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 08/15/2011
Date Data Arrived at EDR: 08/23/2011
Date Made Active in Reports: 10/03/2011
Number of Days to Update: 41

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 04/30/2012
Next Scheduled EDR Contact: 08/13/2012
Data Release Frequency: Varies

RESPONSE: State Response Sites
Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 03/14/2012
Date Data Arrived at EDR: 03/15/2012
Date Made Active in Reports: 04/02/2012
Number of Days to Update: 18

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 03/15/2012
Next Scheduled EDR Contact: 05/21/2012
Data Release Frequency: Quarterly

ENVIROSTOR: EnviroStor Database
The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 03/14/2012
Date Data Arrived at EDR: 03/15/2012
Date Made Active in Reports: 04/02/2012
Number of Days to Update: 18

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 03/15/2012
Next Scheduled EDR Contact: 05/21/2012
Data Release Frequency: Quarterly

TRIBAL RECORDS

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/16/2012
Next Scheduled EDR Contact: 07/30/2012
Data Release Frequency: Semi-Annually

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 02/06/2012
Next Scheduled EDR Contact: 05/21/2012
Data Release Frequency: Varies

EDR PROPRIETARY RECORDS

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Historical Auto Stations: EDR Proprietary Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Historical Cleaners: EDR Proprietary Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Underground Tanks
Underground storage tank sites located in Alameda county.

Date of Government Version: 01/12/2012
Date Data Arrived at EDR: 01/13/2012
Date Made Active in Reports: 02/24/2012
Number of Days to Update: 42

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/02/2012
Next Scheduled EDR Contact: 07/16/2012
Data Release Frequency: Semi-Annually

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 08/31/2010
Date Data Arrived at EDR: 09/01/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 29

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 03/16/2012
Next Scheduled EDR Contact: 05/28/2012
Data Release Frequency: Quarterly

LOS ANGELES COUNTY:

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/23/2012
Date Data Arrived at EDR: 01/24/2012
Date Made Active in Reports: 02/21/2012
Number of Days to Update: 28

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 04/24/2012
Next Scheduled EDR Contact: 08/06/2012
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/05/2009
Date Data Arrived at EDR: 03/10/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 29

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 11/17/2011
Next Scheduled EDR Contact: 03/05/2012
Data Release Frequency: Varies

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/23/2012
Date Data Arrived at EDR: 01/25/2012
Date Made Active in Reports: 02/22/2012
Number of Days to Update: 28

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 04/17/2012
Next Scheduled EDR Contact: 08/06/2012
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/28/2003
Date Data Arrived at EDR: 10/23/2003
Date Made Active in Reports: 11/26/2003
Number of Days to Update: 34

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 04/30/2012
Next Scheduled EDR Contact: 08/13/2012
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 01/16/2012
Date Data Arrived at EDR: 01/18/2012
Date Made Active in Reports: 02/22/2012
Number of Days to Update: 35

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/10/2012
Next Scheduled EDR Contact: 07/30/2012
Data Release Frequency: Semi-Annually

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 01/13/2012
Date Data Arrived at EDR: 01/24/2012
Date Made Active in Reports: 02/22/2012
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 04/09/2012
Next Scheduled EDR Contact: 07/23/2012
Data Release Frequency: Semi-Annually

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 12/05/2011
Date Data Arrived at EDR: 12/06/2011
Date Made Active in Reports: 02/07/2012
Number of Days to Update: 63

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 03/05/2012
Next Scheduled EDR Contact: 06/18/2012
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 12/05/2012
Next Scheduled EDR Contact: 06/18/2012
Data Release Frequency: No Update Planned

ORANGE COUNTY:

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 02/01/2012
Date Data Arrived at EDR: 02/17/2012
Date Made Active in Reports: 02/21/2012
Number of Days to Update: 4

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/13/2012
Next Scheduled EDR Contact: 05/28/2012
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 02/01/2012
Date Data Arrived at EDR: 02/17/2012
Date Made Active in Reports: 04/03/2012
Number of Days to Update: 46

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/13/2012
Next Scheduled EDR Contact: 05/28/2012
Data Release Frequency: Quarterly

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 01/18/2012
Date Data Arrived at EDR: 01/26/2012
Date Made Active in Reports: 02/21/2012
Number of Days to Update: 26

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/21/2011
Next Scheduled EDR Contact: 04/09/2012
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 01/18/2012
Date Data Arrived at EDR: 01/26/2012
Date Made Active in Reports: 02/24/2012
Number of Days to Update: 29

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/21/2011
Next Scheduled EDR Contact: 04/26/2012
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 03/01/2012
Date Data Arrived at EDR: 03/01/2012
Date Made Active in Reports: 03/27/2012
Number of Days to Update: 26

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 02/13/2012
Next Scheduled EDR Contact: 05/28/2012
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2011
Date Data Arrived at EDR: 11/04/2011
Date Made Active in Reports: 12/13/2011
Number of Days to Update: 39

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 04/30/2012
Next Scheduled EDR Contact: 08/13/2012
Data Release Frequency: Varies

SAN FRANCISCO COUNTY:

Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 02/13/2012
Next Scheduled EDR Contact: 05/28/2012
Data Release Frequency: Quarterly

Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/29/2010
Date Data Arrived at EDR: 03/10/2011
Date Made Active in Reports: 03/15/2011
Number of Days to Update: 5

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 02/13/2012
Next Scheduled EDR Contact: 05/28/2012
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 01/18/2012
Date Data Arrived at EDR: 01/18/2012
Date Made Active in Reports: 02/22/2012
Number of Days to Update: 35

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 03/26/2012
Next Scheduled EDR Contact: 07/09/2012
Data Release Frequency: Semi-Annually

SAN MATEO COUNTY:

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 12/15/2011
Date Data Arrived at EDR: 12/15/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 35

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/19/2012
Next Scheduled EDR Contact: 07/02/2012
Data Release Frequency: Semi-Annually

SANTA CLARA COUNTY:

HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/05/2012
Date Data Arrived at EDR: 03/07/2012
Date Made Active in Reports: 03/27/2012
Number of Days to Update: 20

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 03/05/2012
Next Scheduled EDR Contact: 06/18/2012
Data Release Frequency: Annually

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 12/19/2011
Date Data Arrived at EDR: 01/06/2012
Date Made Active in Reports: 01/27/2012
Number of Days to Update: 21

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 03/19/2012
Next Scheduled EDR Contact: 07/02/2012
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 12/19/2011
Date Data Arrived at EDR: 01/17/2012
Date Made Active in Reports: 02/24/2012
Number of Days to Update: 38

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 03/19/2012
Next Scheduled EDR Contact: 07/02/2012
Data Release Frequency: Quarterly

SONOMA COUNTY:

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 04/05/2011
Date Data Arrived at EDR: 04/06/2011
Date Made Active in Reports: 05/12/2011
Number of Days to Update: 36

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 04/02/2012
Next Scheduled EDR Contact: 07/16/2012
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 03/12/2012
Date Data Arrived at EDR: 03/13/2012
Date Made Active in Reports: 04/03/2012
Number of Days to Update: 21

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 03/12/2012
Next Scheduled EDR Contact: 06/25/2012
Data Release Frequency: Semi-Annually

VENTURA COUNTY:

Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/09/2012
Next Scheduled EDR Contact: 07/23/2012
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 02/20/2012
Next Scheduled EDR Contact: 06/04/2012
Data Release Frequency: Quarterly

Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 12/27/2011
Date Data Arrived at EDR: 02/03/2012
Date Made Active in Reports: 02/21/2012
Number of Days to Update: 18

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 04/30/2012
Next Scheduled EDR Contact: 08/13/2012
Data Release Frequency: Quarterly

Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/19/2011
Date Made Active in Reports: 01/17/2012
Number of Days to Update: 29

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/21/2012
Next Scheduled EDR Contact: 07/02/2012
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 12/28/2011
Date Data Arrived at EDR: 01/06/2012
Date Made Active in Reports: 01/17/2012
Number of Days to Update: 11

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 03/26/2012
Next Scheduled EDR Contact: 07/09/2012
Data Release Frequency: Annually

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 02/20/2012
Date Data Arrived at EDR: 02/20/2012
Date Made Active in Reports: 03/15/2012
Number of Days to Update: 24

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 02/20/2012
Next Scheduled EDR Contact: 06/04/2012
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 07/20/2011
Date Made Active in Reports: 08/11/2011
Number of Days to Update: 22

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/17/2012
Next Scheduled EDR Contact: 07/30/2012
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/10/2012
Date Data Arrived at EDR: 02/09/2012
Date Made Active in Reports: 03/09/2012
Number of Days to Update: 29

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 02/09/2012
Next Scheduled EDR Contact: 05/21/2012
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 01/26/2012
Date Made Active in Reports: 03/06/2012
Number of Days to Update: 40

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/23/2012
Next Scheduled EDR Contact: 08/06/2012
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 06/24/2011
Date Made Active in Reports: 06/30/2011
Number of Days to Update: 6

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/27/2012
Next Scheduled EDR Contact: 06/11/2012
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 08/19/2011
Date Made Active in Reports: 09/15/2011
Number of Days to Update: 27

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/19/2012
Next Scheduled EDR Contact: 07/02/2012
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.
Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

STREET AND ADDRESS INFORMATION

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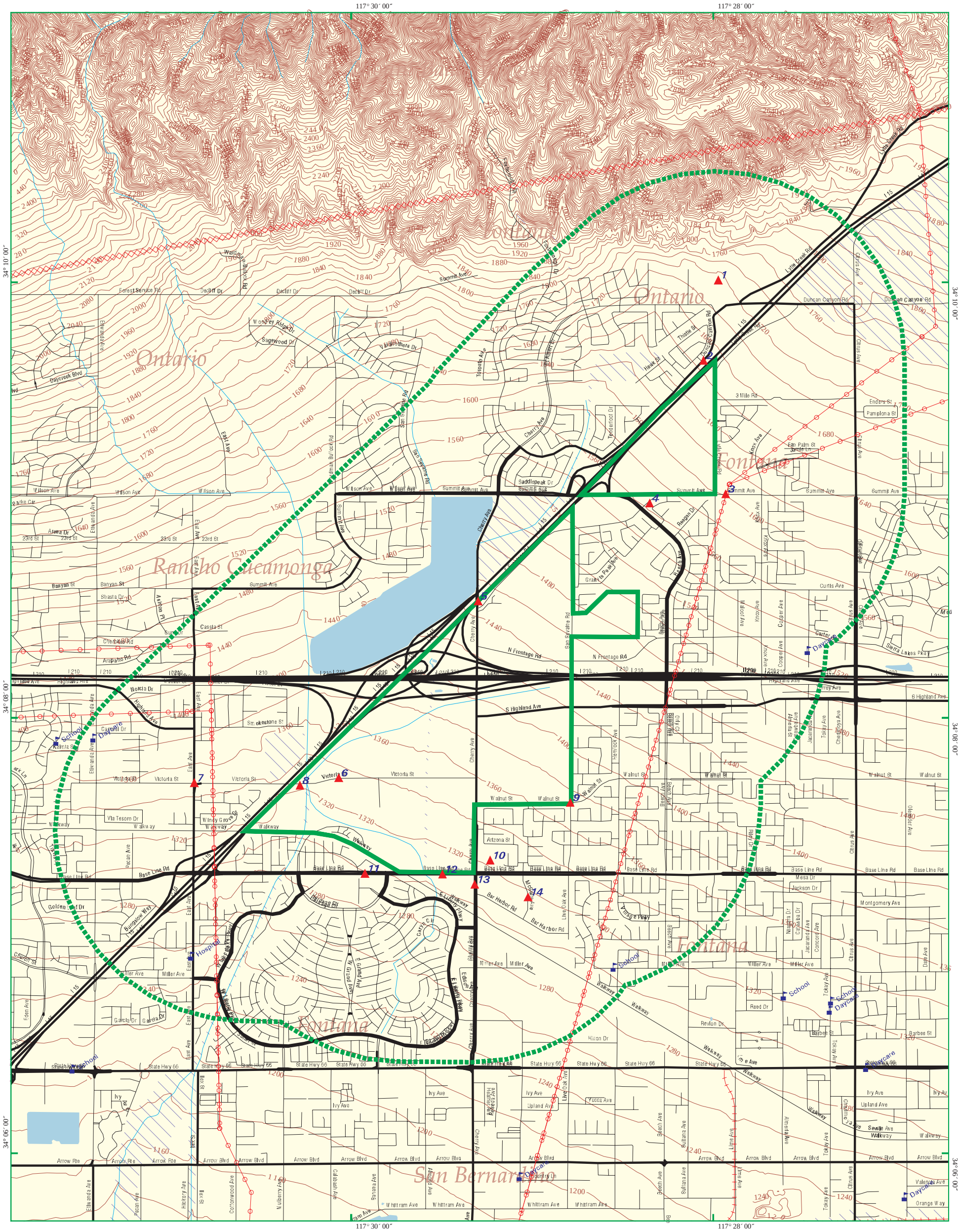

EDR DataMap® - Area Study

Westgate Specific Plan

EDR® Environmental Data Resources Inc

Fontana, CA

- Listed Sites
- Earthquake Epicenters (Richter 5 or greater)
- Search Boundary
- Roads
- Major Roads
- Waterways
- Railroads
- Contour Lines
- Pipelines
- Powerlines
- Fault Lines
- Water
- Superfund Sites
- Indian Reservations BIA
- 100-Yr Flood Zones

N

0 1/4 1/2

Scale in Miles

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Appendix H - Hydrology and Water Quality Technical Report

WESTGATE SPECIFIC PLAN

HYDROLOGY & WATER QUALITY TECHNICAL REPORT

Fontana, California

Prepared For

PCR Services Corporation
One Venture, Suite 150
Irvine, CA 92618
949.753.7001

Prepared By

Fuscoe Engineering, Inc.
16795 Von Karman, Suite 100
Irvine, California 92606
949.474.1960
www.fuscoe.com

Project Manager:
Ian Adam

Date Prepared: September 10, 2012
Job Number: 445.05.01

full circle thinking®

WESTGATE SPECIFIC PLAN

WATER QUALITY & HYDROLOGY TECHNICAL REPORT

CITY OF FONTANA
COUNTY OF SAN BERNARDINO, CALIFORNIA

PREPARED FOR:

PCR SERVICES CORPORATION
One Venture, Suite 150
Irvine, CA 92618
949.753.7001

PREPARED BY:

FUSCOE ENGINEERING, INC.
16795 Von Karman Suite 100
Irvine, CA 92606
949.474.1960
www.fuscoe.com

SEPTEMBER 10, 2012

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Attachment E Storm Drain Master Plan
Attachment F Hydrology Calculations Summary
Attachment G Water Quality Management Plan Exhibit
Attachment H Westgate Specific Plan Infrastructure Study

ACRONYMS & ABBREVIATIONS

ACOE	United States Army Corps of Engineers
ASBS	Area of Special Biological Significance
ATS	Active Treatment System
BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practice
CAFO	Concentrated Animal Feeding Operation
CASQA	California Stormwater Quality Association
CBRP	Comprehensive Bacteria Reduction Plan
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGP	Construction General Permit
COD	Chemical Oxygen Demand
CWA	Clean Water Act
DCV	Design Capture Volume
EHM	Engineered, Hardened and Maintained
EIR	Environmental Impact Report
ESA	Environmentally Sensitive Area
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
HCOC	Hydrologic Condition of Concern
HOA	Home Owners Association
HSC	Hydrologic Source Control
I-15	Interstate 15
LA	Load Allocation
LID	Low Impact Development
LIP	Local Implementation Plan
MEP	Maximum Extent Practicable
MPD	Master Plan of Drainage
MS4	Municipal Separate Storm Sewer System
MSAR	Middle Santa Ana River
NOI	Notice of Intent

NPDES	National Pollutant Discharge Elimination System
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyl
POA	Property Owners Association
PRD	Permit Registration Document
RCB	Reinforced Concrete Box
RGO	Retail Gasoline Outlet
RWQCB	Regional Water Quality Control Board
SBCFCD	San Bernardino County Flood Control District
SFHA	Special Flood Hazard Area
SIC	Standard Industrial Classification
SWPPP	Storm Water Pollution Prevention Plan
Tc	Time of Concentration
TDS	Total Dissolved Solids
TGD	Technical Guidance Document
TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids
US EPA	United States Environmental Protection Agency
WDR	Waste Discharge Requirements
WLA	Wasteload Allocation
WQMP	Water Quality Management Plan

1. INTRODUCTION

The Westgate Specific Plan (herein referred to as "project") encompasses 964 acres in the northwestern part of the City of Fontana in western San Bernardino County. The project site lies east and adjacent to the Interstate 15 (I-15) and is bisected by Route 210 freeway. The southern limit of the Project is Baseline Road and the northern limit is the I-15. The eastern limit of the project occurs at Lytle Creek Road north of the 210 Freeway. A major utility corridor including utilities for Southern California Edison, Southern California Gas Company and the Metropolitan Water District traverses the site, parallel to the I-15 freeway. The site is currently undeveloped and is surrounded to the south and east by existing residential neighborhoods including the Village of Heritage, Summit Heights, Morningside and Citrus Heights North. Figure 1 is the Project's Vicinity Map, and a Location Map is provided as Figure 2.

The proposed Westgate Specific Plan development includes a number of attached and detached single-family residential, multi-family homes, business parks (commercial), open space, public parks, landscaping and roadways. Table 1 provides a breakdown of the proposed land uses, acreages and target dwelling units for the residential component. Attachment A provides the land use exhibit and acreage breakdown in more detail.

Table 1 Proposed Land Use Summary.

WESTGATE LAND USE SUMMARY		
Description	**Acres**	**Target Dwelling Units**
Business Park	141.4	--
Business Park/Public Facilities	69.2	--
Commercial Retail	52.1	--
Residential-1 (R1)	38.4	138
Residential-2 (R2)	84.7	777
Residential-3a (R3a)	156.1	2,290
Residential-3b (R3b)	57.6	1,231
Residential-4 (R4)	29.9	1,495
Open Space/ Public Parks P1	43.7	--
Open Space/ Public Parks P2	12.85	--
Open Space/ Landscape	1.4	--
Open Space/ Utility Corridors	89.8	--
School sites	84.0	--
Other (Road R/W)	102.85	--
Total Acres	**964**	--
Maximum Dwelling Units		**5,931**

This report analyzes potential impacts to hydrology and water quality conditions associated with the Westgate Specific Plan as it relates to (1) construction activities and (2) the long-term operations. In general, new development activities associated with the Project have the potential to alter existing drainage courses, modify the impervious conditions, and create the possibility for new sources for runoff contamination. Measures to reduce the potential impacts to hydrology, groundwater and surface water as a result of the construction and post-construction operations will be addressed in this report.

This report and exhibits rely primarily on the hydrology and water quality calculations provided by Hall & Foreman for support of the Specific Plan documentation (Westgate Specific Plan Infrastructure Study, January 2011). A copy of the Hall & Foreman study is included as Attachment H. In certain instances, additional estimated peak flow rates have been provided using the baseline hydrology information provided in the Hall & Foreman study. The level of detail provided is consistent with a Program-Level EIR based on the evaluations and impacts associated with changes in land use. The evaluation of project-specific site plans will occur with the development of each phase of the project.

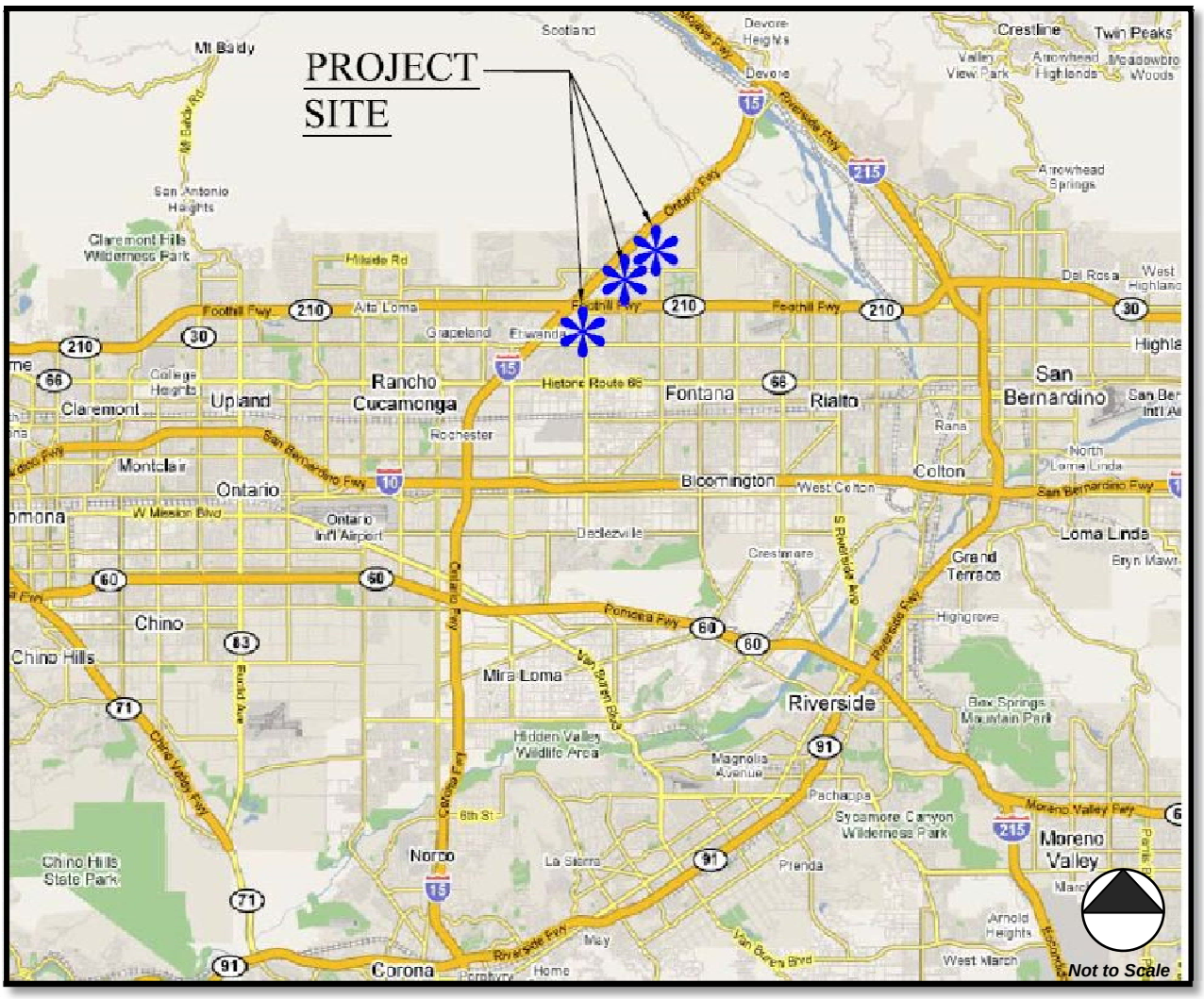

Figure 1 Vicinity Map

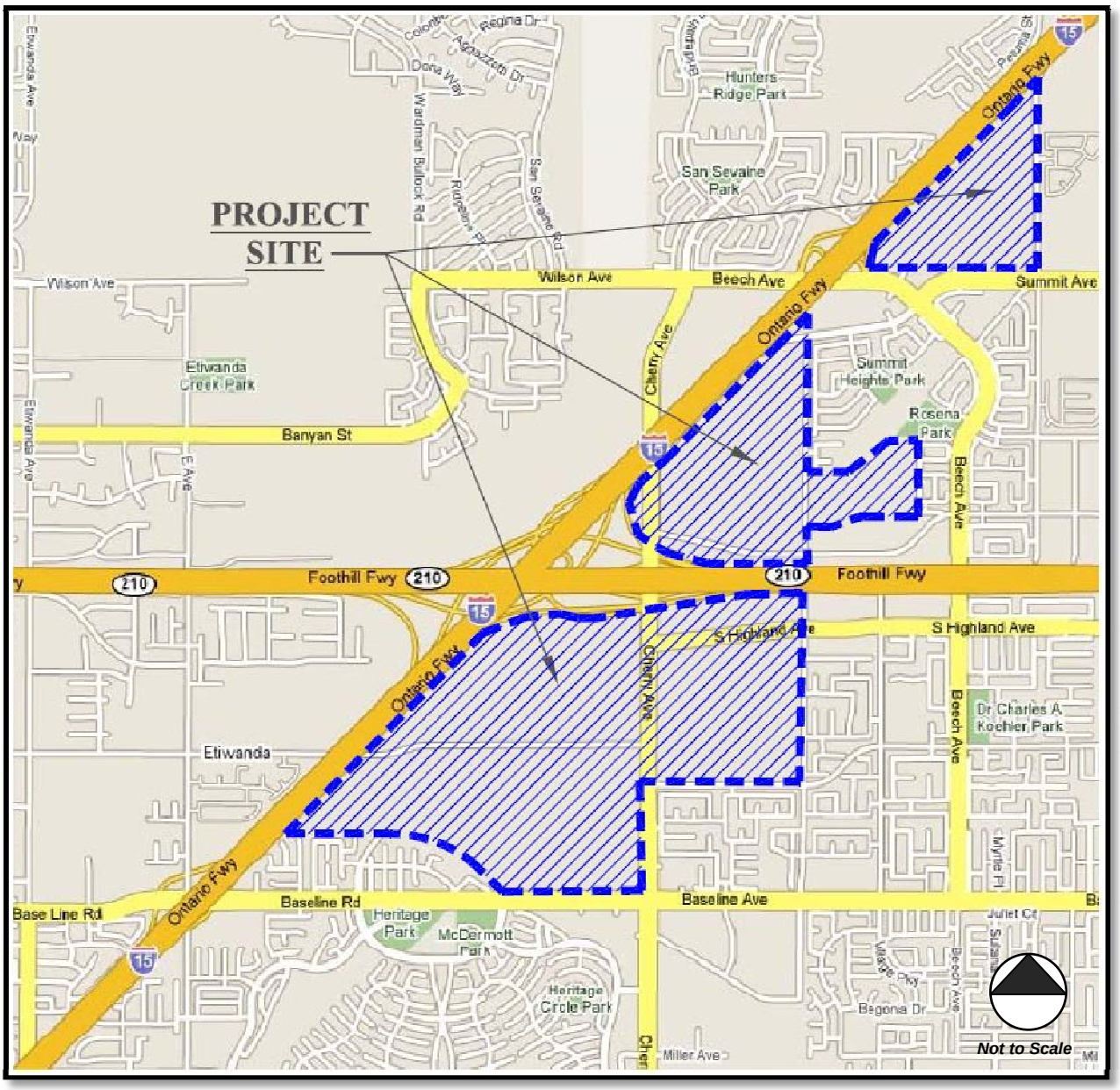

Figure 2 Location Map

2. ENVIRONMENTAL SETTING

2.1 HYDROLOGY

2.1.1 Existing Drainage Conditions

The Westgate Specific Plan encompasses 964 acres in the northwestern part of the City of Fontana within a mildly sloping alluvial plain of the nearby San Gabriel Mountains in western San Bernardino County. The project site slopes generally in a southwesterly direction with an average slope of 1.5 to 2 percent. Runoff flows though the site primarily in a sheet flow condition until flows are generally intercepted by the I-15 freeway and directed into the existing regional flood control facilities or detention basins.

There are two major earthen drainage channels that existing within the proposed project limits. The channels reside within the most southern portion of the proposed development (Planning Area 4) and ultimately tie into the San Sevaine Channel, an off-site improved flood control channel. Under the proposed condition, the on-site channels will be abandoned and filled in as development occurs.

2.1.2 Flood Control Master Plan & Drainage Facilities

Responsibilities for storm drain systems are shared by the City of Fontana and the San Bernardino Flood Control District (SBCFCD). The SBCFCD is the agency responsible for operations and maintenance of the regional flood control facilities within the City of Fontana (Flood Control Zone 2 per SBCFCD Master Zone Map) and surrounding cities including channels, debris basins and detention facilities. The City of Fontana is responsible for the design, acceptance and maintenance of the local drainage system, local detention basins and storm drain lines that connect into the County regional facilities.

To assist with the regional flood control planning, the City of Fontana developed and adopted a Master Plan of Drainage (MPD) that included the proposed project within the Master Plan area. The master planned facilities are typically designed to accommodate existing conditions and future build out conditions. The project will be responsible for safely conveying the 100-year proposed discharge to a regional or city master planned drainage facility.

The proposed project is divided up into four primary planning areas and is served by four (4) master planned facilities. Planning Area 1 includes the most northerly development area north of Summit Avenue, west of Lytle Creek Road and east of the I-15. Planning Area 1 primarily drains into the Summit Avenue Storm Drain, a regional 12' x 8' reinforced concrete box (RCB) that drains east to west towards the I-15 freeway, turns southerly along the south side of the I-15 and then crosses under the freeway at Cherry Avenue and drains into Sevaine Basin #5. A portion of the flows also drain into the Hawker-Crawford Channel which connects into Basin #3. Planning Area 2 includes the development area south of Planning Area 1 and is located west of San Sevaine Road, east of Cherry Avenue and north of N. Frontage Road adjacent to the I-15. Planning Area 2 drains to the Highland Channel, a primarily existing concrete open channel with an enclosed portion related to the undercrossing at San Sevaine Road. Planning Area 3 includes the development area east of Cherry Avenue, west of San Sevaine Road and north of Walnut Avenue, and drains into either the Baseline Avenue Storm Drain or the San Sevaine Channel. Planning Area 4 includes the most southern

development area and is bounded by Cherry Avenue to the east, Baseline Avenue to the south, Highland Channel to the north and I-15 to the west. Similar to Planning Area 3, runoff drains to either the Baseline Avenue storm drain or the San Sevaine Channel. Attachment B provides an exhibit of the major planning areas of the project, existing and proposed peak flows and major flood control facilities (existing and proposed).

2.1.3 Existing Hydrology Conditions

The existing hydrology conditions for each planning area were evaluated to establish baseline runoff conditions and to provide a comparison for the future development conditions. Following the parameters of the San Bernardino County Hydrology Manual,[1] a portion of the existing site was modeled to determine a representative runoff rate of the undeveloped condition (in cubic feet per acre [cfs/ac]) and then used to calculate the remaining portions of the site for the 2-year, 25-year and 100-year event. A summary of the existing hydrology conditions are provided in Table 2. The calculations should be accepted as preliminary and are for Program-Level EIR purposes only to estimate peak flows between existing and proposed conditions. Refer to Attachment B for planning areas and existing peak flow rates.

Table 2 Summary of Existing Hydrology Conditions

EXISTING CONDITIONS				
		Peak Discharge Rate (cfs)		
	Acreage	2-Year	25-Year	100-Year
Planning Area 1				
Existing conditions	148.8 ac	109.3	248.4	317.9
Primary Flood Control Facility	Hawker - Crawford Channel (Basin #3); Summit Avenue Storm Drain (Basin #5)			
Planning Area 2				
Existing conditions	235.2	132.8	301.9	386.4
Primary Flood Control Facility	San Sevaine Basin 5; Highland Channel			
Planning Area 3				
Existing conditions	192.5	110.1	250.3	320.3
Primary Flood Control Facility	San Sevaine Channel; Baseline Avenue Box Culvert			
Planning Area 4				
Existing conditions	324.9	182.5	414.7	530.8
Primary Flood Control Facility	San Sevaine Channel; Baseline Avenue Box Culvert			

Notes: cfs cubic feet per second
Source: Hall & Foreman, Inc. (2011, January). Westgate Specific Plan Infrastructure Study.

2.1.4 Floodplain Mapping

[1] Williamson and Schmid Civil Engineers. (1986, August). County of San Bernardino Hydrology Manual.

The National Flood Insurance Act (1968) established the National Flood Insurance Program, which is based on the minimal requirements for flood plain management and is designed to minimize flood damage within Special Flood Hazard Areas. The Federal Emergency Management Agency (FEMA) is the agency that administrates the National Flood Insurance Program. Special Flood Hazard Areas (SFHA) are defined as areas that have a 1 percent chance of flooding within a given year, also referred to as the 100-year flood. Flood Insurance Rate Maps (FIRMs) were developed to identify areas of flood hazards within a community.

According to the Flood Insurance Rate Map (FIRM) catalog, there are three FIRMs produced by FEMA that cover the Westgate Specific Plan project area:

- 06071C8651H (revised August 28, 2008)
- 06071C8635H (revised August 28, 2008)
- 06071C7915H (revised August 28, 2008)

Based on the most recent FIRM maps, the majority of the proposed project resides within Zone X and does not require flood insurance. A small portion of the southwestern development area is located in an area protected by levee's and does not require flood insurance. See Attachment C for Flood Zones and the project area highlighted in red.

2.2 WATER QUALITY

2.2.1 Regulatory Framework

Clean Water Act

Controlling pollution of the nation's receiving water bodies has been a major environmental concern for more than three decades. Growing public awareness of the impacts of water pollution in the United States culminated in the establishment of the federal Clean Water Act[2] (CWA) in 1972, which provided the regulatory framework for surface water quality protection.

The United States Congress amended the CWA in 1987 to specifically regulate discharges to waters of the US from public storm drain systems and storm water flows from industrial facilities, including construction sites, and require such discharges be regulated through permits under the National Pollutant Discharge Elimination System (NPDES).[3] Rather than setting numeric effluent limitations for storm water and urban runoff, CWA regulation calls for the implementation of Best Management Practices (BMPs) to reduce or prevent the discharge of pollutants from these activities to the Maximum Extent Practicable (MEP) for urban runoff and meeting the Best Available Technology Economically achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) standards for construction storm water. Regulations and permits have been implemented at the federal, state, and local level to form a comprehensive regulatory framework to serve and protect the quality of the nation's surface water resources.

[2] Also referred to as the Federal Water Pollution Control Act of 1972.
[3] CWA Section 402(p).

In addition to reducing pollution with the regulations described above, the CWA also seeks to maintain the integrity of clean waters of the United States – in other words, to keep clean waters clean and to prevent undue degradation of others. As part of the CWA, the Federal Antidegradation Policy [40 CFR Section 131.12] states that each state "shall develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy…" [40 CFR Section 131.12(a)]. Three levels of protection are defined by the federal regulations:

1. Existing uses must be protected in all of the Nation's receiving waters, prohibiting any degradation that would compromise those existing uses;
2. Where existing uses are better than those needed to support propagation of aquatic wildlife and water recreation, those uses shall be maintained, unless the state finds that degradation is "…necessary to accommodate important economic or social development" [40 CFR Section 131.12(a)(2)]. Degradation, however, is not allowed to fall below the existing use of the receiving water; and
3. States must prohibit the degradation of Outstanding National Resource Waters, such as waters of National and State parks, wildlife refuges, and waters of exceptional recreation or ecological significance.

Porter-Cologne Water Quality Act

In the State of California, the State Water Resources Control Board (SWRCB) and local Regional Water Quality Control Boards (RWQCBs) have assumed the responsibility of implementing US EPA's NPDES Program and other programs under the CWA such as the Impaired Waters Program and the Antidegradation Policy. The primary quality control law in California is the Porter-Cologne Water Quality Act (Water Code Sections 13000 et seq.). Under Porter-Cologne, the SWRCB issues joint federal NPDES Storm Water permits and state Waste Discharge Requirements (WDRs) to operators of municipal separate storm sewer systems (MS4s), industrial facilities, and construction sites to obtain coverage for the storm water discharges from these operations.

Basin Plan for the Santa Ana Region

In addition to its permitting programs, the SWRCB, through its nine RWQCBs, developed Regional Water Quality Control Plans (or Basin Plans) that designate beneficial uses and water quality objectives for California's surface waters and groundwater basins, as mandated by both the CWA and the state's Porter-Cologne Water Quality Control Act. Water quality standards are thus established in these Basin Plans and provide the foundation for the regulatory programs implemented by the state. The Santa Ana RWQCB's Basin Plan, which covers the Westgate Specific Plan project area, specifically (i) designates beneficial uses for surface waters and groundwaters, (ii) sets narrative and numerical objectives that must be met in order to protect the beneficial uses and conform to the State's antidegradation policy, and (iii) describes implementation programs to protect all waters in the Region.[4] In other words, the Santa Ana RWQCB Basin Plan provides all relevant information necessary to carry out federal mandates for the antidegradation policy, 303(d) listing of impaired waters, and related TMDLs, and provides information relative to NPDES and WDR permit limits.

[4] California Regional Water Quality Control Board, San Diego. (1995, January 24). *Water Quality Control Plan for the Santa Ana River Basin (8)*. Updated February 2008.

Clean Water Act Section 303(d) List of Water Quality Limited Segments

Under Section 303(d) of the CWA, states are required to identify water bodies that do not meet their water quality standards. Once a water body has been listed as impaired, a Total Maximum Daily Load (TMDL) for the constituent of concern (pollutant) must be developed for that water body. A TMDL is an estimate of the daily load of pollutants that a water body may receive from point sources, non-point sources, and natural background conditions (including an appropriate margin of safety), without exceeding its water quality standard. Those facilities and activities that are discharging into the water body, collectively, must not exceed the TMDL.

Storm water runoff from the Westgate Specific Plan project area ultimately discharges into San Sevaine Channel, which is not listed as impaired. However, San Sevaine Channel drains to the Santa Ana River Reach 3, which is listed as impaired for copper, lead, and pathogens per the 2010 California 303(d) List of Water Quality Limited Segments.[5]

Total Maximum Daily Loads (TMDLs)

Once a water body has been listed as impaired on the 303(d) list, a TMDL for the constituent of concern (pollutant) must be developed for that water body. A TMDL is an estimate of the daily load of pollutants that a water body may receive from point sources, non-point sources, and natural background conditions (including an appropriate margin of safety), without exceeding its water quality standard. Those facilities and activities that are discharging into the water body, collectively, must not exceed the TMDL. In general terms, municipal, small MS4, and other dischargers within each watershed are collectively responsible for meeting the required reductions and other TMDL requirements by the assigned deadline.

In 1994 and 1998, the Santa Ana RWQCB listed various water bodies in the Middle Santa Ana River (MSAR) watershed to the CWA Section 303(d) list due to exceedances of the fecal coliform objective established to protect Water Contact Recreation (REC-1) beneficial uses. The water bodies listed included the Santa Ana River Reach 3, Chino Creek Reaches 1 & 2, Mill Creek (Prado Area), Cucamonga Creek (Reach 1), and Prado Park Lake. On February 3, 2005, the Santa Ana RWQCB amended the Basin Plan to incorporate the Middle Santa Ana River Waterbodies Bacterial Indicator TMDLs (referred to as "MSAR Bacteria Indicator TMDL"). The amendment was adopted by the Santa Ana RWQCB on August 26, 2005, approved by the SWRCB Office of Administrative Law on September 1, 2006, and subsequently approved by the US EPA on May 16, 2007.[6]

The TMDL/Basin Plan Amendment specifies TMDLs, wasteload allocations for point source discharges (WLAs) and load allocations for nonpoint source discharges (LAs) for fecal coliform and *E. coli* in MSAR watershed water bodies. WLAs are specified for urban discharges and discharges from Confined Animal Feeding Operations (CAFOs), including storm water. LAs are specified for runoff from other types of agriculture and from natural sources (open space/undeveloped forest land). TMDLs, WLAs and LAs are specified for both dry weather discharges and wet weather discharges, with separate compliance schedules. To account for unknowns such as bacterial re-growth, die-off and

[5] State Water Resources Control Board (SWRCB). 2010 California 303(d) List of Water Quality Limited Segments. Approved by the US EPA October 11, 2011.

[6] Santa Ana Watershed Project Authority. (n.d.). Background Middle Santa Ana Bacterial Indicator TMDL. Retrieved June 13, 2012, from http://www.sawpa.org/roundtable-MSARTF.html.

dilution, the TMDL/Basin Plan Amendment specifies an explicit margin of safety of 10% applied to the TMDLs, waste load allocations and load allocations. [7]

Summarized below are the numeric targets selected in order to meet the water quality objectives for the protection of beneficial uses in the impaired waters as part of the TMDL. Regardless of the allocation (WLA or LA), the fecal indicator bacteria numeric targets are the same.[8]

- Fecal coliform: 5-sample/30-day logarithmic mean less than 180 organisms/ 100 mL and not more than 10% of the samples exceed 360 organisms/100 mL for any 30-day period.
- *E. coli*: 5-sample/30-day logarithmic mean less than 113 organisms/100 mL and not more than 10% of the samples exceed 212 organisms/100 mL for any 30-day period.

In response to the TMDL, the County of San Bernardino developed and submitted a final Middle Santa Ana River (MSAR) Bacterial Indicator Total Maximum Daily Load (TMDL) Comprehensive Bacteria Reduction Plan (CBRP) in Compliance with Board Order, R8-2010-0036, Requirement V.D.1.B on June 28, 2011. The CBRP relies on "multiple barriers" to reduce/meet the urban waste load allocation during dry weather conditions including prevention, LID measures, expanded urban source evaluation programs, structural BMPs and interception/diversion if necessary.[9]

Construction General Permit

The Construction General Permit (CGP), Order No. 2009-0009-DWQ, NPDES Permit No. CAS000002, regulates storm water and non-storm water discharges associated with construction activities disturbing 1 acre or greater of soil. Construction sites that qualify must submit a Notice of Intent (NOI) to gain permit coverage or otherwise be in violation of the CWA and California Water Code.

The CGP requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) for each individual construction project greater than or equal to 1 acre of disturbed soil area (regardless of the site's Risk Level). The SWPPP must list Best Management Practices (BMPs) that the discharger will use to control sediment and other pollutants in storm water and non-storm water runoff; the BMPs must meet the BAT and BCT performance standards. Additionally, the SWPPP must contain a visual monitoring inspection program; a chemical monitoring programs for sediment and other "non-visible" pollutants to be implemented based on the Risk Level of the site, as well as inspection, reporting, training and record-keeping requirements.

In addition to the requirements above, the CGP contains requirements for construction sites based on the sites risk of discharging construction-related pollutants, as well as additional monitoring and reporting requirements. Each construction project must complete a Risk Assessment prior to commencement of construction activities, which assigns a Risk Level to the site and determines the

[7] Santa Ana Regional Water Quality Control Board (RWQCB). (2005, February 3). Resolution No. R8-2005-0001. Resolution amending the Water Quality Control Plan for the Santa Ana River Basin to Incorporate Bacterial Indicator Total Maximum Daily Loads (TMDLs) for Middle Santa Ana River Watershed Bodies. Adopted August 26, 2005.
[8] CDM. (2010, February 15). Middle Santa Ana River Watershed Bacterial Indicator TMDL: Triennial Report.
[9] CDM. (2011, June 28). Comprehensive Bacteria Reduction Plan. Submitted to California Regional Water Quality Board Santa Ana Region by the San Bernardino County Flood Control District.

level of water quality protection/requirements the site must comply with. The Permit also includes provisions for meeting specific Action Levels for pollutants based on the sites' Risk Level.

Individual projects within the Westgate Specific Plan that disturb greater than 1 acre will be subject to the storm water discharge requirements of the CGP. The projects will require submittal of a NOI, SWPPP, Risk Assessment and other Permit Registration Documents (PRDs) required by the CGP prior to the commencement of soil disturbing activities. In the Santa Ana Region, the SWRCB is the permitting authority, while the Santa Ana RWQCB provides local oversight and enforcement of the CGP.

San Bernardino County MS4 Permit

In January 2010, the Santa Ana RWQCB reissued the MS4 Storm Water Permit as WDR Order R8-2010-0036 (NPDES Permit No. CAS618036) to the San Bernardino County Flood Control District, the County of San Bernardino, and the incorporated cities of San Bernardino County within the Santa Ana Region (also referred to as "fourth-term MS4 Permit"). The permit contains provisions for receiving water limitations, discharge prohibitions, and storm water management, monitoring and reporting for reducing pollutants to the MEP standard.

In response to the fourth-term MS4 Permit, the County developed a Model Area-Wide Local Implementation Plan (LIP) in July 2010 that was approved by the Santa Ana RWQCB in January 2011. The Local Implementation Plan (LIP), a requirement of the MS4 Permit (Sections III.A.2.a; III.B1), describes how the City of Fontana implements the requirements of the MS4 Permit within its own jurisdiction. In addition, the County developed an in-depth Technical Guidance Document (TGD) for Water Quality Management Plans (WQMP) in July 2011 and is waiting for Santa Ana RWQCB approval. Accordingly, the LIP and TGD are the principal documents that comprehensively translate the MS4 Permit requirements into standards, conditions of approvals and actions that manage water quality in the local MS4.

This new MS4 Permit includes new requirements that follow similar changes that other Regional Boards have made in their recent permit renewals, such as within the Orange County portion of the Santa Ana region as well as the San Diego RWQCB. This includes requirements pertaining to hydromodification[10] and low impact development (LID) features associated with new developments and redevelopments.

City of Fontana Water Quality Management Plan (WQMP)

One requirement of the City's Storm Water Program is the provision to prepare Water Quality Management Plans (WQMPs) for specified categories of development aimed at reducing pollutants in post-development runoff. Specifically, a WQMP includes Santa Ana RWQCB approved BMPs, where applicable, that address post-construction management of storm water runoff water quality. This includes operation and maintenance requirements for all structural or treatment control BMPs required for specific categories of developments to reduce pollutants in post-development runoff to the MEP. In addition, projects designated as "Priority Projects" are required to incorporate LID features and BMPs to address pollutants of concern from the project site. In accordance with the fourth-term MS4 Permit and 2011 TGD for WQMPs, a project is considered a Priority Project if it meets any of the following criteria:

[10] Hydromodification is generally defined as the alteration of natural flow characteristics.

a. All significant redevelopment projects. Significant redevelopment is defined as the addition or replacement of 5,000 or more square feet of impervious surface on an already developed site subject to discretionary approval of the Permittee. Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of the facility, or emergency redevelopment activity required to protect public health and safety. Where redevelopment results in an increase of less than fifty percent of the impervious surfaces of a previously existing developed site, and the existing development was not subject to WQMP requirements, the numeric sizing criteria discussed below applies only to the addition or replacement, and not to the entire developed site. Where redevelopment results in an increase of fifty percent or more of the impervious surfaces of a previously existing developed site, the numeric sizing criteria applies to the entire development.

b. New development projects that create 10,000 square feet or more of impervious surface (collectively over the entire project site) including commercial, industrial, residential housing subdivisions (i.e., detached single family home subdivisions, multi-family attached subdivisions or townhomes, condominiums, apartments, etc.), mixed-use, and public projects. This category includes development projects on public and private land, which fall under the planning and building authority of the Permittees.

c. Automotive repair shops (with SIC codes 5013, 5014, 5541, 7532-7534, 75367539).

d. Restaurants (with SIC code 5812) where the land area of development is 5,000 square feet or more.

e. All hillside developments of 5,000 square feet or more which are located on areas with known erosive soil conditions or where the natural slope is twenty five percent or more.

f. Developments of 2,500 square feet of impervious surface or more adjacent to (within 200 feet) or discharging directly into environmentally sensitive areas (ESAs) such as areas designated in the Ocean Plan as areas of special biological significance (ASBS) or water bodies listed on the CWA Section 303(d) list of impaired waters.

g. Parking lots of 5,000 square feet or more exposed to storm water. Parking lot is defined as land area or facility for the temporary parking or storage of motor vehicles.

h. Retail Gasoline Outlets (RGOs) that are either 5,000 sq feet or more, or have a projected average daily traffic of 100 or more vehicles per day.

i. Emergency public safety projects in any of the above-listed categories shall be excluded if the delay caused due the requirement for a WQMP compromises public safety, public health and/or environmental protection.

As required by the City of Fontana's LIP and municipal ordinances on storm water quality management, project-specific WQMPs must be submitted to the City for approval prior to the City issuing any building or grading permits. Since the Westgate Specific Plan includes the future development of several of the categories listed above, the individual projects and Planning Areas will be subject to the requirements of the City of Fontana WQMP. Individual projects within the Westgate Specific Plan area will be required to submit a project-specific WQMP to ensure all requirements of the City of Fontana's Storm Water Program/LIP and ordinances on storm water quality are addressed

for that project. This includes meeting any new requirements associated with Priority Projects, as well as the requirements of the MS4 permit re-issuance, which includes LID features and/or hydromodification controls.

2.2.2 *Existing Surface Water Conditions*

Runoff from the project site ultimately discharges into the San Sevaine Channel, which drains to the Santa Ana River, Reach 3 and is part of the larger Santa Ana River Hydrologic Unit (801.21). Beneficial uses and water quality objectives have been developed for the Santa Ana River, and are discussed below.

Beneficial Uses

The beneficial uses for Reach 3 of the Santa Ana River, as outlined in the Basin Plan, are:

- AGR Agricultural Supply
- GWR Groundwater Recharge
- REC1 Water Contact Recreation
- REC2 Non-Contact Water Recreation
- WARM Warm Freshwater Habitat
- WILD Wildlife Habitat
- RARE Rare, Threatened, or Endangered Species
- SPWN Spawning, Reproduction and Development

Water Quality Objectives

In order to maintain the beneficial uses listed above, surface waters must achieve certain water quality objectives outlined in the Basin Plan. Table 3 summarizes the specific water quality objectives for Santa Ana River, Reach 3.

Table 3 Water Quality Objectives for Santa Ana River, Reach 3.

Total Dissolved Solids (TDS)	Hardness	Sodium	Chloride	Total Inorganic Nitrogen	Sulfate	Chemical Oxygen Demand
700	350	110	140	10[a]	150	30

Notes:
All units in mg/L unless otherwise noted.
Source: Regional Water Quality Control Board (RWQCB) Santa Ana Region. Water Quality Control Plan for the Santa Ana River Basin (8). January 24, 1995, updated February 2008.
a. Total nitrogen, filtered sample.

In addition to the specific objectives, qualitative and quantitative general water quality objectives have been set in the Basin Plan for the following constituents:

- algae
- ammonia
- bacteria/coliform
- boron
- chemical oxygen demand
- chloride
- chlorine
- color
- total dissolved solids
- floatables
- fluoride
- hardness
- nitrogen
- metals
- nitrate
- oil & grease
- dissolved oxygen
- pH
- radioactivity
- sodium
- settleable solids
- sulfate
- sulfides
- surfactants
- taste & odor
- temperature
- toxic substances
- turbidity
- methylene blue-activated substances (MBAS)

Surface Water Quality Conditions

As part of the fourth-term MS4 Permit, the consortium of the San Bernardino County Flood Control District (SBCFCD), the County of San Bernardino, and the incorporated cities of San Bernardino County within the Santa Ana Region developed an Integrated Watershed Monitoring Program (IWMP). The overall objective of the IWMP is to provide data to support the development of an effective watershed and key environmental resources management program that focuses resources on the priority pollutants of concern. Based on a risk-based analysis of historical water quality data collected for almost 20 years, the Permittees identified a priority list of pollutants of concern in the MSAR watershed. The pollutants of concern, in order of priority from high to low are: (1) high priority–bacteria; (2) medium priority–metals (zinc, copper, lead); and (3) low priority–nutrients, total suspended solids (TSS) and chemical oxygen demand (COD). This priority ranking provides the basis for a risk-based approach to overall Program storm water management and to direct resources to the most important water quality monitoring and improvement activities.[11] The finding of bacteria as the highest priority further substantiates the need for implementation of the MSAR Bacteria Indicator TMDL to reduce controllable sources of bacteria within the watershed for both dry weather and wet weather flows.

As stated previously, various water bodies in the MSAR watershed are listed on the state 303(d) list of impaired waters due to high levels of fecal coli form bacteria, including the Santa Ana River Reach 3, which runoff from the project site ultimately discharges to. The MSAR TMDLs established limits for bacterial source indicators for the Santa Ana River Reach 3 (not in San Bernardino County), Chino Creek Reaches 1 and 2), Prado Park Lake, Mill Creek (Prado Area), and Cucamonga Creek (Reach1). The purpose of the MSAR TMDL is to assure that REC1 beneficial uses are protected. Wasteload allocations were adopted for fecal coliform and *E. coli* in the above impaired water bodies. Although the Basin Plan currently does not have an established objective for *E. coli*, the Stormwater Quality Standards Task Force is expected to make recommendations for the adoption of alternative bacterial indicators such as *E. coli*, based on US EPA's "Ambient Water Quality Criteria for Bacteria - 1986". These and other recommendations of the Task Force are likely to result in changes to recreational water quality objectives. When and if the Basin Plan is amended to incorporate new beneficial use

[11] Larry Walker Associates. (2011, August). San Bernardino County Stormwater Program Integrated Watershed Monitoring Program (IWMP). Submitted to Santa Ana Regional Water Quality Control Board.

definitions, designations and/or bacterial standards, the MSAR TMDLs will be revised, as appropriate.[12]

In accordance with the requirements of the fourth-term MS4 Permit, a Comprehensive Bacteria Reduction Plan (CBRP) was developed to provide a comprehensive plan for attaining effluent limits/WLAs for the MSAR TMDL by integrating existing control programs and efforts with new permit mandates and other additional activities necessary to address controllable urban sources of bacterial indicators. Implementation of the CBRP relies on a step-wise approach that implements key actions to identify controllable urban sources of bacterial indicators, evaluate and select a mitigation alternative, and, where necessary, construct structural BMPs to mitigate controllable sources. Selected BMPs range from programmatic activities that set the stage for other CBRP elements (e.g., dry weather flow source evaluation activities) to specific activities that can reduce dry weather flows or mitigate controllable urban sources of bacterial indicators.[13]

The TMDL implementation requirements were also incorporated into the fourth-term MS4 Permit. As a MS4 Permittee in the MSAR watershed, the City of Fontana will evaluate and modify if necessary existing ordinances and authority available to manage dry weather runoff from water use practices and improve management of animal wastes to control known pathogen or bacterial indicator sources. In addition, the city will also evaluate potential for transient camps to contribute bacterial indicators to MS4 dry weather flow, and if determined necessary, develop and implement transient camp closure activities.

Since the Westgate Specific Plan area is located within the MSAR watershed area, the individual projects will be required to implement BMPs to incorporate LID BMPs that fully retain storm water or provide medium or high effectiveness in reducing bacteria pollutants prior to release, if on-site retention is feasible. Based on the highly permeable soil conditions and favorable infiltration conditions, infiltration best management practices (BMPs) will be utilized within the Westgate Specific Plan. In addition, the projects will also be required to incorporate source control BMPs identified in the CBRP, unless they do not apply to the proposed project.[14] These include street sweeping, irrigation or water conservation practices, septic system management, pet waste management and maintenance. BMPs proposed for the Westgate Specific Plan project are discussed further in Section 4.2.2 of this report.

[12] California Regional Water Quality Control Board, Santa Ana Region. (2010, January 29). Waste Discharge Requirements for the County of San Bernardino and the Incorporated Cities of San Bernardino County, Order No. R8-2010-0036, NPDES No. CAS618036, Areawide Urban Storm Water Runoff.

[13] CDM. (2011, June 28). Comprehensive Bacteria Reduction Plan. Submitted to California Regional Water Quality Board Santa Ana Region by the San Bernardino County Flood Control District.

[14] CDM. (2011, July 28). San Bernardino County Stormwater Program Technical Guidance Document for Water Quality Management Plans (WQMP). Submitted to the California Regional Water Quality Board Santa Ana Region July 29, 2011.

2.2.3 *Existing Groundwater Conditions*

Geographically, the Westgate Specific Plan project area is located in the northeast portion of the Chino-North Basin, Management Zone 1, as designated in the Basin Plan. The larger Chino Basin is generally bounded by the Chino Hills to the west, the San Gabriel Mountains and the Cucamonga Basin to the north, the Rialto-Colton fault on the east, the Jurupa Mountains to the southeast, and the Puente Hills and Chino Fault to the south.[15]

Beneficial Uses

The Basin Plan identifies the Chino-North Management Zone 1 as having four beneficial uses. They are:

- MUN – Municipal and Domestic Supply;
- IND – Industrial Service Supply; and
- PROC – Industrial Process Supply.
- AGR – Agricultural Supply;

Water Quality Objectives

Specific water quality objectives have been established for the Chino-North Management Zone 1 basin to maintain its beneficial uses, and are summarized in Table 4.

Table 4 Water Quality Objectives for Chino Groundwater Management Zones.

Groundwater Management Zone [a]	Total Dissolved Solids (TDS)	Hardness	Sodium	Chloride	Total Inorganic Nitrogen	Sulfate
Chino-North "Maximum Benefit"	420	--	--	--	5.0	--
Chino 1 "Antidegradation"	280	--	--	--	5.0	--

Notes: All units in mg/L unless otherwise noted.
Source: Regional Water Quality Control Board (RWQCB) Santa Ana Region. Water Quality Control Plan for the Santa Ana River Basin (8). January 24, 1995, updated February 2008.
a. "Maximum benefit" objectives apply unless Regional Board determines that lowering of water quality is not of maximum benefit to the people of the state; in that case, "antidegradation" objectives apply (for Chino North, antidegradation objectives for Chino 1, 2, 3 would apply if maximum benefit is not demonstrated).

[15] California Department of Water Resources. (2003). California's Groundwater. Bulletin 118. Last update January 20, 2006.

In addition to specific numeric water quality objectives, narrative objectives for all groundwaters in the Santa Ana Region also apply to the Chino-North Groundwater Management Zone. Narrative objectives have been established for the following constituents:

- arsenic
- boron
- cyanide
- MBAS
- oil & grease
- sodium
- total dissolved solids
- bacteria, coliform
- chloride
- fluoride
- metals
- pH
- sulfate
- toxicity
- barium
- color
- hardness (as $CaCO_3$)
- nitrate
- radioactivity
- taste & odor

Groundwater Conditions

Based on the California Groundwater Bulletin 118, the project is located in the Upper Santa Ana Valley Groundwater Basin, Chino Subbasin. The basin includes water-bearing units consisting of Holocene and Upper Pleistocene Alluvium. The Holocene Alluvium consists primarily of alluvial-fan deposits, with maximum thickness of 150 feet that are coarsest at the mouths of the canyons. The Pleistocene Alluvium is exposed primarily in the northern part of the subbasin and supplies most of the water to wells within the subbasin. The Alluvium is about 600 to 700 feet thick containing finer, alluvial fan deposits and coarser, fluvial deposits.[16] Within the vicinity of the Westgate Specific Plan area, groundwater depths range between 550 to 600 feet below ground surface.[17]

There are several groundwater recharge facilities throughout the subbasin, including Basins #1-5 as part of the San Sevaine Spreading Grounds located west of the Westgate Specific Plan project area. Percolation tests by the Chino Basin Municipal Water District in the San Sevaine Spreading Grounds and San Sevaine Basins indicated a sustained percolation rate of 2.5 feet per day.[18]

2.2.4 Existing Soil Conditions

To determine geotechnical information on the project site's soils as they relate to runoff characteristics, a Custom Soils Resource Report for the project site was generated utilizing data from the Natural Resources Conservation Service. This report has been included for reference in Attachment D. Soils on the site include Hanford course sandy loam (HaC, ~ 22%), PS Amments and fluvents (Ps, ~1%), Soboba gravelly loamy sand (SoC, ~3%), SO Boba stony loamy sand (SpC, ~ 1%), Tujunga loamy sand (TuB, ~1%) and Tujunga gravelly loamy sand (TvC, ~72%). All soils fall within shallow slope ranges from 2 to 9 percent. TvC is the most prominent soil within the project site which was formed by the alluvial fans from the foothills of the San Gabriel Mountains. The soil is slightly acidic, and light brown loamy sand to brown coarse sand. The soil is very permeable, and runoff is slow to very slow. Roots can penetrate to a depth of 60 inches or greater. Available water capacity is 4 to 5 inches. All of the soil types belong to the Hydrologic Soil Group A, and capacity of the most limiting layer to transmit water (Ksat) are high to very high (5.95 to 19.88 in/hr).[19]

[16] California Department of Water Resources. (2003). California's Groundwater. Bulletin 118. Updated January 20, 2006.
[17] Wildermuth Environmental, Inc. (2006). Depth to Groundwater Contours, Chino Basin Fall 2006. Retrieved September 7, 2012, from http://www.cbwm.org/docs/engdocs/maps/DTW_CBWM.PDF
[18] J.V.R. and Southwestern Field Biologists. (1994, February). San Sevaine Creek Water Project Initial Study.
[19] United States Department of Agriculture, Natural Resources Conservation Service. (2012, August 14). Custom Soil Resource Report for San Bernardino County Southwestern Part, California. Westgate Specific Plan, Fontana.

3. THRESHOLDS OF SIGNIFICANCE

California Environmental Quality Act (CEQA) significance criteria are used to evaluate the degree of impact caused by a development project on environmental resources such as hydrology and water quality. According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would impact any of the items listed below.

Would the Project:

A. Violate any water quality standards or waste discharge requirements?

B. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table? (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)

C. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or in a manner which would result in a substantial erosion or siltation on- or off-site?

D. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?

E. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

F. Otherwise substantially degrade water quality?

G. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

H. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

I. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

J. Be subject to inundation by seiche, tsunami, or mudflow?

Should the answers to these environmental factors prove to be a potentially significant impact, mitigation measures would be required to reduce those impacts to a less-than-significant threshold. Impacts B, C, D, E, G, H, I, and J are associated with hydrology and drainage and will be analyzed within Section 4.1.3 of this report. Impacts A and F are associated with water quality and will be analyzed within Section 4.2.3.

4. ENVIRONMENTAL IMPACTS

4.1 HYDROLOGY

4.1.1 Proposed On-Site Hydrology Conditions

The purpose of the proposed conditions evaluation is to determine potential impacts associated with the development of the Project. The proposed Westgate Specific Plan project includes the removal of several existing interim debris basins and development of residential, commercial retail, schools, open space and roadways. Attachment A is the proposed Site Plan for the Westgate project.

Under proposed conditions, storm water runoff will flow in similar patterns to existing conditions, generally flowing south and west towards existing storm drain facilities. New storm drain facilities will be constructed on-site to convey runoff to the existing storm drain lines that traverse from north to south and east to west through the project site. All project runoff will flow to the existing regional flood control facilities that are currently accepting runoff from the undeveloped condition.

As stated previously in Section 2.1.2, the proposed project is divided up into four primary planning areas and is served by four (4) existing master planned facilities. Attachment B provides a summary of the planning areas and master planned facilities.

Planning Area 1 includes the most northerly development area north of Summit Avenue, west of Lytle Creek Road and east of the I-15. Planning Area 1 includes an existing 40-acre commercial retail center at the southwestern corner and proposed land uses include residential, open space and a school. Planning Area 1 primarily drains into the Summit Avenue Storm Drain, a regional 12' x 8' RCB that drains east to west towards the I-15 freeway, turns southerly along the south side of the I-15 and then crosses under the freeway at Cherry Avenue and drains into Sevaine Basin #5. A portion of the flows will also drain into the Hawker-Crawford Channel which connects into Basin #3.

Planning Area 2 includes the development area south of Planning Area 1 and is located west of San Sevaine Road, east of Cherry Avenue and north of N. Frontage Road adjacent to the I-15. Planning Area 2 will consist primarily of business parks with some open space and residential abutting the business park uses. The area will be served by the Highland Channel, a primarily existing concrete open channel with an enclosed portion related to the undercrossing at San Sevaine Road. The Highland Channel ultimately ties into the San Sevaine Channel downstream.

Planning Area 3 includes the development area east of Cherry Avenue, west of San Sevaine Road and north of Walnut Avenue. Planning Area 3's largest land use includes a proposed high school with open space, residential and business park for the remainder of the planning area. Planning Area 3 will drain into either the Baseline Avenue Storm Drain or the San Sevaine Channel directly. The Baseline Avenue storm drain ultimately ties into San Sevaine Channel at the southern end of the project site.

Planning Area 4 includes the most southern development area and is bounded by Cherry Avenue to the east, Baseline Avenue to the south, Highland Channel to the north and I-15 to the west. Planning Area 4 land uses include the utility open space corridor that bisects the planning area, business parks

to the west, residential, and commercial. Similar to Planning Area 3, runoff will drain to either the Baseline Avenue storm drain or the San Sevaine Channel.

The project includes a variety of connections to these existing flood control facilities. All of the major existing proposed and regional facilities (30" or greater) are provided on the Storm Drain Master Plan exhibit (Attachment E). Attachment F provides a summary of the existing and proposed hydrology calculations and assumptions for preparing the preliminary calculations. Table 5 summarizes the proposed runoff conditions as compared to the existing conditions.

Table 5 Summary of Proposed Hydrology Conditions

PROPOSED CONDITIONS					
			Peak Discharge Rate (cfs)		
	Acreage	Imperviousness	2-Year	25-Year	100-Year
Planning Area 1					
Existing Conditions	148.8 ac	29%	109.3	248.4	317.9
Proposed Conditions	148.8 ac	66%	141.0	320.5	410.2
Primary Flood Control Facility	Hawker - Crawford Channel (Basin #3); Summit Avenue Storm Drain (Basin #5)				
Planning Area 2					
Existing Conditions	235.2 ac	5%	132.8	301.9	386.4
Proposed Conditions	235.2 ac	72%	242.6	551.3	705.7
Primary Flood Control Facility	San Sevaine Basin #5; Highland Channel				
Planning Area 3					
Existing Conditions	192.5 ac	5%	110.1	250.3	320.3
Proposed Conditions	192.5 ac	65%	210.5	478.4	612.4
Primary Flood Control Facility	San Sevaine Channel; Baseline Avenue Box Culvert				
Planning Area 4					
Existing Conditions	324.9 ac	5%	182.5	414.7	530.8
Proposed Conditions	324.9 ac	57%	297.1	675.3	864.4
Primary Flood Control Facility	San Sevaine Channel; Baseline Avenue Box Culvert				

Notes: cfs cubic feet per second
Source: Hall & Foreman, Inc. (2011, January). Westgate Specific Plan Infrastructure Study.

Under the proposed condition, runoff rates will increase significantly over existing conditions. In order to ensure runoff is conveyed from the project site to off-site regional flood control facilities, on-site storm drain systems must be appropriately sized. Hall & Foreman prepared a planning level hydrology analysis to determine preliminary sizing and alignments for the storm drain infrastructure

required to support the Westgate development plan. Peak flow discharges, preliminary sizing and alignments for a 25-year storm event were provided for the proposed condition. Refer to Attachment E for additional details.

4.1.2 Regional Hydrology Conditions

In order to ensure runoff is safely conveyed from the project to downstream regional flood control facilities, it is important that the facilities have been sized to accommodate the upstream development.

Regional scale flood control improvements generally follow the City of Fontana Master Plan of Drainage (MPD). Since the time the MPD was completed, a number of the MPD facilities have been constructed (e.g., Summit Storm Drain, Highland Channel, Baseline Ave RCB). Each of these facilities was designed based on specific hydrology and hydraulics for that particular project. They followed the MPD as a guideline for tributary areas and design storm interval although certain facilities design capacity deviated from the MPD. For example, the Baseline RCB was originally assumed to be designed for a 25-year event in the MPD but was ultimately constructed to convey a 100-year design event. The constructed facilities were designed based on developed land uses that assumed build out of the City's General Plan, which included the Westgate project.

The design of future drainage facilities within the Westgate Specific Plan shall ensure that flows from the project area are within the design parameters of downstream completed facilities. If for some reason, a particular area of Westgate will generate peak flows greater than the capacity of the downstream facility, then that area will be responsible for attenuating their flows through on-site detention or some other means.

4.1.3 Hydrology Impacts

The following impact assessments are based on the significance criteria established in Section 3 for hydrology.

Impact B: *Would the Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?*

Impact Analysis: The proposed project will not utilize local groundwater wells for water supply. Potable water will be provided by the Fontana Water Company and the Cucamonga Valley Water District. Implementation of the proposed project would not result in substantially depletion of the groundwater supplies or lowering of the aquifer. In addition, a Water Supply Assessment will be provided to ensure long-term water supply is available. Impacts associated with depletion of groundwater supplies are considered less than significant.

Under existing conditions, groundwater recharge occurs through the pervious surfaces and highly permeable soils. Under the proposed condition, LID BMPs and features will be required to infiltrate the 85th percentile storm event for the entire development area to ensure groundwater recharge occurs after project implementation. Infiltration BMPs are discussed further in Section 4.2.2. The use of infiltrating LID BMPs and features will result in a less than significant impact to groundwater recharge.

Impact C: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or in a manner which would result in a substantial erosion or siltation on- or off-site?

Impact Analysis: Under the existing conditions, runoff from the project area generally flows southwest in a sheet flow condition towards existing interim debris basins before entering into the existing regional flood control facilities (e.g., Summit Avenue Storm Drain, Highland Storm Drain, Baseline Storm Drain, etc.). Soil erosion potential is generally classified as high based on the alluvial soil type and the interim basins help reduce erosion and siltation off-site. Under the proposed conditions, runoff from the development areas will be collected into a local storm drain network and conveyed to the downstream regional flood control facilities. Drainage patterns will be largely preserved and flows will continue to drain in a southwesterly direction. The increase in impervious surfaces will serve to reduce the potential for erosion and siltation downstream and the interim debris basins will no longer be needed. In the southern portion of the site, two existing earthen channel exist today, however one no longer serves as a flood conveyance channel, and the second has been channelized downstream. In the proposed condition, the channels will be abandoned and filled for development and the downstream improvements will be extended upstream into the project. Implementation of the project will reduce the potential for on-site erosion and siltation reaching downstream. In addition, all project runoff drains into hardened regional flood control channels or reinforced box culverts thereby eliminating the potential for downstream erosion or siltation. Potential impacts related to erosion or siltation and hydromodification are considered less than significant.

Impact D: Would the Project substantially alter the existing drainage pattern of the site, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?

Impact Analysis: The proposed project will substantially increase the rate and volume of runoff as compared to the existing condition. In order to safely convey runoff to downstream facilities and prevent flooding on-site and off-site, both the on-site and off-site storm drain systems must be properly sized for the expected rates and volumes. A preliminary analysis was performed and storm drain facilities were sized for a 25-year storm event consistent with local drainage criteria. A detailed storm drain and hydrology analysis including hydraulic modeling will be performed as part of the final engineering documents to confirm pipe sizes, connections and 100-year flood conveyance. In addition, the detailed hydrology analysis will be required to confirm that the downstream regional flood control facility has the capacity to accept the projected runoff conditions and if capacity is limited, the proposed project will have to control peak flows on-site to the downstream capacity. This scenario is not anticipated as the existing regional flood control facilities were sized based upon full build-out of the General Plan which includes the Westgate property. Impacts related to on-site and off-site flooding are less than significant.

Impact E: Would the Project create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Impact Analysis: All project runoff will be collected and discharged into existing regional flood control facilities that were sized upon full build-out of the General Plan which includes the Westgate property. In addition, the proposed project will be required to develop detailed storm drain and hydrology analyses to confirm the regional flood control facilities can accommodate the projected peak flow events. The implementation plan includes a series of LID BMPs and features that will utilize the highly permeable native soil properties to infiltrate the first 85th percentile storm event and prevent the "first flush" pollutants from leaving the project site and entering the downstream facilities. Infiltration BMPs are discussed further in Section 4.2.2. Implementation of infiltration based BMPs will result in less than significant impacts to downstream receiving waters.

Impact G: Would the Project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Impact Analysis: The Westgate Specific Plan does not propose any housing within a 100-year floodplain based on the FIRM maps or flood hazard delineation maps. Impacts to flooding are considered less than significant.

Impact H: Would the Project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Impact Analysis: No improvements associated with the project are located within a 100-year floodplain that would impede or redirect flood flows. Impacts are considered less than significant.

Impact I: Would the Project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Impact Analysis: The Westgate Specific Plan is not subject to flooding as a result of a failure of a levee or dam as there are no major dams upstream or within the project vicinity. Impacts are considered less than significant.

Impact J: Would the Project be subject to inundation by seiche, tsunami, or mudflow?

Impact Analysis: The Westgate Specific Plan is not subject to inundation from seiches, tsunamis or mudflow. Impacts are considered less than significant.

4.2 WATER QUALITY

4.2.1 Construction Activities

Clearing, grading, excavation and construction activities associated with the proposed project may impact water quality due to sheet erosion of exposed soils and subsequent deposition of particulates in local drainages. Grading activities, in particular, lead to exposed areas of loose soil, as well as sediment stockpiles, that are susceptible to uncontrolled sheet flow. Although erosion occurs naturally in the environment, primarily from weathering by water and wind action, improperly managed construction activities can lead to substantially accelerated rates of erosion that are considered detrimental to the environment.

Prior to the issuance of grading permits, the applicants shall provide evidence that the development of the projects as part of the Westgate Specific Plan shall comply with the most current General Construction Permit (CGP) and associated local NPDES regulations to ensure that the potential for soil erosion is minimized on a project-by-project basis. In accordance with the CGP (Order No. 2009-0009-DWQ), the following Permit Registration Documents (PRDs) are required to be submitted to the SWRCB prior to commencement of construction activities:

- Notice of Intent (NOI)
- Risk Assessment (Standard or Site-Specific)
- Particle Size Analysis (if site-specific risk assessment is performed)
- Post-Construction Water Balance (if applicable)
- Site Map
- SWPPP
- Active Treatment System (ATS) Design Documentation (if ATS is determined necessary)
- Annual Fee & Certification

In accordance with the existing and updated CGP, construction SWPPPs must be prepared and implemented at the project sites, and revised as necessary, as administrative or physical conditions change. The SWPPPs must be made available for review by the RWQCB, upon request, and must describe construction BMPs that address pollutant source reduction and provide measures/controls necessary to mitigate potential pollutant sources. These include, but are not limited to: erosion controls, sediment controls, tracking controls, non-storm water management, materials & waste management, and good housekeeping practices.[20] The above-mentioned BMPs for construction activities are briefly discussed below.

- Erosion control BMPs, such as hydraulic mulch, soil binders, and geotextiles and mats, protect the soil surface by covering and/or binding the soil particles. Temporary earth dikes or drainage swales may also be employed to divert runoff away from exposed areas and into

[20] California Stormwater Quality Association (CASQA). (2009, November) *Stormwater Best Management Practice Handbook Portal: Construction*.

more suitable locations. If implemented correctly, erosion controls can effectively reduce the sediment loads entrained in storm water runoff from construction sites.

- Sediment controls are designed to intercept and filter out soil particles that have been detached and transported by the force of water. All storm drain inlets on the project site or within the project vicinity (i.e., along streets immediately adjacent to the project boundary) should be adequately protected with an impoundment (e.g., gravel bags) around the inlet and equipped with a sediment filter (e.g., fiber roll). They should also be placed around areas of soil disturbing activities, such as grading or clearing.
- Stabilize all construction entrance/exit points to reduce the tracking of sediments onto adjacent streets and roadways. Wind erosion controls should be employed in conjunction with tracking controls.
- Non-storm water management BMPs prohibit the discharge of materials other than storm water, as well as reduce the potential for pollutants from discharging at their source. Examples include avoiding paving and grinding operations during the wet season where feasible, and performing any vehicle equipment cleaning, fueling and maintenance in designated areas that are adequately protected and contained.
- Waste management consists of implementing procedural and structural BMPs for collecting, handling, storing and disposing of wastes generated by a construction project to prevent the release of waste materials into storm water discharges.

Prior to commencement of construction activities, the individual project-SWPPPs will be prepared in accordance with the site specific sediment risk analyses based on the final rough grading plans and erosion and sediment controls proposed for each phase of construction for each project. The phases of construction will define the maximum amount of soil disturbed, the appropriate sized sediment basins and other control measures to accommodate all active soil disturbance areas and the appropriate monitoring and sampling plans.

4.2.2 Post-Construction Activities

Predicted Pollutants and Sources

The pollutants of concern for water quality are those pollutants that are anticipated (expected) or potentially could be generated by the project, based on past and proposed land uses, along with those pollutants that have been identified by regulatory agencies as potentially impairing beneficial uses in receiving water bodies. Based on the various land uses for the Westgate Specific Plan, the pollutants of concern can be divided up into anticipated pollutants and potential pollutants. Table 6, derived from the Technical Guidance Document for Water Quality Management Plans (TGD for WQMPs), summarizes typical pollutants of concern for major land uses and project categories, including those that are proposed for the Westgate Specific Plan.

Table 6 Anticipated and Potential Pollutants Generated by Land Use Type.

Project Categories and/or Features	Pathogens (Bacteria/ Virus)	Heavy Metals	Nitrogen	Phosphorous	Toxic Organic Compounds	Suspended Solids/ Sediments	Trash & Debris	Oil & Grease
Detached Residential Development	E	N	E	E	E [a]	E	E	E
Attached Residential Development	E	N	E	E	E [a]	E	E	E [b]
Commercial/ Industrial Development	E [c]	E	E [a]	E [a]	E [a,d]	E [a]	E	E
Automotive Repair Shops	N	E	N	N	E [a,c,d]	N	E	E
Restaurants (≥5,000 ft^2)	E	E [b]	E [a]	E [a]	E [a]	E [a,b]	E	E
Hillside Development (≥5,000 ft^2)	E	N	E	E	E [a]	E	E	E
Parking Lots (≥5,000 ft^2)	E [e]	E	E [a]	E [a]	E [c]	E [a]	E	E
Retail Gasoline Outlets	N	E	N	N	E [e]	N	E	E

Notes: E = Expected to be a concern in storm water runoff N = Not expected to be a concern in storm water runoff
Source: CDM. (2011, July 28). Technical Guidance Document for Water Quality Management Plans (WQMP). Draft submitted to the Santa Ana RWQCB.
a. Expected pollutant if landscaping exists on-site; otherwise not expected.
b. Expected pollutant if the project includes uncovered parking areas; otherwise not expected.
c. Including petroleum hydrocarbons.
d. Including solvents.
e. Bacterial indicators are routinely detected in pavement runoff.

Bacteria/Pathogens. Elevated pathogens are typically caused by the transport of human or animal fecal wastes from the watershed. Runoff that flows over land such as urban runoff can mobilize pathogens, including bacteria and viruses. Even runoff from natural areas can contain pathogens (e.g., from wildlife, plant matter, and soils). Other sources of pathogens in urban areas include pets and leaky sanitary sewer pipes. The presence of pathogens in runoff can impair receiving waters. Total and fecal coliform, enterococcus bacteria, and *E. coli* bacteria are commonly used as indicators for pathogens due to the difficulty of monitoring pathogens directly.

Metals. The primary sources of trace metals in storm water are metals typically used in transportation, buildings and infrastructure and also paints, fuels, adhesives and coatings. Copper, lead, and zinc are the most prevalent metals typically found in urban runoff. Other trace metals, such as cadmium,

chromium, mercury are typically not detected in urban runoff or are detected at very low levels.[21] Trace metals have the potential to cause toxic effects on aquatic life and are a potential source of groundwater contamination.

Nutrients. Nutrients are inorganic forms of phosphorous and nitrogen. The main sources of nutrients in urban areas include fertilizers in lawns, pet wastes, failing septic systems, and atmospheric deposition from automobiles and industrial operations. The most common impact of excessive nutrient input is eutrophication of the receiving water body, resulting in excessive algal production, hypoxia or anoxia, fish kills and potential releases of toxins from sediment due to changes in water chemistry profiles.

Noxious Aquatic Plants. Noxious aquatic plants are invasive plants with respect to a particular ecosystem that are not found in the ecosystem and whose presence in the environment causes economic or environmental harm or harm to human health.

Pesticides. Pesticides (including herbicides) are chemical compounds commonly used to control insects, rodents, plant diseases, and weeds. Excessive application of a pesticide or impractical application of pesticides (i.e., right before rain events) may result in runoff containing toxic levels to receiving water bodies and the microorganisms.

Polychlorinated Biphenyls (PCBs). PCBs are synthetic chemicals that were manufactured for use in various industrial and commercial applications – including oil in electrical and hydraulic equipment, and plasticizers in paints, plastics and rubber products – because of their non-flammability, chemical stability, high boiling point and electrical insulation properties. When released into the environment, PCBs do not easily break apart. Instead, they persist for many years, bioaccumulate and bioconcentrate in organisms. The US EPA has classified PCBs as probable human carcinogens. Long-term effects of PCB exposure include harm to the nervous and reproductive system, immune system suppression, hormone disruption and skin and eye irritation.

Organic Compounds. Organic compounds are carbon-based, and are typically found in pesticides, solvents, and hydrocarbons. Dirt, grease, and other particulates can also adsorb organic compounds in rinse water from cleaning objects, and can be harmful or hazardous to aquatic life either indirectly or directly.

Sediment/Turbidity. Sheet erosion and the transport and deposition of sediment in surface waters can be a significant form of pollution that may result in water quality problems. Increases in runoff velocities and volumes can cause excessive stream erosion and sediment transport altering the sediment equilibrium of a stream or channel. Sediments can increase turbidity, clog fish gills, reduce spawning habitat, lower young aquatic organisms survival rates, smother bottom-dwelling organisms, and suppress aquatic vegetation growth. Excessive fine sediment, such as total suspended solids (TSS), can impair aquatic life through changes to the physical characteristics of the stream (light reduction, temperature changes, etc.).

pH. pH is an expression of hydrogen ion concentration in water. pH affects most chemical and biological processes in water, and it is one of the most important environmental factors limiting the

[21] Los Angeles County, Department of Public Works. (2000, September). Los Angeles County 1994–2000 Integrated Receiving Water Impacts Report. Retrieved January 27, 2009, from http://ladpw.org/WMD/npdes/IntTC.cfm

distribution of species in aquatic habitats. Different species flourish within different ranges of pH, with the optima for most aquatic organisms falling between pH 6.5-8. Fluctuating pH or sustained pH outside this range reduces biological diversity in streams because it physiologically stresses many species and can result in decreased reproduction, decreased growth, disease, or death.

Trash and Debris. Improperly disposed or handled trash such as paper, plastics and debris including the biodegradable organic matter such as leaves, grass cuttings, and food waste can accumulate on the ground surface where it can be entrained in urban runoff. The large amount of trash and debris can have significant negative impacts on the recreational value of water body. Excessive organic matter can create a high biochemical oxygen demand in a stream and lower its water quality.

Oxygen Demanding Substances. Oxygen-demanding substances include biodegradable organic material as well as chemicals that react with dissolved oxygen in water to form other compounds, such as proteins, carbohydrates, fats, as well as ammonia and hydrogen sulfide. The oxygen demand of a substance can lead to depletion of dissolved oxygen in a water body and possibly the development of septic conditions, resulting in the growth of undesirable organisms and the release of odorous and hazardous compounds.

Oil and Grease. The most common sources of oil and grease in urban runoff stem from spilled fuels and lubricants, discharge of domestic and industrial wastes, atmospheric deposition, and runoff. Runoff can contain leachate from roads, breakdown of tires/rubber and deposition of automobile exhaust. Some petroleum hydrocarbons, such as polycyclic aromatic hydrocarbons (PAHs), can bioaccumulate in aquatic organisms and are toxic at low concentrations. Hydrocarbons can be measured in a variety of ways including petroleum hydrocarbons, oil and grease, or as individual groups such as PAHs. Hydrocarbons can persist in sediment for long periods of time in the environment and can result in adverse impacts on the diversity and abundance of benthic communities.

Water Quality Approach

The overall approach to water quality treatment for the individual projects associated with the Westgate Specific Plan will include incorporation of site design/LID strategies and source control measures in a systematic manner that maximizes the use of LID features to provide treatment of storm water and reduce runoff. In accordance with the fourth-term MS4 Permit for San Bernardino County, the use of LID features will be consistent with the prescribed hierarchy of treatment provided in the Permit, including techniques to infiltrate, filter, store, evaporate, or retain runoff close to the source of runoff. For those areas of the site where LID features are not feasible or do not meet the feasibility criteria, treatment control BMPs with biotreatment enhancement design features will be utilized to provide treatment. LID features will be sized to infiltrate the required design capture volume (DCV) to reduce impacts pollutant and runoff volumes to downstream receiving waters. Consistent with regulatory requirements and design guidelines for water quality protection, the following principles are being followed for the project and will be supported by construction level documents in the final Water Quality Management Plans (WQMPs) per each phase of development and prior to grading permit(s) issuance by the City of Fontana:

- Where feasible, LID features will be sized for water quality treatment credit according to local Regional Board sizing criteria as defined in the fourth-term MS4 Permit for either flow-based or volume-based BMPs. There will be a significant effort to integrate LID techniques within the

internal development areas (site design objectives), thereby providing treatment of low-flow runoff directly at the source and runoff reduction of small (i.e., more frequent) storm event runoff (first-flush). In most instances, LID features will be sized by volume-based analyses to demonstrate compliance with the required design capture volume for the individual projects associated with the Westgate Specific Plan.

- Detailed drainage calculations, grading, and confirmation of sizing to occur during the detailed design phase and subsequent WQMP documentation. Consistent with the fourth-term MS4 Permit, LID/BMP sizing methodology will follow the WEF Manual formula, which is the "volume of annual runoff produced by the 85th percentile, 24-hour rainfall event determined as the maximized capture storm water volume for the area," from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998).
- Based on known soil conditions from regional sources, other development projects in the region and discussions with City staff, soils exhibit good infiltration rates (design rate of 5-7 in/hour). Based on these conditions, LID features will be designed to infiltrate runoff on-site in accordance with feasibility criteria as defined in the new Countywide Model WQMP (submitted to the RWQCB May 2011) and associated TGD.[22]
- In certain areas of the project, infiltration may not be feasible based on localized soil conditions or other constraints such as utilities or setbacks from buildings. Harvest and use BMPs will be evaluated for these areas but are not anticipated to meet the minimum feasibility requirements based on the imbalance between demand and supply. For these areas, biotreatment BMPs will be utilized and sized accordingly.

Hydromodification Approach

In addition to water quality sizing, Project WQMP's must also address Hydrologic Conditions of Concern (HCOC's). New development typically results in an increased proportion of impervious surfaces on the project site or a reduction of pervious surfaces. Changes in impervious condition causes changes to the hydrologic conditions including increased runoff and velocity, reduced infiltration opportunities, increased flow frequency, flow duration and shortens time of concentration (Tc) leading to faster peak flow rates. Increased volumes and velocities of storm water discharges into natural watercourses can cause stream bank erosion and physical modifications that adversely impact aquatic ecosystems and stream habitat. The collective changes in the hydrologic regime caused by development is termed hydromodification.[23]

If the proposed project is determined to have the potential to cause or contribute to a downstream HCOC, then the WQMP must address both LID and HCOC performance criteria (Sections 4.3.1 and 4.3.2 in the TGD for WQMPs). Conversely, if the project is not within a region upstream of a HCOC, then only LID performance criteria are applicable and associated BMP selection and evaluation steps apply.

[22] CDM. (2011, July 28). San Bernardino County Stormwater Program Technical Guidance Document for Water Quality Management Plans (WQMP). Submitted to the California Regional Water Quality Board Santa Ana Region July 29, 2011.

[23] California Regional Water Quality Control Board, Santa Ana Region. (2010, January 29). Waste Discharge Requirements for the County of San Bernardino and the Incorporated Cities of San Bernardino County, Order No. R8-2010-0036, NPDES No. CAS618036, Areawide Urban Storm Water Runoff.

Section XI.E.5d of the MS4 Permit provides specific metrics of compliance with the Permit requirements for HCOC's as follows:

- Post-development runoff volume, time of concentration, and peak flow velocity for the two-year frequency storm does not exceed that of the predevelopment condition by more than five percent.

In order to determine if the project is within a region upstream of a HCOC, the County conducted a study of all the major storm drain facilities within the County and analyzed their susceptibility for hydromodification and HCOC's. The study titled "Hydromodification Assessment for San Bernardino County Flood Control District" prepared by RBF Consulting in January 2011 analyzed all the major flood control channels to determine their susceptibility to HCOC's, taking into account many variables including: controlled release points (dams), upstream debris basins, engineered, hardened and maintained (EHM) channels, future land use conversion and large rivers. The City of Fontana and the proposed project fall within Zone 1 based on the Hydromodification Map. All runoff from the Westgate Specific Plan project drains into EHM flood control channels not susceptible to HCOC's, and there are no additional downstream channels subject to HCOC's. Based on the findings of the Hydromodification Assessment, HCOC's are not applicable to the project and LID performance criteria are applicable only.[24] Although the report has been submitted as part of the WQMP documentation to the Santa Ana RWQCB, no final approval of the overall Countywide Model WQMP including this study has been obtained at the time of this report. Therefore, HCOC sizing will be provided for EIR purposes. For purposes of this technical study, estimated changes in the 2-year storm event including preliminary peak flow and volume are provided to identify changes in the hydrologic condition and to estimate HCOC sizing and performance criteria in the event HCOC controls are required.

Site Planning & Design / Hydrologic Source Controls (HSCs)

Careful consideration of site design is a critical first step in storm water pollution prevention from new developments and redevelopments. In general, site design objectives include a combination of factors that may include: minimization of impervious surfaces including roads and parking lots; preservation of native vegetation and root systems; minimization of erosion and sedimentation from susceptible areas such as slopes; incorporation of water quality wetlands, bio-infiltration swales, etc. where such measures are likely to be effective and technically and economically feasible; and minimization of impacts from storm water and urban runoff on the biological integrity of natural drainage systems and water bodies. These measures are consistent with the Ahwahnee Water Principles which promote community design, natural resources and open space, water holding areas, permeable surfaces, and recycled water. Ahwahnee Water Principles will be used as a guideline and will be implemented where feasible.[25]

In accordance with the fourth-term MS4 Permit, Countywide Model WQMP and TGD, new development and redevelopment projects are required to implement site design BMPs to minimize

[24] RBF Consulting. (2011, January). Hydromodification Assessment. Prepared for San Bernardino County Flood Control District. Submitted to the California Regional Water Quality Board Santa Ana Region.
[25] Corbett, J., Anderson, C., Davis, D. and Stoner, P. (2006, July). The Ahwahnee Water Principles A Blueprint for Regional Sustainability. Retrieved September 7, 2012, from http://water.lgc.org/guidebook

directly connected impervious areas and promote infiltration of runoff. The TGD for WQMPs identifies example site design BMPs to be implemented where applicable and feasible. Preventative measures associated with site planning and site design BMPs that will be applicable to the projects within the Westgate Specific Plan include:

- Disconnect Impervious Areas. Plan site layout and mass grading to allow runoff to be directed to permeable areas, such as natural retention areas, open spaces, medians, parking islands and planter boxes. Design roof downspouts to drain to pervious areas. Use alternative permeable or porous building materials where allowed by code.
- Minimize Impervious Area & Maximize Natural Infiltration Capacity. Selecting areas and designing to take advantage of a site's natural infiltration capacity. Examples include reducing development footprints by building vertically rather than horizontally, reducing road and sidewalk widths to the maximum extent practicable, clustering construction elements to preserve open space, and minimizing lot setbacks to reduce driveway lengths.
- Preserve Existing Drainage Patterns and Increase Time of Concentration. Includes avoiding channelization of natural drainages, using mild slopes, and using pervious channel linings to increase infiltration.

Hydrologic Source Controls (HSCs) are a class of LID features that can be considered to be a hybrid between site design practices and LID BMPs. HSCs are distinguished from site design BMPs in that they do not reduce the tributary area or reduce the imperviousness of a drainage area; rather they reduce the runoff volume that would result from a drainage area with a given imperviousness compared to what would result if HSCs were not used.

HSCs considered applicable to the project that retain runoff include:

- Impervious area dispersion
- Localized on-lot infiltration
- Street trees
- Residential rain barrels (optional)

Based on the high infiltration capacity of the soil, HSC's are anticipated to be a significant design measure to reduce runoff. HSC's will be incorporated and accounted for in the project-specific WQMP's. If the amount of runoff retained by the HSC's is greater or equal to the entire treatment volume for the drainage area, the area is considered to be "self-retaining" and no additional BMPs are required to treat discharges from the drainage area to meet LID requirements. All "self-treating" areas with appropriate HSC's can be subtracted for the total design capture volume (DCV) and downstream LID sizing can be adjusted downward accordingly.

Low Impact Development (LID) BMPs

The goal of using LID features is to mimic the sites existing hydrology by using design measures that capture, filter, store, evaporate, detain and infiltrate runoff, rather than runoff flowing directly to piped or impervious systems. This includes directing runoff to vegetated areas and reducing the amount of impervious surfaces. Under the fourth-term MS4 Permit, new Model WQMP and TGD, an on-site feasibility analysis will be conducted during the site plan process to determine the amount of runoff that 1) can feasibly be retained (via infiltration and evapotranspiration), and 2), if not completely

retained then bio-treated on-site. Table 7 provides examples of the various LID features that may be used for on-site infiltration of runoff when properly sized and designed in accordance with the TGD for WQMPs and fourth-term MS4 Permit requirements.

Table 7 Low Impact Development (LID) BMP Options.

Infiltration	Biotreatment
▪ Bioretention without underdrains ▪ Infiltration trenches ▪ Infiltration basins ▪ Drywells ▪ Underground infiltration ▪ Permeable pavement	▪ Bioretention with underdrains ▪ Constructed wetlands ▪ Wet detention basins ▪ Dry extended detention basins ▪ Vegetated swales ▪ Vegetated filter strips ▪ Proprietary biotreatment
Source: CDM. (2011, July 28). San Bernardino County Stormwater Program Technical Guidance Document for Water Quality Management Plans (WQMP). Submitted to the California Regional Water Quality Board Santa Ana Region July 29, 2011.	

Selection of LID features for water quality treatment is based on the pollutants of concern for the specific project site and the BMP's ability to effectively treat those pollutants, in consideration of site conditions and constraints. Infiltration BMPs are considered the highest priority within the LID hierarchy due to their ability to significantly reduce storm water pollutants through runoff reduction. Harvest and reuse of storm water runoff is not anticipated based on favorable soil conditions for infiltration and the insufficient demand to reuse the collected volume of runoff within a reasonable time (e.g., no landscape irrigation demand exists for periods longer than 1 week following a first-flush storm event). Evapotranspiration BMPs such as green roofs/blue roofs and brown roofs are also not anticipated due to the favorable soil conditions for infiltration.

The TGD for WQMPs recognizes that certain factors may limit infiltration on-site in all locations, such as presence of low-infiltrating soils or building constraints. For the Westgate Specific Plan, biotreatment BMPs will be utilized for areas if the full DCV cannot be feasible infiltrated.

Infiltration BMPs

Infiltration BMPs are LID BMPs that capture, store and infiltrate storm water runoff. These BMPs are designed to store a specified volume of water and have no design surface discharge (underdrain or outlet structure) until the design volume is exceeded. These types of BMPs may also lose some water due to evapotranspiration but the main volume loss is due to infiltration.

Consistent with all LID BMP's, infiltration BMPs have the potential to fail over time when not adequately designed or maintained. Based on this certainty, an appropriate safety factor must be applied to infiltration testing results. The infiltration rate will decline between maintenance cycles as the BMP surface gets covered in fine particulates and debris thereby reducing the infiltration rates. The methodology for assigning an appropriate infiltration factor of safety is provided in Appendix D of the TGD for WQMPs. Factors including safety factors include soil texture classification, variability of soil across a site, depth to impervious layers, tributary area size, level of pretreatment, compaction

during construction and expected influent sediment loads. All infiltration BMPs must include a minimum safety factor of 2 but no greater than 9.

Infiltration BMPs include infiltration basins, infiltration trenches, bioretention with no underdrain, permeable pavement, dry well and underground infiltration galleries/chambers. The Westgate Specific Plan anticipates using a wide variety of infiltrating type BMPs in order to satisfy infiltration of the design capture volume required. During the development of project-specific site plans and Final WQMP's, infiltration BMPs will be sized in accordance with Form 4.3-3 of the TGD for WQMPs.

Biotreatment BMPs

In the event infiltration of the entire DVC is not feasible utilizing infiltration-based BMPs, the proposed project will utilize biotreatment BMPs to supplement the remaining treatment requirements. Biotreatment BMPs are a broad class of structural LID BMPs that treat storm water using a variety of treatment mechanisms characteristic of biologically active systems to remove suspended and dissolved pollutants in storm water runoff. All biotreatment BMPs include pollutant removal mechanisms that utilize soil, plants and biological, physical and chemical processes. Biotreatment BMPs may either be volume-based or flow-based and are designed to treat and discharge runoff to a downstream conveyance system. Biotreatment BMPs should be designed to maximize infiltration and evapotranspiration even though they will result in the discharge of runoff.

Biotreatment BMPs include bioretention with underdrains, vegetated swales, vegetated filter strips, dry extended detention basin with vegetation enhancement, constructed wetland and proprietary biotreatment.

LID Sizing vs. HCOC Infiltration Sizing per Planning Area

In order to evaluate conformance with WQMP requirements at the Specific Plan and Program-Level EIR, preliminary LID sizing and HCOC sizing assuming infiltration basins for each major planning area are provided below. Although HCOC's are not considered applicable based on the stable EHM channels downstream, preliminary volume estimates are provided below. Infiltration basin sizing for LID is based on the WEF Manual formula,[26] and infiltration basin sizing for HCOC are based on the estimated volume difference between the pre-development and post-development 2-year storm event. In all cases, the water quality volume (LID volume) exceeds the 2-year HCOC volume and therefore infiltration basin sizing estimates per planning area have been sized off the LID volume.

[26] The volume of annual runoff produced by the 85th percentile, 24-hour rainfall event determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998).

Table 8 Summary of Infiltration Basin Sizing.

LID & HCOC INFILTRATION BASIN SIZING PER PLANNING AREA	
Constant Parameters	
Design Infiltration Rate	5"/hour
Max water depth of basin	3'
Draw down time	72 hours
Basin Parameters	5' high depth, 2' freeboard, 3:1 side slopes, 15' maintenance road
Planning Area 1	
Total Tributary Area	148.8 acres
Total Imperviousness	66%
Composite Runoff Coefficient	0.44
Design Capture Volume (WEF Methodology)	10.28 ac-ft
HCOC Volume (2-year delta)	5.13 ac-ft
LID Volume or HCOC Volume	LID > HCOC
Average Infiltration Basin ft^2 per acre of development	1,343 ft^2/ac (3.1%)
LID Infiltration Basin Sizing	4.6 acres for Planning Area
Planning Area 2	
Total Tributary Area	235 acres
Total Imperviousness	72%
Composite Runoff Coefficient	0.49
Design Capture Volume (WEF Methodology)	18.1 ac-ft
HCOC Volume (2-year delta)	8.11 ac-ft
LID Volume or HCOC Volume	LID > HCOC
Average Infiltration Basin ft^2 per acre of development	1,404 ft^2/ac (3.2%)
LID Infiltration Basin Sizing	7.6 acres for Planning Area 2
Planning Area 3	
Total Tributary Area	192.5 acres
Total Imperviousness	65.2%
Composite Runoff Coefficient	0.43
Design Capture Volume (WEF Methodology)	13.1 ac-ft
HCOC Volume (2-year delta)	6.64 ac-ft

LID Criteria or HCOC Criteria	LID > HCOC
Average Infiltration Basin ft^2 per acre of development	1,343 ft^2/ac (2.9%)
LID Infiltration Basin Sizing	5.65 acres for Planning Area 3
Planning Area 4	
Total Tributary Area	324.9 acres
Total Imperviousness	57.4%
Composite Runoff Coefficient	0.37
Design Capture Volume (WEF Methodology)	19 ac-ft
HCOC Volume (2-year delta)	11.2 ac-ft
LID Criteria or HCOC Criteria	LID > HCOC
Average Infiltration Basin ft^2 per acre of development	1,343 ft^2/ac c (2.4%)
LID Infiltration Basin Sizing	7.92 acres for Planning Area 4

Notes:
LID Low Impact Development HCOC Hydrologic Condition of Concern
Source: Hall & Foreman, Inc. (2011, January). Westgate Specific Plan Infrastructure Study.

The results indicate that for Planning Area 1, approximately 4.6 acres should be set aside for infiltration basins or 3.1 percent of the total development area. One infiltration basin per Planning Area will likely be broken up into smaller basin sizes and distributed accordingly within the development footprint. In certain instances, infiltration basins may be situated within open space areas or located in recreational areas downstream of more than one development area to serve as a regional infiltration basin. In other cases, infiltration basins will be incorporated into each land use at the local basin level. In all cases, detailed water quality volumes will be provide upon the approved site plan(s) for each planning area and estimated infiltration basin sizing and locations will be revised accordingly. Attachment G identifies potential locations of local infiltration basins per land use and regional basins serving multiple land uses.

Regional Systems, Alternative Approaches & Treatment Control BMPs

The use of one major regional infiltration BMP for the entire project is not considered feasible due to the spatial constraints and ability to direct low flows to one centralized downstream location from all the development areas. Alternative approaches and treatment control BMPs are not anticipated due to the high potential for infiltration based on the soil conditions.

Source Control BMPs

Source control BMPs effectively minimize the potential for typical urban pollutants to come into contact with runoff, thereby limiting water quality impacts downstream. This includes both non-structural measures, such as activity restrictions, maintenance, and training practices, and structural measures, such as material storage area and loading dock design features. A list of potential source control measures are provided below as identified in the TGD for WQMPs:

- *(N1) Education for Property Owners, Tenants, and Occupants*. Educational materials related to urban runoff can be provided to tenants/homeowners (via project owner, home owner association [HOA], and/or property owner association [POA]) and employees to reduce pollutants from reaching the storm drain system. Examples of environmental awareness materials include, but are not limited to: guidelines for landscaping and gardening, tips for pet care, vehicle cleaning, and proper disposal of household hazardous waste.
- *(N2) Activity Restrictions*. Activity restrictions can be developed to restrict activities that have the potential to create adverse impacts on water quality. Activities include but are not limited to: the handling and disposal of contaminants, trash management and litter control, irrigation and landscaping practices, vehicle and equipment cleaning, fertilizer applications and household waste management practices.
- *(N3) Landscape Management (CASQA BMP Handbook SC-73)*. Common area landscape management that includes minimizing fertilizer and pesticide application in accordance with local requirements, use of slow-release fertilizers, maintenance activities, providing education to homeowners and tenants (via project owner, HOA and/or POA), and providing education and training for employees on management of landscape materials and storm water management.
- *(N4) BMP Maintenance*. The owners, HOAs and/or POAs of the individual project sites will be responsible for the implementation and maintenance of each applicable non-structural BMP, as well as scheduling inspections and maintenance of all applicable structural BMP facilities through its landscape contractor and any other necessary maintenance contractors for the project site. In addition, the project owner will be required to verify treatment control BMP implementation and ongoing maintenance through inspection, self-certification, survey, or other equally effective measure. The certification shall verify that, at a minimum, the inspection and maintenance of all structural BMPs including inspection and performance of any required maintenance in the early fall, prior to the start of the rainy season, and in accordance with frequencies outlined in the project-specific WQMP prepared for each phase of development.
- *(N5) Title 22 CCR Compliance*. Where applicable, project sites shall comply with Title 22 of the California Code of Regulations (CCR) and relevant sections of the California Health and Safety Code regarding hazardous waste management, which will be enforced by County Environmental Health on behalf of the State.
- *(N6) Local Water Quality Ordinance*. Projects must comply with any applicable local water quality ordinances to ensure clean storm water discharges from fuel dispensing areas or other areas of concern to public properties.
- *(N7) Spill Contingency Plan (CASQA BMP Handbook SC-11)*. Any facilities that store liquid materials or wastes shall maintain procedures for spill response and cleanup activities. Emergency spill kits shall be kept on-site at all times. Activities will be coordinated between the respective departments and the Police and Fire departments in the event of a spill.
- *(N8) Underground Storage Tank Compliance*. Any underground storage tanks proposed shall meet applicable Federal, State, County, and local regulations.

- *(N9) Hazardous Materials Disclosure Compliance*. Any projects that store or utilize hazardous wastes, where applicable, shall comply with the local fire authority hazardous material disclosure requirements.
- *(N10) Uniform Fire Code Implementation*. The owner, HOA and/or POA shall ensure all structures comply with Article 80 of the Uniform Fire Code, City codes, local fire authority, and local standards.
- *(N11) Common Area Litter Control (CASQA BMP Handbook SC-60)*. Includes regular litter control for the entire project area including trash pick-up and sweeping of littered common areas, as performed by the maintenance crew. In addition, pet waste receptacles should be provided throughout the project site where applicable.
- *(N12) Employee Training*. Employees of the owner, HOA and/or POA, as well as any contractors of the aforementioned entities will require training to ensure that employees are aware of maintenance activities that may result in pollutants reaching the storm drain. Example training topics include proper storage and use of fertilizers and pesticides, or training on the implementation of hazardous spill contingency plans.
- *(N13) Housekeeping of Loading Docks (CASQA BMP Handbook SD-31)*. Loading dock housekeeping measures will be implemented where applicable to keep the areas clean and orderly condition.
- *(N14) Common Area Catch Basin Inspection (CASQA BMP Handbook SC-74)*. Includes routine maintenance of all catch basins, grate inlets, etc. for debris and litter removal. For industrial/commercial developments and developments with privately-maintained drainage systems, the owner is required to have at least 80 percent of drainage facilities inspected, cleaned and maintained on an annual basis with 100 percent of the facilities included in a two-year period. Cleaning should take place in the late summer/early fall, prior to the start of the storm season. Drainage facilities include catch basins (storm drain inlets), detention basins, retention basins, sediment basins, open drainage channels and lift stations.
- *(N15) Vacuum Street Sweeping Private Streets and Parking Lots (CASQA BMP Handbook SC-43, SC-70)*. Street sweeping of all impervious streets and parking lots performed at a frequency that reduces or prevents sediment and debris from entering receiving waters and prior to the rainy season or as equivalent as required by the local agency.
- *(N16) Other Non-structural Measures for Public Agency Projects*. Other non-structural measures shall be implemented and included in the Project WQMP(s) as applicable for new public agency priority projects as required by the local jurisdiction.
- *(N17) Other NPDES Permits, As Applicable*. Includes compliance with other NPDES permits as applicable, such as General Industrial Permits, etc., to include BMPs that are required as part of a SWPPP.
- *(S1) Provide Storm Drain Stenciling and Signage (CASQA BMP Handbook SD-13)*. Storm drain stenciling or signage on all catch basins with highly visible source control messages (e.g., "No Dumping – Flows to Creek").
- *(S2) Design Outdoor Hazardous Material Storage Areas to Reduce Pollutant Introduction (CASQA BMP Handbook SD-34)*. Any areas proposed for outdoor hazardous material storage shall be paved accordingly and storage bins will include sidewalls to contain the materials. There will be a drainage grate along the front of the storage bins with an outlet

screen that traps material to prevent pollutants from entering the storm drain. Any hazardous materials shall be stored in storage cabinets, sheds or enclosures that meet all applicable regulations.

- *(S3) Design Trash Enclosures to Reduce Pollutants (CASQA BMP Handbook SD-32).* All trash and waste shall be stored in containers that have lids or tarps to minimize direct precipitation into the containers. The storage areas shall be paved, and either be sloped or include a barrier to keep drainage out of the storm drain.
- *(S4) Use Efficient Irrigation Systems and Landscape Design (CASQA BMP Handbook SD-12).* Installing and maintaining efficient irrigation systems designed to minimize water by eliminating overspray to hardscape areas, and setting irrigation timing and cycle lengths in accordance with water demands, given time of year, weather, and day and night temperatures. Where feasible, incorporation of native tolerant species for landscaping, protection of slopes and efficient irrigation. May be used in conjunction with educational materials to homeowners/tenants as well as activity restrictions. The irrigation systems shall be in conformance with local water use efficiency guidelines and ordinances.
- *(S5) Finished Grade of Landscaped Areas.* Includes grading of landscaped pockets, fingers, setback areas, parkway strips, street medians, etc. at a minimum of 2 inches below top of curb or sidewalk for increased retention/infiltration of storm water and irrigation water.
- *(S6) Protect Slopes and Channels.* The site drainage design shall include appropriate BMPs to decrease the potential for erosion of slopes and/or channels. The design shall be consistent with Federal, State, and local standards (e.g., RWQCB, ACOE, CDFG). Where feasible, the following principles shall be considered: 1) convey runoff safely from the tops of slopes, 2) avoid disturbing steep or unstable slopes, as well as natural channels, 3) implement a permanent stabilization BMP on disturbed slopes and channels as quickly as possible, such as native vegetation, and 4) install energy dissipaters at the outlets of new storm drains, culverts, or channels.
- *(S7) Loading Dock Areas (CASQA BMP Handbook SD-31).* Any new loading docks shall be built at-grade, generally draining away from the buildings towards the drive aisles. In addition, loading dock housekeeping measures shall be implemented where applicable to keep the areas clean and orderly condition. Direct connections to the municipal storm drain system from below grade loading docks (truck wells) or similar structures are prohibited.
- *(S8) Maintenance Bays (CASQA BMP Handbook SD-31).* Any maintenance bays proposed shall be designed in accordance with TGD standards. Examples include locating facilities indoors, and draining nuisance flows to an oil/water separator that is connected to the sanitary sewer system.
- *(S9) Vehicle Wash Areas (CASQA BMP Handbook SD-33).* Any vehicle wash areas proposed shall be designed in accordance with TGD standards. Vehicle wash areas shall be self-contained or covered, equipped with a wash rack and clarifier or other pretreatment facility. Discharge from a vehicle wash area to the storm drain system is prohibited.
- *(S10) Outdoor Processing Areas (CASQA BMP Handbook SD-36).* Any outdoor processing areas proposed shall be designed in accordance with TGD standards. Areas shall be enclosed and covered to preclude storm water, and not be allowed to discharge into the storm drain system.

- *(S11) Equipment Wash Areas.* Any equipment wash areas proposed shall be designed in accordance with TGD standards. Examples include designing the area to be self-contained and covered, preventing the runoff from entering the storm drain system with berms or containment structures, and collecting runoff in a sump for disposal. Discharge from an equipment wash area to the storm drain system is prohibited.
- *(S12) Fueling Areas (CASQA BMP Handbook SD-30).* Any fueling areas proposed shall be designed in accordance with City and TGD standards. Any fueling areas proposed for the project site shall implement, where feasible the following measures: (1) maintaining clean fuel-dispensing areas, (2) appropriately designed fueling areas to minimize storm water exposure, (3) minimization of pooling of water, (4) utilization of fueling safeguards, (5) regular inspections of fueling equipment, (6) spill kits on-site (7) underground storage tanks fit with spill containment and overflow prevention systems that meet regulations of Section 2635(b) of Title 23 of the Code of California Regulations, (8) canopy to eliminate direct precipitation and grade breaks to reduce runoff and runoff, and (9) a posted notice to remind employees not to top off fuel tanks. Additionally, the fueling stations shall have an oil/water separator to treat pollutants discharged into the sewer system.
- *(S13) Site Design and Landscape Planning (Hillside Landscaping) (CASQA BMP Handbook SD-10).* The owner shall be responsible for the vegetative establishment on all manufactured or disturbed slopes with a mixture of native species and approved ornamentals by the City.
- *S14) Wash Water Controls for Food Preparations Areas.* Any food preparation facilities proposed shall meet all health and safety, building and safety and any other applicable regulations, codes requirements. Discharge of wash water from food preparation areas to the storm drain system is prohibited.
- *(S15) Community Car Wash Racks.* Any community car wash racks proposed shall be designed in accordance with City and TGD standards. Wash waters from area may be directed to the sanitary sewer (with approval), to an engineered infiltration system, or an equally effective alternative. Discharge from a wash area to the storm drain system is prohibited.

4.2.3 Water Quality Impacts

The impact assessments are based on the significance criteria established in Section 3 for water quality.

Impact A ***Would the Project violate any water quality standards or waste discharge requirements?***

Impact Analysis: The proposed Westgate Specific Plan anticipates infiltration of the entire design capture volume (DCV) based on highly permeable soil conditions. Infiltration of the entire DCV ranks as the most effective BMP strategy for pollutant removal based on the LID hierarchy for protection of water quality. It would also result in infiltration of the volume different between the existing and proposed 2-year storm event based on preliminary calculations, thereby satisfying HCOC requirements. Between the source control, site design features, HSC's and infiltration LID BMPs for the entire DCV for pollutant removal and runoff reduction, the proposed project is not anticipated to violate water quality standards or waste discharge requirements.

Impact F Would the Project otherwise substantially degrade water quality?

Impact Analysis: As a result of the construction-related, site design, LID and source control BMPs and reliance on infiltration BMPs, water quality exceedances are not anticipated, and pollutants are not expected in Project runoff that would adversely affect beneficial uses in downstream receiving waters. Impacts to water quality are considered less than significant. See Impact Analysis to Impact A for additional details.

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ATTACHMENTS

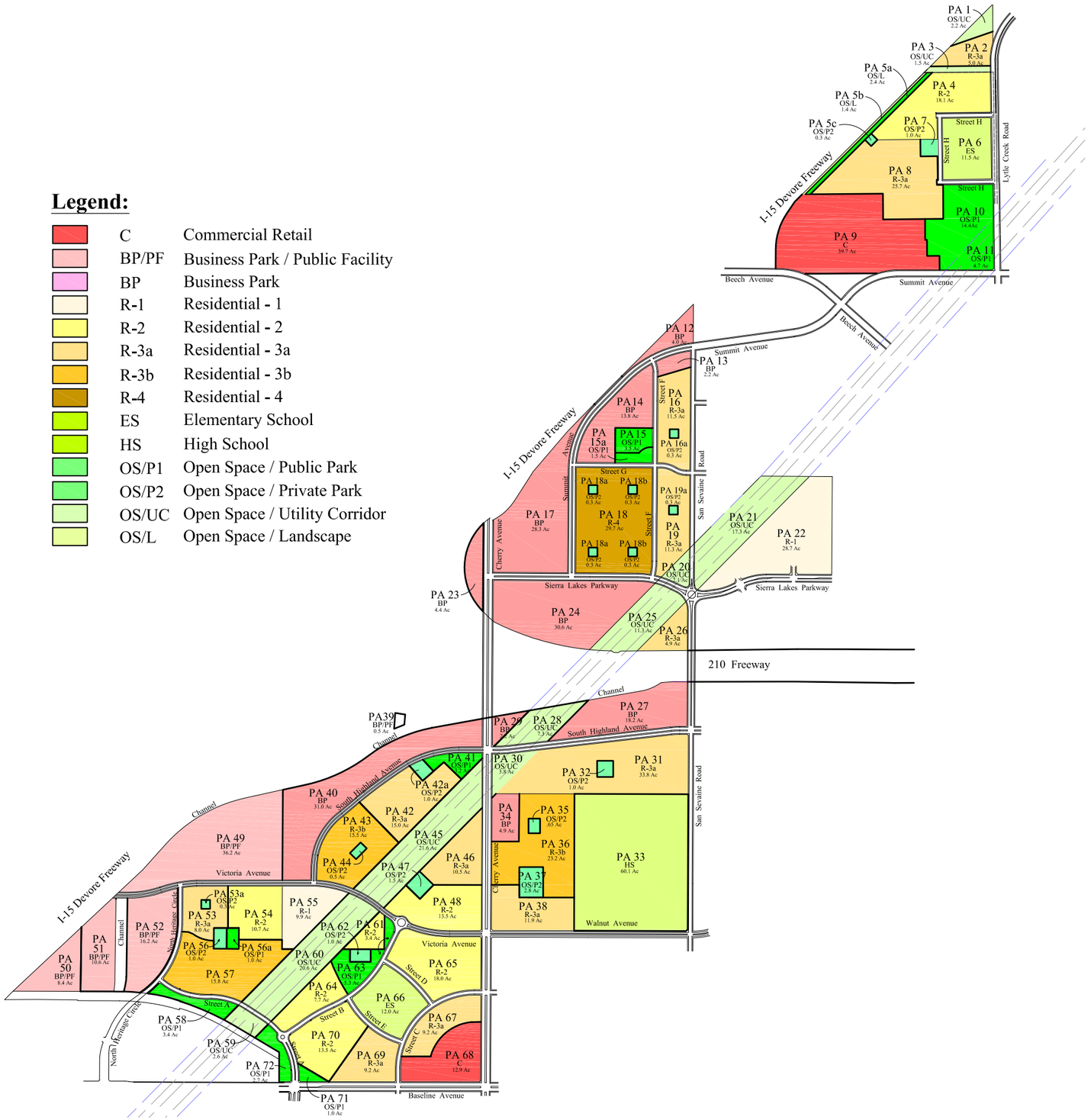
Attachment A	Land Use Plan
Attachment B	Conceptual Hydrology Peak Flows
Attachment C	City of Fontana Flood Insurance Rate Map
Attachment D	Custom Soil Resource Report for Westgate Specific Plan, Fontana
Attachment E	Storm Drain Master Plan
Attachment F	Hydrology Calculations Summary
Attachment G	Water Quality Management Plan Exhibit
Attachment H	Westgate Specific Plan Infrastructure Study

ATTACHMENT A

LAND USE PLAN

Legend:

	C	Commercial Retail
	BP/PF	Business Park / Public Facility
	BP	Business Park
	R-1	Residential - 1
	R-2	Residential - 2
	R-3a	Residential - 3a
	R-3b	Residential - 3b
	R-4	Residential - 4
	ES	Elementary School
	HS	High School
	OS/P1	Open Space / Public Park
	OS/P2	Open Space / Private Park
	OS/UC	Open Space / Utility Corridor
	OS/L	Open Space / Landscape



SPECIFIC PLAN

WESTGATE

City of Fontana, CA

EXHIBIT NAME

Land Use Plan

RESIDENTIAL	Density	DU	Acres
Residential - 1	0-5 du/ac	193 du	57.8 ac
Residential - 2	5.1-12 du/ac	795 du	86.8 ac
Residential - 3a	12.1-18 du/ac	1,832 du	155.4 ac
Residential - 3b	18.1-24 du/ac	1,239 du	38.6 ac
Residential - 4	24.1-50 du/ac	1,495 du	29.9 ac
		5,554 du	368.5 ac

COMMERCIAL	
Commercial Retail (C)	52.1 ac
Business Park (BP)	140.9 ac
Business Park / Public Facilities (BP/PF)	69.7 ac

OPEN SPACE	
Open Space / Public Parks (OS/P1)	42.7 ac
Open Space / Private Parks (OS/P2)	13.85 ac
Open Space / Landscape (OS/L)	1.4 ac
Open Space / Utility Corridor (OS/UC)	89.8 ac
Elementary Schools (ES)	24.0 ac
High School (HS)	60.0 ac

OTHER	
Major Street Rights-of-Way	101.05 ac
TOTALS	**5,554 du 964.0 ac**

CREDITS

Applicant:

Unitex Management Corp

Prepared By:

JHA Consulting, Inc.

FIGURE 3-1

WESTGATE SPECIFIC PLAN (Sent to HFI Nov 10, 2010)

Land Use Concept Statistical Summary

Prepared by : JHA Consulting, Inc.

10-Nov-10

			Total Business Acres and SF							Total Residential Acres and Dwelling Units (rounded)									School/OS/Park/UC				
Planning Area #	Net Acres	Land Use	Retail Ac.	Retail SF	BP Ac.	BP SF*	Total Building SF*	Total Net Res Ac.	Total SuperNet Ac.	R-1 0-5 du/ac	R-2 5.1-12 du/ac.	R-3a 12.1-18 du/ac.	R-3b 18.1-24 du/ac.	R-4 24.1-50 du/ac	DU/AC Net		Total Res. DU	Non-Rounded DU	Planning Area #'s	School	OS/Park Public P1	OS/Park Private P2	OS/L Landscape	OS/UC
FALCON RIDGE VILLAGE																								
1	2.2	OS/Utility Corridor																	1					2.2
2	5.2	R-3a						5.2	4.5			73.00			14.04		73.00	72.8	2					
3	1.5	OS/Utility Corridor																	3					1.5
4	18.6	R-2						18.6	18.2		167.00				8.98		167.00	167.4	4					
5a	2.4	OS/Landscape																	5a				2.4	
5b	1.4	OS/Landscape																	5b				1.4	
5c	0.3	OS/Park P2																	5c			0.3		
6	12.0	Elementary School																	6	12.0				
7	1.0	OS/Park P2																	7			1.0		
8	25.7	R-3a						25.7	25.7			463.00			18.02		463.00	462.6	8					
9	39.4	Commercial Retail	39.4	446,000			446,000												9					
10	14.5	OS/Park P1																	10		14.5			
11	5.0	OS/Park P1			0.0														11		5.0			
	129.2	Subtotal	39.4	446,000	0.0	0.0	446,000	49.5	48.4	0	167.00	536.00	0.00	0			703.00	702.8		12.0	19.5	1.3	3.8	3.7
WESTGATE CENTER																								
12	4.6	Business Park			4.6	80,150	80,150												12					
13	2.2	Business Park			2.2	38,333	38,333												13					
14	14.1	Business Park			14.1	245,678	245,678												14					
15	3.5	OS/Park P1																	15		3.5			
15a	1.5	OS/Park P1																	15a		1.5			
16	11.8	R-3a						11.8	10.9			165.00			13.98		165.00	165.2	16					
16a	0.3	OS/Park P2																	16a			0.3		
17	29.5	Business Park			29.5	514,008	514,008												17					
18	29.9	R-4						29.9	28.5					1495	50.00		1495.00	1495.0	18					
18a	0.3	OS/Park P2																	18a			0.3		
18b	0.3	OS/Park P2																	18b			0.3		
18c	0.3	OS/Park P2																	18c			0.3		
18d	0.3	OS/Park P2																	18d			0.3		
19	11.6	R-3a						11.6	10.8			162.00			13.97		162.00	162.4	19					
19a	0.3	OS/Park P2																	19a			0.3		
20	2.1	OS/Utility Corridor																	20					2.1
21	17.2	OS/Utility Corridor																	21					17.2
22	28.7	R-1						28.7	28.0	110					3.83		110.00	110.0	22					
23	4.2	Business Park			4.2	73,181	73,181												23					
24	30.4	Business Park			30.4	529,690	529,690												24					
25	11.3	OS/Utility Corridor																	25					11.3
26	5.1	R-3a						5.1	4.9			71.00			13.92		71.00	71.4	26					
	209.5	Subtotal	0.0	0.0	85.0	1,481,040	1,481,040	87.1	83.1	110.00	0.00	398.00	0.00	1495			2003.00	2004.0		0.0	5.0	1.8	0.0	30.6
WESTGATE VILLAGE (EAST)																								
27	18.4	Business Park			18.4	320,602	320,602												27					
28	7.3	OS/Utility Corridor																	28					7.3
29	2.1	Business Park			2.1	36,590	36,590												29					
30	3.8	OS/Utility Corridor																	30					3.8
31	32.8	R-3a						32.8	32.0			459.00			14.00		459.00	459.2	31					
32	1.0	OS/Park P2																	32			1.0		
33	60.0	High School																	33	60.0				
34	4.4	Business Park		0.0	4.4	76,666	76,666												34					
35	0.65	OS/Park P2																	35			0.65		
36	23.1	R-3b						23.1	23.0				495.00		21.43		495.00	495.0	36					
37	2.8	OS/Park P2																	37			2.8		
38	11.7	R-3a						11.7	11.3			167.00			14.27		167.00	167.0	38					
	168.1	Subtotal	0.0	0.0	24.9	433,858	433,858	67.6	66.3	0	0.00	626.00	495.00	0			1121.00	1121.2		60.0	0.0	4.5	0.0	11.1
WESTGATE VILLAGE (WEST)																								
39	0.5	BP/PublicFacilities			0.5		0												39					
40	31.0	Business Park			31.0	540,144	540,144												40					
41	3.2	OS/Park P1																	41		3.2			
42	15.1	R-3a						15.1	14.9			211.00			13.97		211.00	211.4	42					
42a	1.0	OS/Park P2																	42a			1.0		
43	15.5	R-3b						15.5	15.0				281.00		18.13		281.00	280.6	43					
44	0.5	OS/Park P2																	44			0.5		
45	21.4	OS/Utility Corridor																	45					21.4
46	10.5	R-3a						10.5	10.0			147.00			14.00		147.00	147.0	46					
47	1.5	OS/Park P2																	47			1.5		
48	13.2	R-2						13.2	12.5	119.00					9.02		119.00	118.8	48					
49	35.6	BP/PublicFacilities			19.0	331,056	331,056												49					
		Current Facilites	actual		16.6	124,000	124,000																	
50	8.4	BP/PublicFacilities			8.4	146,362	146,362												50					
51	9.6	BP/PublicFacilities			9.6	167,270	167,270												51					
52	15.6	BP/PublicFacilities			15.6	271,814	271,814												52					
53	7.8	R-3a						7.8	7.6			109.00			13.97		109.00	109.0	53					
53a	0.3	OS/Park P2																	53a			0.3		
54	10.5	R-2						10.5	10.3	110.00					10.48		110.00	110.0	54					
55	9.7	R-1						9.7	9.4	28.00					2.89		28.00	28.0	55					
56	1.0	OS/Park P2																	56			1.0		
56a	1.0	OS/Park P1																			1.0			
57	20.7	R-3a						20.7	20.4				455.00		21.98		455.00	455.0	57					
58	3.4	OS/Park P1																	58		3.4			
59	2.6	OS/Utility Corridor																	59					2.6
60	20.4	OS/Utility Corridor																	60					20.4
61	3.4	R-2						3.4	3.3	31.00					9.12		31.00	30.6	61					
62	1.0	OS/Park P2																	62			1.0		
63	5.3	OS/Park P1																	63		5.3			
64	7.7	R-2						7.7	7.4	69.00					8.96		69.00	69.3	64					
65	17.7	R-2						17.7	16.5	159.00					8.98		159.00	159.3	65					
66	12.0	Elementary School																	66	12.0				
67	9.6	R-3a						9.6	8.7			134.00			13.96		134.00	134.4	67					
68	12.7	Commercial Retail	12.7	138,303			138,303												68					
69	9.2	R-3a						9.2	8.4			129.00			14.02		129.00	128.8	69					
70	13.6	R-2						13.6	13.0	122.00					8.97		122.00	122	70					
71	1.1	OS/Park P1																	71		1.1			
72	2.8	OS/Park P1																	72		2.8			
	356.1	Subtotal	12.7	138,303	100.7	1,580,646	1,718,949	164.2	157.3	28.00	610.00	730.00	736	0			2104.00	2104.6		12.0	16.8	5.3	0.0	44.4
	101.05	Major Street ROW's																						
Total	**964**		**52.1**	**584,303**	**210.6**	**3,495,544**	**4,079,847**	**368.4**	**355.1**	**138.00**	**777.00**	**2290.00**	**1231.00**	**1495.00**	**5931.00**		**5931.00**	**5932.6**		**84.0**	**41.3**	**12.85**	**3.8**	**89.8**

Note:
PA 9 and PA 49 (124,000sf) square feet input per City staff input.
*Building Square feet totals are estimates. For greater detail and accuracy, refer also to Bldg. SF Summary prepared by Kunzman Assoc.10-6-2010 for the WG traffic study.

Use 5931 DU based on columns to left

ATTACHMENT B

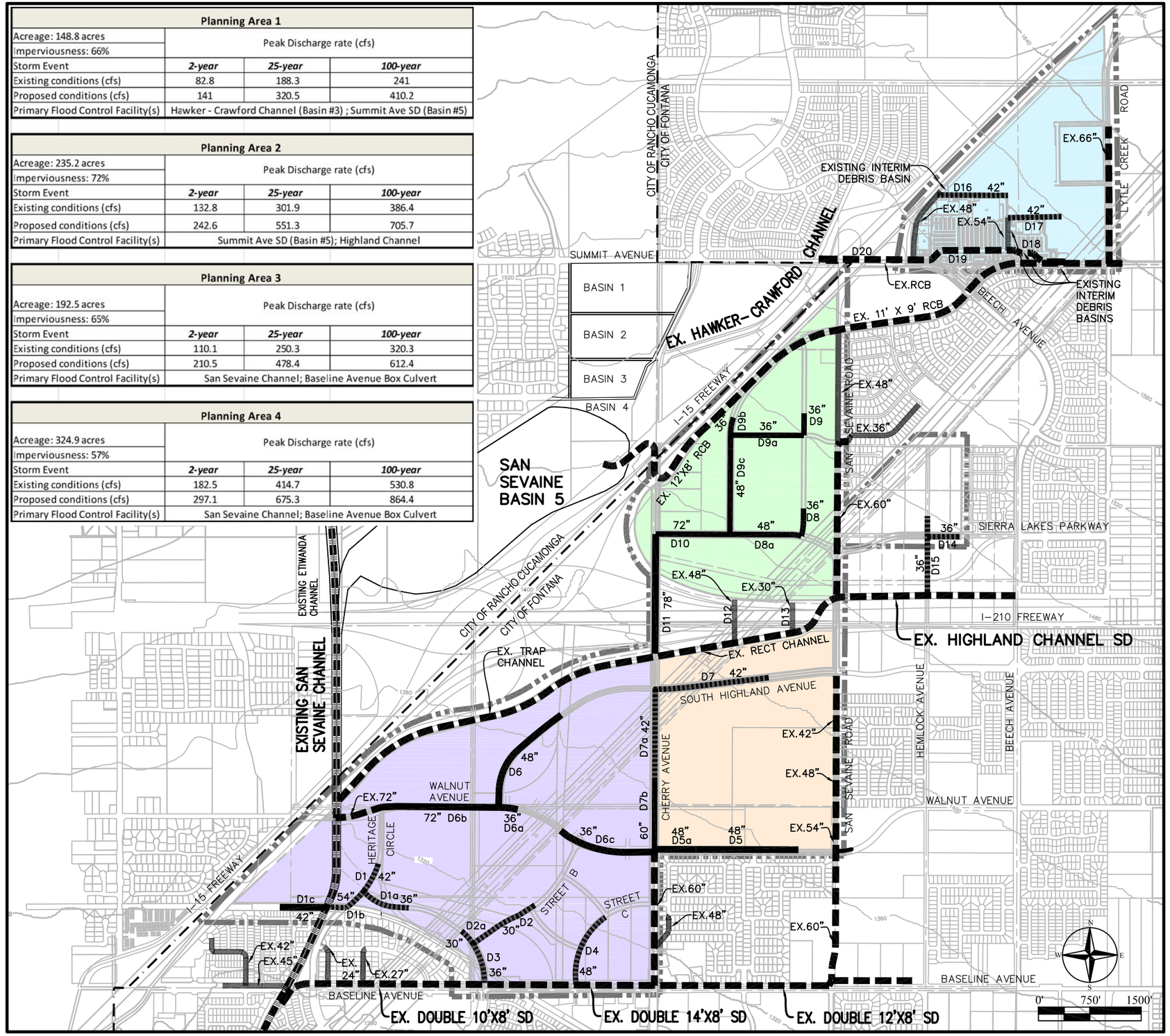
CONCEPTUAL HYDROLOGY PEAK FLOWS

Planning Area 1			
Acreage: 148.8 acres Imperviousness: 66%	Peak Discharge rate (cfs)		
Storm Event	*2-year*	*25-year*	*100-year*
Existing conditions (cfs)	82.8	188.3	241
Proposed conditions (cfs)	141	320.5	410.2
Primary Flood Control Facility(s)	Hawker - Crawford Channel (Basin #3) ; Summit Ave SD (Basin #5)		

Planning Area 2			
Acreage: 235.2 acres Imperviousness: 72%	Peak Discharge rate (cfs)		
Storm Event	*2-year*	*25-year*	*100-year*
Existing conditions (cfs)	132.8	301.9	386.4
Proposed conditions (cfs)	242.6	551.3	705.7
Primary Flood Control Facility(s)	Summit Ave SD (Basin #5); Highland Channel		

Planning Area 3			
Acreage: 192.5 acres Imperviousness: 65%	Peak Discharge rate (cfs)		
Storm Event	*2-year*	*25-year*	*100-year*
Existing conditions (cfs)	110.1	250.3	320.3
Proposed conditions (cfs)	210.5	478.4	612.4
Primary Flood Control Facility(s)	San Sevaine Channel; Baseline Avenue Box Culvert		

Planning Area 4			
Acreage: 324.9 acres Imperviousness: 57%	Peak Discharge rate (cfs)		
Storm Event	*2-year*	*25-year*	*100-year*
Existing conditions (cfs)	182.5	414.7	530.8
Proposed conditions (cfs)	297.1	675.3	864.4
Primary Flood Control Facility(s)	San Sevaine Channel; Baseline Avenue Box Culvert		



SPECIFIC PLAN

WESTGATE

City of Fontana, CA

EXHIBIT NAME

Conceptual Hydrology Peak Flows

LEGEND:

- CITY LIMIT
- SPECIFIC PLAN BOUNDARY
- MASTER PLAN STORM DRAIN
- EXISTING MASTER STORM DRAIN
- LOCAL STORM DRAIN
- EXISTING LOCAL STORM DRAIN
- FUTURE PLANNING AREA 1
- FUTURE PLANNING AREA 2
- FUTURE PLANNING AREA 3
- FUTURE PLANNING AREA 4

CREDITS

Prepared By:
Fuscoe Engineering, Inc.

Source:
Hall & Foreman, Inc.

FIGURE 3-26

Drawing Name: P:\Projects\445\05\Eng_File Cabinet\Reports\Hydrology\Concept Peak Flows Exhibit\44505xh01concept hydro peak flows.dwg Tab Name: SD 11X17
Last Opened: Sep 06, 2012 - 3:35pm by: Debbie Bade

ATTACHMENT C

CITY OF FONTANA FLOOD INSURANCE RATE MAP

City of Fontana, State of California

FLOOD INSURANCE RATE MAP

Effective Date: August 28, 2008

NOTE: REFER TO ORIGINAL FIRM PANEL MAPS FOR PARCELS CLOSE TO THE FLOOD ZONE BOUNDARY

Last Revised: January 11, 2012

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE

The 1% annual chance flood (100 year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities are determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazards (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazards (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachments so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; areas protected by levees from the 1% annual chance flood.

OTHER FLOOD AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.
- - - -	Zone D boundary

FLOOD INSURANCE RATE MAP NUMBER NOTES

** PANEL NOT PRINTED - UNICORPORATED AREAS ZONED D; OTHER AREAS ZONE X

*** PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS

Click here for FEMA Map Service Center website: http://msc.fema.gov

FEMA Map Service Center

Product Catalog | Map Search | Quick Order | Digital Post Office | Help

Map Disclaimer

The data provided hereon may be inaccurate or out of date and any person or entity who relies on said information for any purpose whatsoever does so solely at his or her own risk.

Neither the City of Fontana nor any agency, officer, or employee of either nor of any information provider warrants the accuracy, reliability of timeliness of any of the data provided heron.

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SEAL OF THE CITY OF FONTANA, CALIFORNIA — INCORPORATED JUNE 25, 1952

N

0 2,000 4,000 6,000 Feet

1 inch = 2,000 feet

06071C7915H

06071C7920H

06071C7895H

06071C8635H

06071C8651H

06071C8652H

*** 06071C8656H

*** 06071C8657H
PANEL NOT PRINTED
NO SPECIAL FLOOD HAZARD AREAS

06071C8634H

06071C8653H

06071C8654H

06071C8658H

*** 06071C8659H
PANEL NOT PRINTED
NO SPECIAL FLOOD HAZARD AREAS

*** 06071C8665H
PANEL NOT PRINTED
NO SPECIAL FLOOD HAZARD AREAS

06071C8642H

06071C8666H

** 06071C8667H
PANEL NOT PRINTED
UNICORPORATED AREAS ZONED D;
OTHER AREAS ZONE X

Click on a Flood Insurance Rate Map (FIRM) panel number to open a scanned image of the panel map. Any Letter of Map Revision (LOMR) that modified the panel, can also be accessed through this panel map.

Locate the map at: T:\Adobe Reader PDF Files\Flood Insurance Rate Map 11x17.pdf

Hawker Crawford Channel; Proposed I-15 Channel; I-15 FREEWAY; Highland Channel; West Fontana Channel; East Fontana Channel; Etiwanda/San Sevaine Channel; San Sevaine Channel; I-10 Channel; Declez Channel

SR-210 FREEWAY; I-10 FREEWAY; UNION PACIFIC RR

BASELINE AVE; FOOTHILL BLVD; ARROW BLVD; METROLINK; MILLER AVE; MERRILL AVE; RANDALL AVE; SAN BERNARDINO AVE; VALLEY BLVD; SLOVER AVE; SANTA ANA AVE; JURUPA AVE; SUMMIT AVE

EAST AVE; ETIWANDA AVE; CHERRY AVE; MULBERRY AVE; BEECH AVE; CITRUS AVE; SIERRA AVE; ALDER AVE; MAPLE AVE

ZONE X; A; AE; AE FLOODWAY; AH; AO; AO (DEPTH 1); AO (DEPTH 2); D; 0.2 PCT; .02 PCT; X PROTECTED BY LEVEE

City of Fontana
Department of Engineering / Mapping
fema.mxd

ATTACHMENT D

CUSTOM SOIL RESOURCE REPORT FOR WESTGATE SPECIFIC PLAN, FONTANA

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for San Bernardino County Southwestern Part, California

Westgate Specific Plan, Fontana

August 14, 2012

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://soils.usda.gov/sqi/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://soils.usda.gov/contact/state_offices/).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Soil Data Mart Web site or the NRCS Web Soil Survey. The Soil Data Mart is the data storage site for the official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means

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Ps—PSAMMENTS AND FLUVENTS, FREQUENTLY FLOODED.....13
SoC—SOBOBA GRAVELLY LOAMY SAND, 0 TO 9 PERCENT SLOPES.....14
SpC—SOBOBA STONY LOAMY SAND, 2 TO 9 PERCENT SLOPES.....15
TuB—TUJUNGA LOAMY SAND, 0 TO 5 PERCENT SLOPES.....16
TvC—TUJUNGA GRAVELLY LOAMY SAND, 0 TO 9 PERCENT SLOPES.....17
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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features
- Gully
- Short Steep Slope
- Other

Political Features
- Cities

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

MAP INFORMATION

Map Scale: 1:26,300 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 11N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Bernardino County Southwestern Part, California
Survey Area Data: Version 4, Jan 3, 2008

Date(s) aerial images were photographed: 6/18/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

San Bernardino County Southwestern Part, California (CA677)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
HaC	HANFORD COARSE SANDY LOAM, 2 TO 9 PERCENT SLOPES	256.8	22.5%
Ps	PSAMMENTS AND FLUVENTS, FREQUENTLY FLOODED	11.4	1.0%
SoC	SOBOBA GRAVELLY LOAMY SAND, 0 TO 9 PERCENT SLOPES	33.0	2.9%
SpC	SOBOBA STONY LOAMY SAND, 2 TO 9 PERCENT SLOPES	13.9	1.2%
TuB	TUJUNGA LOAMY SAND, 0 TO 5 PERCENT SLOPES	13.6	1.2%
TvC	TUJUNGA GRAVELLY LOAMY SAND, 0 TO 9 PERCENT SLOPES	812.8	71.2%
Totals for Area of Interest		**1,141.6**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially

where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

San Bernardino County Southwestern Part, California

HaC—HANFORD COARSE SANDY LOAM, 2 TO 9 PERCENT SLOPES

Map Unit Setting

Elevation: 150 to 900 feet
Mean annual precipitation: 10 to 20 inches
Mean annual air temperature: 63 degrees F
Frost-free period: 250 to 280 days

Map Unit Composition

Hanford and similar soils: 85 percent
Minor components: 15 percent

Description of Hanford

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Available water capacity: Very high (about 20.3 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability (nonirrigated): 3e

Typical profile

0 to 12 inches: Sandy loam
12 to 60 inches: Fine sandy loam, sandy loam, coarse sandy loam

Minor Components

Greenfield sandy loam

Percent of map unit: 10 percent

Tujunga loamy sand

Percent of map unit: 5 percent

Ps—PSAMMENTS AND FLUVENTS, FREQUENTLY FLOODED

Map Unit Setting

Elevation: 10 to 1,500 feet
Mean annual precipitation: 10 to 25 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 250 to 350 days

Map Unit Composition

Fluvents and similar soils: 50 percent
Psamments and similar soils: 50 percent

Description of Psamments

Setting

Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy alluvium

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water capacity: High (about 9.1 inches)

Interpretive groups

Land capability (nonirrigated): 8w

Typical profile

0 to 12 inches: Sand
12 to 48 inches: Loamy sand, fine sand, sand
48 to 60 inches: Stratified gravelly sand to gravelly loamy sand

Description of Fluvents

Setting

Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 6.1 inches)

Interpretive groups

Land capability (nonirrigated): 8w

Typical profile

0 to 10 inches: Gravelly sand
10 to 30 inches: Stratified gravelly sand to gravelly loam
30 to 60 inches: Stratified gravelly sand to gravelly loam

SoC—SOBOBA GRAVELLY LOAMY SAND, 0 TO 9 PERCENT SLOPES

Map Unit Setting

Elevation: 30 to 4,200 feet
Mean annual precipitation: 10 to 20 inches
Mean annual air temperature: 61 to 63 degrees F
Frost-free period: 175 to 250 days

Map Unit Composition

Soboba and similar soils: 85 percent
Minor components: 15 percent

Description of Soboba

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Properties and qualities

Slope: 0 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)

Available water capacity: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): 4s
Land capability (nonirrigated): 6s

Typical profile

0 to 12 inches: Gravelly loamy sand
12 to 36 inches: Very gravelly loamy sand
36 to 60 inches: Very stony sand

Minor Components

Delhi fine sand

Percent of map unit: 5 percent

Unnamed

Percent of map unit: 5 percent

Tujunga gravelly loam

Percent of map unit: 3 percent

Unnamed

Percent of map unit: 2 percent
Landform: Drainageways

SpC—SOBOBA STONY LOAMY SAND, 2 TO 9 PERCENT SLOPES

Map Unit Setting

Elevation: 30 to 4,200 feet
Mean annual precipitation: 10 to 20 inches
Mean annual air temperature: 61 degrees F
Frost-free period: 210 to 330 days

Map Unit Composition

Soboba and similar soils: 85 percent
Minor components: 15 percent

Description of Soboba

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Properties and qualities

Slope: 2 to 9 percent
Surface area covered with cobbles, stones or boulders: 0.1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained

Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
Available water capacity: Very low (about 2.5 inches)

Interpretive groups
Land capability classification (irrigated): 4s
Land capability (nonirrigated): 6s

Typical profile
0 to 10 inches: Very stony loamy sand
10 to 60 inches: Very stony sand

Minor Components

Ramona
Percent of map unit: 5 percent

Tujunga gravelly loamy coarse sand
Percent of map unit: 5 percent

Hanford
Percent of map unit: 5 percent

TuB—TUJUNGA LOAMY SAND, 0 TO 5 PERCENT SLOPES

Map Unit Setting
Elevation: 10 to 2,500 feet
Mean annual precipitation: 10 to 25 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 280 to 350 days

Map Unit Composition
Tujunga and similar soils: 85 percent
Minor components: 15 percent

Description of Tujunga

Setting
Landform: Alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Properties and qualities
Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Available water capacity: High (about 10.0 inches)

Interpretive groups
Land capability classification (irrigated): 3e
Land capability (nonirrigated): 4e

Typical profile
0 to 18 inches: Gravelly loamy sand
18 to 60 inches: Loamy sand, coarse sand, loamy coarse sand

Minor Components

Unnamed
Percent of map unit: 5 percent
Landform: Drainageways

Tujunga gravelly loamy sand
Percent of map unit: 5 percent

Hanford sandy loam
Percent of map unit: 5 percent

TvC—TUJUNGA GRAVELLY LOAMY SAND, 0 TO 9 PERCENT SLOPES

Map Unit Setting
Elevation: 10 to 1,500 feet
Mean annual precipitation: 10 to 25 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 250 to 350 days

Map Unit Composition
Tujunga and similar soils: 85 percent
Minor components: 15 percent

Description of Tujunga

Setting
Landform: Alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Properties and qualities
Slope: 0 to 9 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Available water capacity: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): 4s
Land capability (nonirrigated): 4e

Typical profile

0 to 36 inches: Gravelly loamy sand
36 to 60 inches: Gravelly sand, gravelly loamy sand

Minor Components

Unnamed

Percent of map unit: 5 percent
Landform: Drainageways

Soboba gravelly loamy sand

Percent of map unit: 5 percent

Delhi fine sand

Percent of map unit: 5 percent

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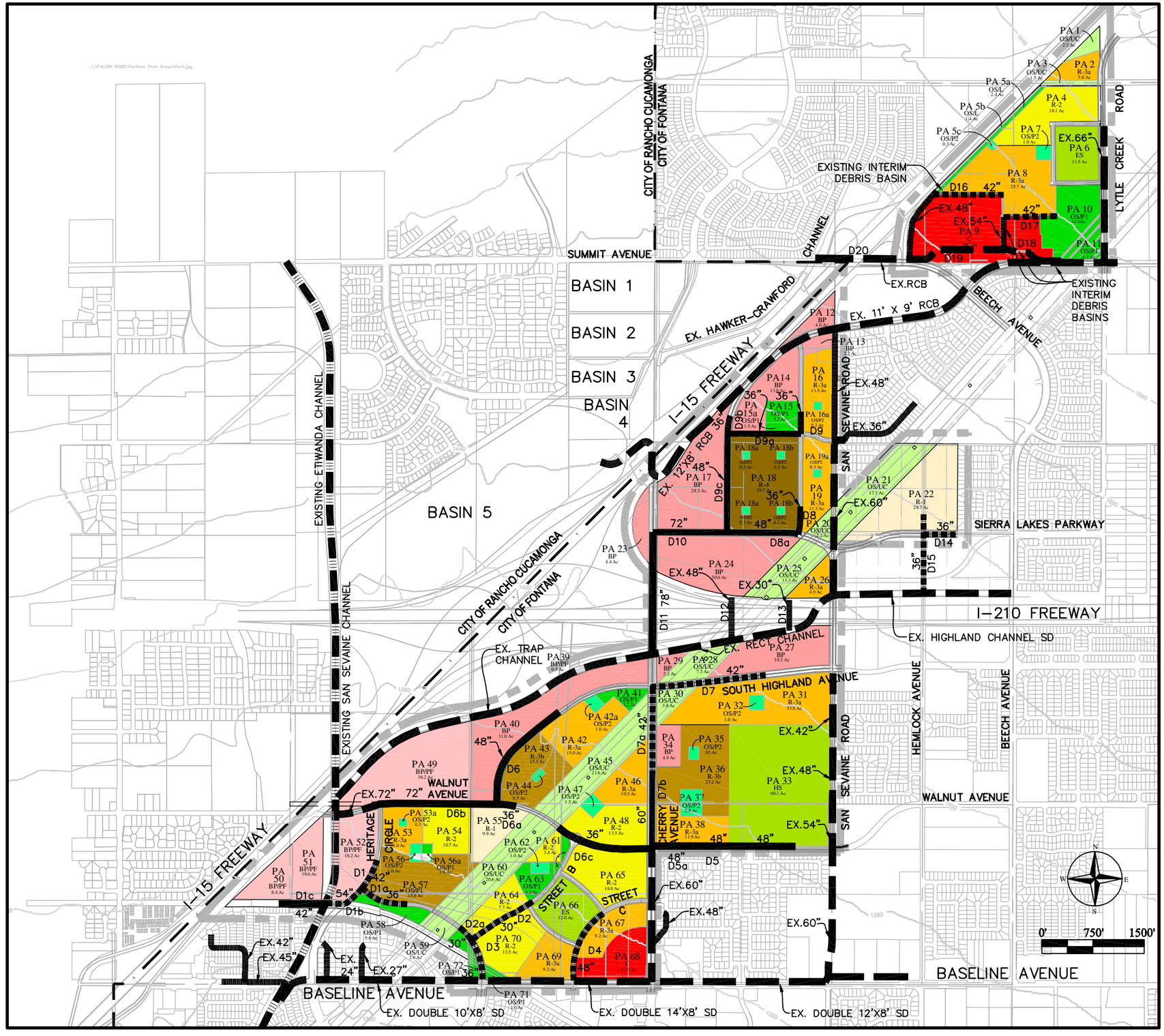
ATTACHMENT E

STORM DRAIN MASTER PLAN



SPECIFIC PLAN

WESTGATE

City of Fontana, CA

EXHIBIT NAME

Storm Drain Master Plan

LEGEND:

CITY LIMIT	
SPECIFIC PLAN BOUNDARY	
MASTER PLAN STORM DRAIN	
EXISTING MASTER STORM DRAIN	
LOCAL STORM DRAIN	
EXISTING LOCAL STORM DRAIN	
PA	PLANNING AREA
AC	NET ACREAGE
SD	STORM DRAIN

CREDITS

Applicant:
Unitex Management Corp

Prepared By:
JHA Consulting, Inc.

Source:
Hall & Foreman, Inc.

FIGURE 3-26

Drawing Name: S:\080183\Eng\080183-000\Exhibit\080183exhibit-sd.dwg
Last Opened: Jan 05, 2011 - 2:26pm by: EOune

ATTACHMENT F

HYDROLOGY CALCULATIONS SUMMARY

Summary Table

		Existing Q			Proposed Q		
	Area (ac)	2 Year	25 Year	100 Year	2 Year	25 Year	100 Year
Area 1	148.8	109.3	248.4	317.9	141.0	320.5	410.2
Area 2	235.2	132.8	301.9	386.4	242.6	551.3	705.7
Area 3	192.5	110.1	250.3	320.3	210.5	478.4	612.4
Area 4	324.9	182.5	414.7	530.8	297.1	675.3	864.4
		0.561711					

Material Used From Westgate Specific Plan Infrastructure Study (Hall & Foreman, January 2011)

1. Storm Drain Master Plan Figure 3-26
2. Storm Drain Hydrology Calculations, Appendix J
3. Water Quality Calculations, Appendix K

Procedure

1. Site Areas Per Appendix K
2. Proposed 25 Year Qs Per Appendix J
3. Existing 25 Year Qs Developed Using SBCFCD Hydrology Manual
4. Existing and Proposed 2 Year and 100 Year Qs Developed Using Accepted Multiplication Factors and Checking Against 2 Year and 100 Year Storms Per SBCFCD Hydrology Manual

Site Areas

Area 1	Area (ac)
Site	132.1
St. RW	16.7
Total	**148.8**

Flows To Ex. Hawker Crawford Channel
And Into Basin 5

Area 2	Area (ac)
Site	206.8
St. RW	26.4
Total	**235.2**

Flows To Ex. Channel South Of I-210
And Into Ex. San Sevaine Channel

Area 3	Area (ac)
Site	170.9
St. RW	21.6
Total	**192.5**

Flows To Ex. Cherry Ave Storm Drain
And Into Ex. San Sevaine Channel

Area 4	Area (ac)
Site	288.5
St. RW	36.4
Total	**324.9**

Portion Flows To Ex. Cherry Ave Storm Drain
Portion Flows To Ex. San Sevaine Channel
Portion Flows To Ex. Box Channel In Baseline
All Flow into Ex. San Sevaine Channel

			Existing Q			Proposed Q		
Area 1	PA	Area (ac)	2 Year	25 Year	100 Year	2 Year	25 Year	100 Year
	1	2.2	1.3	2.86	3.7	1.0	2.2	2.8
	2	5	2.9	6.5	8.3	5.7	13	16.6
	3	1.5	0.8	1.9	2.4	0.7	1.5	1.9
	4	18.1	10.3	23.5	30.1	18.3	41.6	53.2
	5a	2.5	1.4	3.1	4.0	1.1	2.4	3.1
	5b	1.4	0.8	1.8	2.3	0.6	1.4	1.8
	5c	0.3	0.2	0.4	0.5	0.1	0.3	0.4
	6	11.5	6.6	15	19.2	5.3	12	15.4
	7	4.9	0.6	1.3	1.7	0.4	1	1.3
	8	25.7	14.7	33.4	42.8	29.4	66.9	85.6
	9	39.9	49.3	112	143.4	49.3	112	143.4
	10	14.4	8.3	18.8	24.1	6.4	14.5	18.6
	11	4.7	2.7	6.1	7.8	2.1	4.7	6.0
Sub Total		132.1	99.7	226.66	290.1	120.3	273.5	350.1
Mjr. Str. RW		16.7	9.5	21.7	27.8	20.7	47	60.2
Total Area		**148.8**	**109.3**	**248.36**	**317.9**	**141.0**	**320.5**	**410.2**

			Existing Q			Proposed Q		
Area 2	PA	Area (ac)	2 Year	25 Year	100 Year	2 Year	25 Year	100 Year
	12	4	1.3	2.86	3.7	5.1	11.5	14.7
	13	2.2	1.3	2.9	3.7	2.8	6.4	8.2
	14	13.9	7.9	17.9	22.9	17.6	40	51.2
	15	3.4	2.0	4.6	5.9	1.5	3.5	4.5
	15a	1.6	0.9	2	2.6	0.7	1.5	1.9
	16	11.8	6.6	15	19.2	13.2	29.9	38.3
	16a	0.3	0.2	0.4	0.5	0.1	0.3	0.4
	17	28.3	16.2	36.8	47.1	35.6	80.9	103.6
	18	30.9	17.0	38.6	49.4	35.9	81.7	104.6
	18a	0.3	0.2	0.4	0.5	0.1	0.3	0.4
	18b	0.3	0.2	0.4	0.5	0.1	0.3	0.4
	18c	0.3	0.2	0.4	0.5	0.1	0.3	0.4
	18d	0.3	0.2	0.4	0.5	0.1	0.3	0.4
	19	11.6	6.5	14.7	18.8	12.9	29.4	37.6
	19a	0.3	0.2	0.4	0.5	0.1	0.3	0.4
	20	2.1	1.2	2.7	3.5	0.9	2.1	2.7
	21	17.3	9.9	22.5	28.8	7.6	17.3	22.1
	22	28.7	16.4	37.3	47.7	20.2	45.9	58.8
	23	4.4	2.5	5.7	7.3	5.6	12.8	16.4
	24	30.6	17.5	39.8	50.9	39.0	88.7	113.5
	25	11.3	6.5	14.7	18.8	5.0	11.3	14.5
	26	4.9	2.8	6.4	8.2	5.6	12.7	16.3
Sub Total		208.8	117.4	266.86	341.6	210.1	477.4	611.1
Mjr. Str. RW		26.4	15.4	35	44.8	32.5	73.9	94.6
Total Area		**235.2**	**132.8**	**301.86**	**386.4**	**242.6**	**551.3**	**705.7**

			Existing Q			Proposed Q		
Area 3	PA	Area (ac)	2 Year	25 Year	100 Year	2 Year	25 Year	100 Year
	27	18.2	10.4	23.66	30.3	23.2	52.8	67.6
	28	7.3	4.2	9.49	12.1	3.2	7.3	9.3
	29	2.2	1.3	2.86	3.7	2.8	6.4	8.2
	30	3.9	2.2	5.07	6.5	1.7	3.8	4.9
	31	33.9	19.4	44.07	56.4	38.7	87.9	112.5
	32	1	0.6	1.3	1.7	0.4	1	1.3
	33	60.1	34.4	78.13	100.0	34.4	78.1	100.0
	34	5	2.9	6.5	8.3	6.2	14.2	18.2
	35	0.7	0.4	0.91	1.2	26.5	60.3	77.2
	36	23.9	13.7	31.07	39.8	30.9	70.3	90.0
	37	2.8	1.6	3.64	4.7	1.2	2.8	3.6
	38	11.9	6.8	15.47	19.8	13.6	30.9	39.6
Sub Total		170.9	97.8	222.17	284.4	183.0	415.8	532.2
Mjr. Str. RW		21.6	12.4	28.08	35.9	27.5	62.6	80.1
Total Area		**192.5**	**110.1**	**250.25**	**320.3**	**210.5**	**478.4**	**612.4**

			Existing Q			Proposed Q		
Area 4	PA	Area (ac)	2 Year	25 Year	100 Year	2 Year	25 Year	100 Year
	40	31	17.7	40.3	51.6	39.6	89.9	115.1
	41	3.2	1.8	4.2	5.4	1.4	3.2	4.1
	42	15	8.6	19.5	25.0	17.2	39	49.9
	42a	1	0.6	1.3	1.7	0.4	1	1.3
	43	16	8.9	20.2	25.9	17.7	40.3	51.6
	44	0.5	0.3	0.6	0.8	0.2	0.5	0.6
	45	21.6	12.4	28.1	36.0	9.5	21.6	27.6
	46	10.5	6.0	13.6	17.4	12.0	27.3	34.9
	47	1.5	0.8	1.9	2.4	0.7	1.5	1.9
	48	13.5	7.7	17.6	22.5	13.7	31.1	39.8
	53	8.3	4.6	10.4	13.3	9.2	20.8	26.6
	53a	0.3	0.2	0.4	0.5	0.1	0.3	0.4
	54	10.7	6.1	13.9	17.8	10.8	24.6	31.5
	55	9.9	5.7	12.9	16.5	7.0	15.8	20.2
	56	1	0.6	1.3	1.7	0.4	1	1.3
	56a	1	0.6	1.3	1.7	0.4	1	1.3
	57	20.8	9.0	20.5	26.2	7.0	15.8	20.2
	58	3.4	1.9	4.4	5.6	1.5	3.4	4.4
	59	2.6	1.5	3.4	4.4	1.1	2.6	3.3
	60	20.6	11.8	26.8	34.3	9.1	20.6	26.4
	61	3.4	1.9	4.4	5.6	3.4	7.8	10.0
	62	1	0.6	1.3	1.7	0.4	1	1.3
	63	5.4	3.0	6.9	8.8	2.3	5.3	6.8
	64	7.8	4.4	10	12.8	7.8	17.7	22.7
	65	18	10.3	23.4	30.0	18.2	41.4	53.0
	66	12	6.9	15.6	20.0	6.9	15.6	20.0
	67	9.3	5.3	12	15.4	10.5	23.9	30.6
	68	12.9	7.4	16.8	21.5	16.5	37.4	47.9
	69	9.2	5.3	12	15.4	10.5	23.9	30.6
	70	13.4	7.7	17.6	22.5	13.7	31.1	39.8
	71	1	0.6	1.3	1.7	0.4	1	1.3
	72	2.7	1.5	3.5	4.5	1.2	2.7	3.5
Sub Total		288.5	161.7	367.4	470.3	250.8	570.1	729.7
Mjr. Str. RW		36.4	20.8	47.3	60.5	46.3	105.2	134.7
Total Area		**324.9**	**182.5**	**414.7**	**530.8**	**297.1**	**675.3**	**864.4**

Westgate
City of Fontana, CA

Hydrology Master Plan
Existing and Proposed
8/20/12

			Existing Q			Proposed Q		
Reach	PA	Area (ac)	2 Year	25 Year	100 Year	2 Year	25 Year	100 Year
D_1	52	16.2	9.3	21.06	27.0	19.6	44.6	57.1
	53	8	4.6	10.4	13.3	9.2	20.8	26.6
	53a	0.3	0.2	0.39	0.5	0.1	0.3	0.4
Sub Total		**24.5**	**14.0**	**31.9**	**40.8**	**28.9**	**65.7**	**84.1**
D_{1a}	54	10.7	6.1	13.91	17.8	10.8	24.6	31.5
	55	9.9	5.7	12.87	16.5	7.0	15.8	20.2
	56	1	0.6	1.3	1.7	0.4	1	1.3
	56a	1	0.6	1.3	1.7	0.4	1	1.3
	57	15.8	9.0	20.54	26.3	7.0	15.8	20.2
Sub Total		**38.4**	**22.0**	**49.9**	**63.9**	**25.6**	**58.2**	**74.5**
D_{1b}	58	3.4	1.9	4.42	5.7	1.5	3.4	4.4
	D_1	24.5	14.0	31.85	40.8	28.9	65.7	84.1
	D_{1a}	38.4	22.0	49.92	63.9	25.6	58.2	74.5
Sub Total		**66.3**	**37.9**	**86.2**	**110.3**	**56.0**	**127.3**	**162.9**
D_{1c}	50	8.4	4.8	10.92	14.0	10.2	23.1	29.6
	51	10.6	6.1	13.78	17.6	12.8	29.2	37.4
Sub Total		**19**	**10.9**	**24.7**	**31.6**	**23.0**	**52.3**	**66.9**
D_2	61	3.4	1.9	4.42	5.7	3.4	7.8	10.0
	62	1	0.6	1.3	1.7	0.4	1	1.3
	63	5.3	3.0	6.89	8.8	2.3	5.3	6.8
	64	7.7	4.4	10.01	12.8	7.8	17.7	22.7
Sub Total		**17.4**	**10.0**	**22.6**	**29.0**	**14.0**	**31.8**	**40.7**
D_{2a}	59	2.6	1.5	3.38	4.3	1.1	2.6	3.3
	60	20.6	11.8	26.78	34.3	9.1	20.6	26.4
Sub Total		**23.2**	**13.3**	**30.2**	**38.6**	**10.2**	**23.2**	**29.7**
D_3	70	13.5	7.7	17.55	22.5	13.7	31.1	39.8
	71	1	0.6	1.3	1.7	0.4	1	1.3
	72	2.7	1.5	3.51	4.5	1.2	2.7	3.5
	D_2	17.4	10.0	22.62	29.0	14.0	31.8	40.7
	D_{2a}	23.2	13.3	30.16	38.6	10.2	23.2	29.7
Sub Total		**57.8**	**33.1**	**75.1**	**96.2**	**39.5**	**89.8**	**114.9**

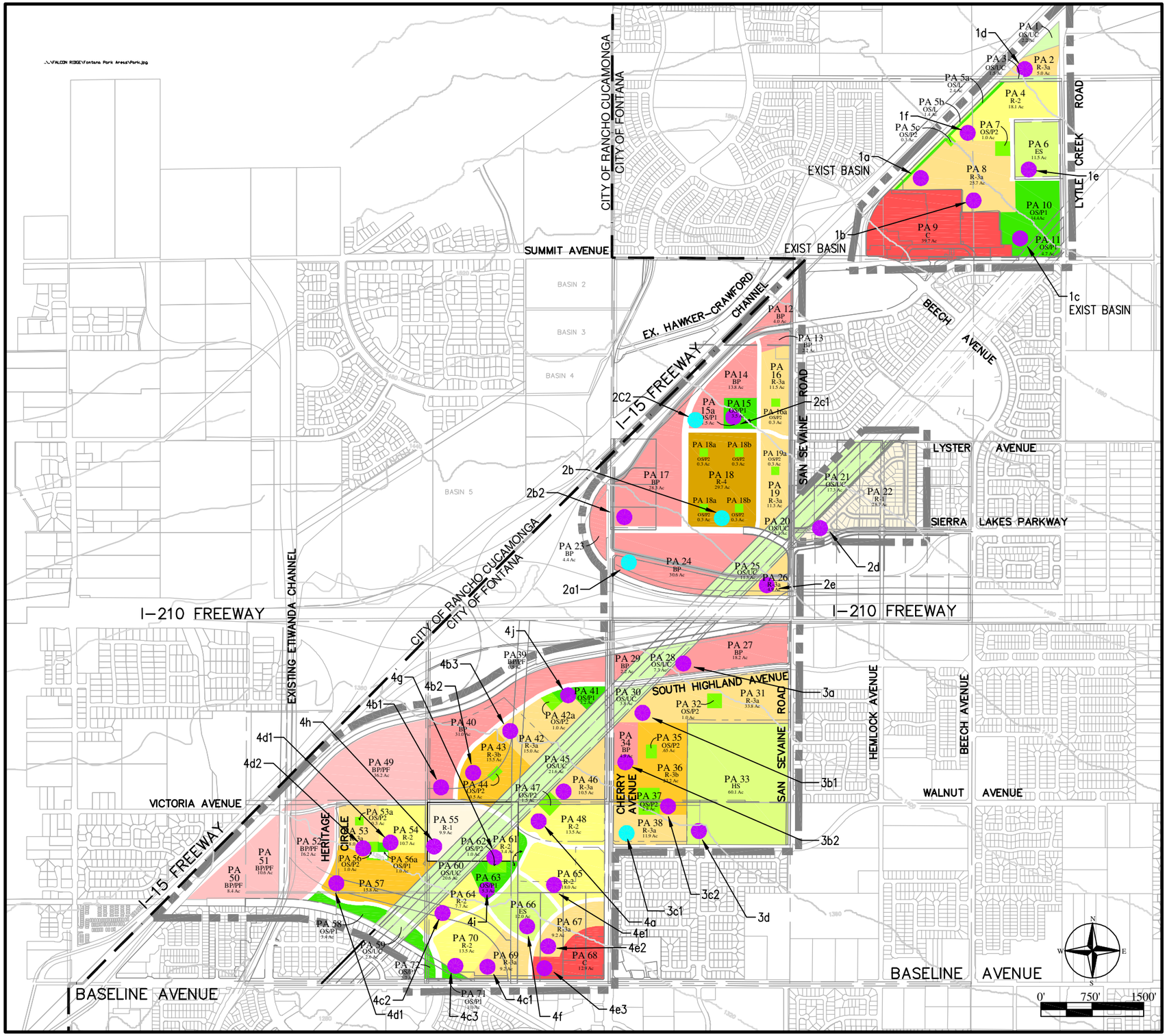
D_4	65	18	10.3	23.4	30.0	18.2	41.4	53.0
	66	12	6.9	15.6	20.0	6.9	15.6	20.0
	67	9.2	5.3	11.96	15.3	10.5	23.9	30.6
	68	12.9	7.4	16.77	21.5	16.5	37.4	47.9
	69	9.2	5.3	11.96	15.3	10.5	23.9	30.6
Sub Total		**61.3**	**35.1**	**79.7**	**102.0**	**62.6**	**142.2**	**182.0**
D_5	33	60.1	34.4	78.13	100.0	34.4	78.1	100.0
Sub Total		**60.1**	**34.4**	**78.1**	**100.0**	**34.4**	**78.1**	**100.0**
D_{5a}	37	2.8	1.6	3.64	4.7	1.2	2.8	3.6
	38	11.9	6.8	15.47	19.8	13.6	30.9	39.6
	D_5	60.1	34.4	78.13	100.0	34.4	78.1	100.0
Sub Total		**74.8**	**42.8**	**97.2**	**124.5**	**49.2**	**111.8**	**143.1**
D_6	41	3.2	1.8	4.16	5.3	1.4	3.2	4.1
	42	15	8.6	19.5	25.0	17.2	39	49.9
	42a	1	0.6	1.3	1.7	0.4	1	1.3
Sub Total		**19.2**	**11.0**	**25.0**	**31.9**	**19.0**	**43.2**	**55.3**
D_{6a}	43	15.5	8.9	20.15	25.8	17.7	40.3	51.6
	44	0.5	0.3	0.65	0.8	0.2	0.5	0.6
Sub Total		**16**	**9.2**	**20.8**	**26.6**	**18.0**	**40.8**	**52.2**
D_{6b}	40	31	17.7	40.3	51.6	39.6	89.9	115.1
	49	36.2	20.7	47.06	60.2	43.8	99.6	127.5
	D_6	19.2	11.0	24.96	31.9	19.0	43.2	55.3
	D_{6a}	16	9.2	20.8	26.6	18.0	40.8	52.2
Sub Total		**102.4**	**58.6**	**133.1**	**170.4**	**120.3**	**273.5**	**350.1**
D_{6c}	45	21.6	12.4	28.08	35.9	9.5	21.6	27.6
	46	10.5	6.0	13.65	17.5	12.0	27.3	34.9
	47	1.5	0.9	1.95	2.5	0.7	1.5	1.9
	48	13.5	7.7	17.55	22.5	13.7	31.1	39.8
Sub Total		**47.1**	**26.9**	**61.2**	**78.4**	**35.9**	**81.5**	**104.3**
D_7	27	18.2	10.4	23.66	30.3	23.2	52.8	67.6
	28	7.3	4.2	9.49	12.1	3.2	7.3	9.3
	29	2.2	1.3	2.86	3.7	2.8	6.4	8.2
Sub Total		**27.7**	**15.8**	**36.0**	**46.1**	**29.3**	**66.5**	**85.1**
D_{7a}	30	3.8	2.2	4.94	6.3	1.7	3.8	4.9
	D_7	27.7	15.8	36.01	46.1	29.3	66.5	85.1
Sub Total		**31.5**	**18.0**	**41.0**	**52.4**	**30.9**	**70.3**	**90.0**

D_{7b}	31	33.8	19.3	43.94	56.2	38.7	87.9	112.5
	32	1	0.6	1.3	1.7	0.4	1	1.3
	34	4.9	2.8	6.37	8.2	6.2	14.2	18.2
	35	0.65	0.4	0.845	1.1	0.3	0.7	0.9
	36	23.2	13.3	30.16	38.6	26.5	60.3	77.2
	D_{7a}	31.5	18.0	40.95	52.4	30.9	70.3	90.0
Sub Total		**95.1**	**54.4**	**123.6**	**158.2**	**103.1**	**234.4**	**300.0**
D_8	19	11.3	6.5	14.69	18.8	12.9	29.4	37.6
	19a	0.3	0.2	0.39	0.5	0.1	0.3	0.4
	20	2.1	1.2	2.73	3.5	0.9	2.1	2.7
Sub Total		**13.7**	**7.8**	**17.8**	**22.8**	**14.0**	**31.8**	**40.7**
D_{8a}	18	29.7	17.0	38.61	49.4	35.9	81.7	104.6
	18a	0.3	0.2	0.39	0.5	0.1	0.3	0.4
	18b	0.3	0.2	0.39	0.5	0.1	0.3	0.4
	18c	0.3	0.2	0.39	0.5	0.1	0.3	0.4
	18d	0.3	0.2	0.39	0.5	0.1	0.3	0.4
	D_8	13.7	7.8	17.81	22.8	14.0	31.8	40.7
Sub Total		**44.6**	**25.5**	**58.0**	**74.2**	**50.5**	**114.7**	**146.8**
D_9	13	2.2	1.3	2.86	3.7	2.8	6.4	8.2
	16	11.5	6.6	14.95	19.1	13.2	29.9	38.3
	16a	0.3	0.2	0.39	0.5	0.1	0.3	0.4
Sub Total		**14**	**8.0**	**18.2**	**23.3**	**16.1**	**36.6**	**46.8**
D_{9a}	15	3.5	2.0	4.55	5.8	1.5	3.5	4.5
	15a	1.5	0.9	1.95	2.5	0.7	1.5	1.9
	D_9	14	8.0	18.2	23.3	16.1	36.6	46.8
Sub Total		**19**	**10.9**	**24.7**	**31.6**	**18.3**	**41.6**	**53.2**
D_{9b}	14	13.8	7.9	17.94	23.0	17.6	40	51.2
Sub Total		**13.8**	**7.9**	**17.9**	**23.0**	**17.6**	**40**	**51.2**
D_{9c}	D_{9a}	19	10.9	24.7	31.6	18.3	41.6	53.2
	D_{9b}	13.8	7.9	17.94	23.0	17.6	40	51.2
Sub Total		**32.8**	**18.8**	**42.6**	**54.6**	**35.9**	**81.6**	**104.4**
D_{10}	17	28.3	16.2	36.79	47.1	36.1	82.1	105.1
	D_{8a}	44.6	25.5	57.98	74.2	50.5	114.7	146.8
	D_{9c}	32.8	18.8	42.64	54.6	35.9	81.6	104.4
Sub Total		**105.7**	**60.5**	**137.4**	**175.9**	**122.5**	**278.4**	**356.4**

D_{11}	23	4.4	2.5	5.72	7.3	5.6	12.8	16.4
	24	30.6	17.5	39.78	50.9	39.0	88.7	113.5
	D_{10}	105.7	60.5	137.41	175.9	122.5	278.3	356.2
Sub Total		**140.7**	**80.5**	**182.9**	**234.1**	**167.1**	**379.8**	**486.1**
D_{12}	25	11.3	6.5	14.69	18.8	5.0	11.3	14.5
Sub Total		**11.3**	**6.5**	**14.7**	**18.8**	**5.0**	**11.3**	**14.5**
D_{13}	26	4.9	2.8	6.37	8.2	5.6	12.7	16.3
Sub Total		**4.9**	**2.8**	**6.4**	**8.2**	**5.6**	**12.7**	**16.3**
D_{14}	Off Site	26	14.9	33.8	43.3	11.4	26	33.3
Sub Total		**26**	**14.9**	**33.8**	**43.3**	**11.4**	**26**	**33.3**
D_{15}	Part of 22	7.4	4.2	9.62	12.3	5.2	11.8	15.1
	D_{14}	26	14.9	33.8	43.3	11.4	26	33.3
Sub Total		**33.4**	**19.1**	**43.4**	**55.6**	**16.6**	**37.8**	**48.4**
	21	17.3	9.9	22.49	28.8	7.6	17.3	22.1
	Part of 22	21.3	12.2	27.69	35.4	15.0	34.1	43.6
Sub Total		**38.6**	**22.1**	**50.2**	**64.2**	**22.6**	**51.4**	**65.8**
D_{16}	1	2.2	1.3	2.86	3.7	1.0	2.2	2.8
	2	5	2.9	6.5	8.3	5.7	13	16.6
	3	1.5	0.9	1.95	2.5	0.7	1.5	1.9
	4	18.1	10.4	23.53	30.1	18.3	41.6	53.2
	5a	2.4	1.4	3.12	4.0	1.1	2.4	3.1
	5b	1.4	0.8	1.82	2.3	0.6	1.4	1.8
	5c	0.3	0.2	0.39	0.5	0.1	0.3	0.4
	7	1	0.6	1.3	1.7	0.4	1	1.3
	Part of 8	15.6	8.9	20.28	26.0	17.9	40.6	52.0
Sub Total		**47.5**	**27.2**	**61.8**	**79.0**	**45.8**	**104**	**133.1**
D_{17}	Part of 8	10.1	5.8	13.13	16.8	11.6	26.3	33.7
	Part of 10	2.1	1.2	2.73	3.5	0.9	2.1	2.7
Sub Total		**12.2**	**7.0**	**15.9**	**20.3**	**12.5**	**28.4**	**36.4**
D_{18}	Part of 10	12.4	7.1	16.12	20.6	5.5	12.4	15.9
	11	4.7	2.7	6.11	7.8	2.1	4.7	6.0
Sub Total		**17.1**	**9.8**	**22.2**	**28.5**	**7.5**	**17.1**	**21.9**
D_{19}	D_{17}	12.2	7.0	15.86	20.3	12.5	28.4	36.4
	D_{18}	17.1	9.8	22.23	28.5	7.5	17.1	21.9
Sub Total		**29.3**	**16.8**	**38.09**	**48.8**	**20.0**	**45.5**	**58.2**
D_{20}	D_{16}	47.5	27.2	61.75	79.0	45.8	104	133.1
	D_{19}	29.3	16.8	38.09	48.8	20.0	45.5	58.2
Sub Total		**76.8**	**43.9**	**99.84**	**127.8**	**65.8**	**149.5**	**191.4**

ATTACHMENT G

WATER QUALITY MANAGEMENT PLAN EXHIBIT



SPECIFIC PLAN

WESTGATE

City of Fontana, CA

EXHIBIT NAME

Water Quality Management Plan

LEGEND:

- LOCAL WATER QUALITY BASIN LOCATION
- 1a BASIN #
- REGIONAL WATER QUALITY BASIN LOCATION
- 3a1 BASIN #

CREDITS

Applicant:

Unitex Management Corp

Prepared By:

JHA Consulting, Inc.

Source:

Hall & Foreman, Inc.

FIGURE 3-27

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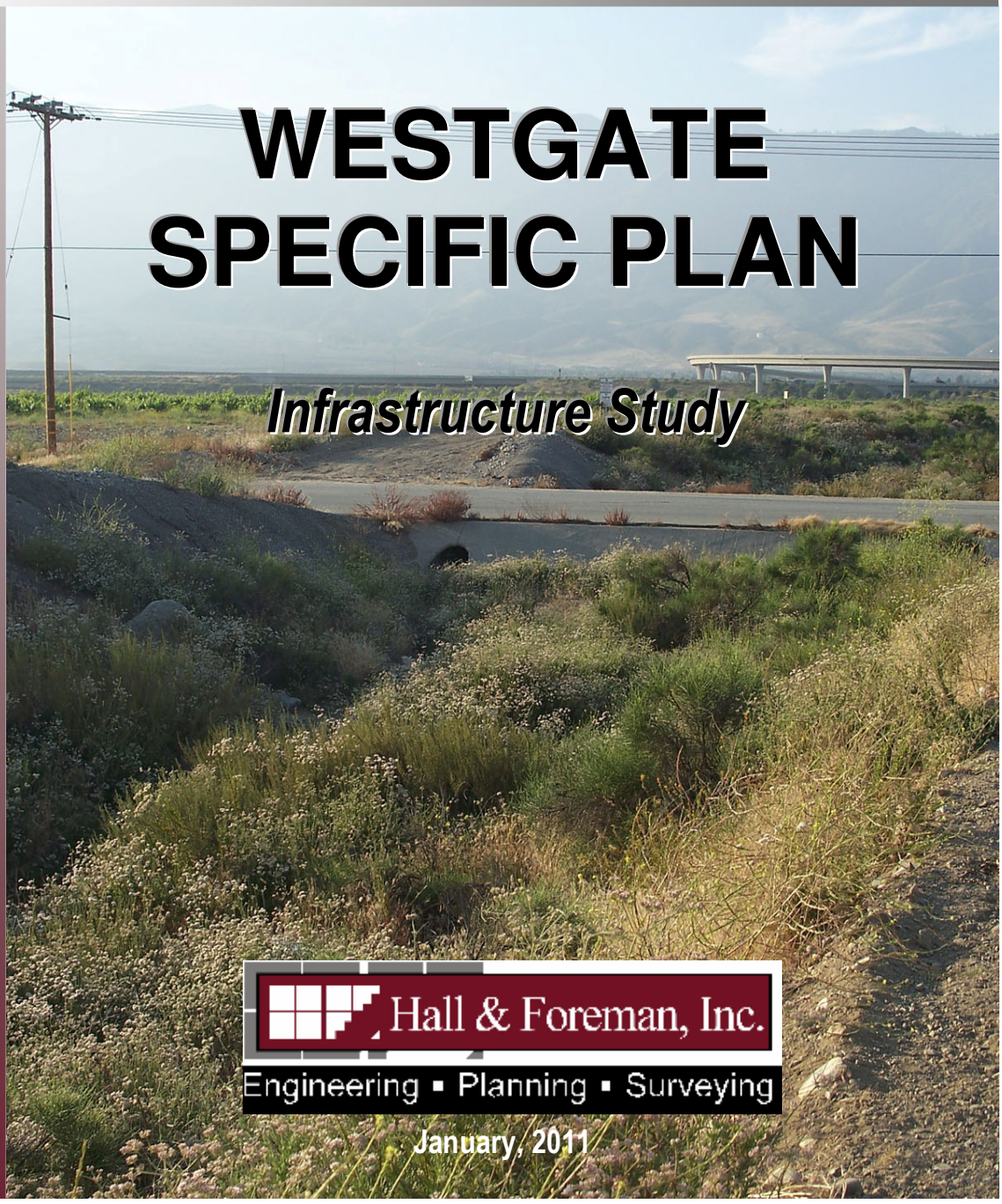
Last Opened: Jan 05, 2011 - 12:06pm by: EOune

ATTACHMENT H

WESTGATE SPECIFIC PLAN INFRASTRUCTURE STUDY

WESTGATE SPECIFIC PLAN

Infrastructure Study



TUSTIN
17782 East 17th Street
Suite 200
Tustin, CA 92780
714.665.4500
Fax: 714.665.4501

SANTA CLARITA
25152 Springfield Court
Suite350
Santa Clarita, CA 91355-1096
661.284.7400
Fax 661.284.7401

TEMECULA
Three BetterWorld Circle
Suite 100
Temecula, CA 92590-3745
951.294.9300
Fax: 951.294-9301

VICTORVILLE
14297 Cajon Avenue
Suite 101
760.241.0595
Fax 760.241.1937

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January, 2011

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1. PROJECT DESCRIPTION

The purpose of this study is to perform a planning level analysis of the domestic water, recycled water, and sewer infrastructure needs of the Westgate Specific Plan (SP). The Westgate SP is generally located along the southern side of the I-15 Freeway between Baseline Avenue and Summit Avenue. A portion of the project also extends north of Summit Avenue and is bounded by the I-15 Freeway and Lytle Creek Road. The Westgate SP includes approximately 960 net acres consisting of a variety of land use types including residential, commercial, business park, public facilities, schools, parks, and open space. At build-out, the SP envisions over 5,900 residential dwelling units, four million square feet of retail and business park buildings, and over 230 acres of schools, parks, and open space.

This study summarizes the methodologies used in making the preliminary design recommendations presented on the Master Plan for each respective utility. It should be noted that a hydraulic model was not created in order to evaluate these systems. Recommendations are based on constraints of the existing infrastructure and on engineering judgment, and are consistent with similar developments.

2. DOMESTIC WATER SYSTEM

The intent of the enclosed domestic water analysis is to determine preliminary sizing and alignments for the domestic water infrastructure required to support development of the Westgate SP. It should be noted that this is a planning level document and hydraulic modeling was not performed in making the enclosed recommendations. A detailed domestic water analysis shall be performed as part of the development of final engineering documents.

Water service in the Westgate SP area is currently provided by two different agencies. Cucamonga Valley Water District (CVWD) services the area west of Cherry Avenue, and the Fontana Water Company (FWC) services the area east of Cherry Avenue.

Existing water lines are prevalent around the Westgate SP area, which allows new water lines to have multiple points of connection to the existing ones. In general, new water lines are proposed to extend what exists today, matching line sizes and completing the loops where necessary.

LAND USE AND WATER SYSTEM DEMANDS

Water demands have been projected based on the product allocation and/or land use designated on the Westgate SP Land Use Plan (see Appendix H).

For the purposes of this analysis, the following domestic water demand formulas were used. These are based on engineering judgment and consistent with similar developments. Average Day Demands (ADD) were determined by using a demand factor that is a ten percent (10%) increase from the Sewer Flow Generation Factors from Table 2.1 in the City of Fontana Sewer Master Plan Update dated in September of 2000. Establishing domestic water ADD using sewer generation factors is a generally accepted approach. The rationale for the ten percent increase is consistent with the City of Los Angeles Design Criteria and accounts for evaporation and absorption losses. The resulting domestic water ADD factors for Westgate closely correlates with demand factors cited in the CVWD Water System Master Plan dated April 2003.

The land uses and flow generation factors used for the Westgate SP are as follows:

Land Use Designation	Description	ADD Factor
R - 1 (0-5 du/ac)	Single Family Detached	307 GPD/DU
R - 2 (5-12 du/ac)	Single Family Detached	307 GPD/DU
R - 3a (12-18 du/ac)	Condominiums	307 GPD/DU
R - 3b (18-24 du/ac)	Condominiums	307 GPD/DU
R - 4 (24-50 du/ac)	Apartments	220 GPD/DU
C	Commercial Retail	3,300 GPD/AC
BP	Business Park	3,300 GPD/AC
BP / PF	Business Park / Public Facilities	3,300 GPD/AC
OS / P1	Open Space / Public Parks	220 GPD/AC
OS / P2	Open Space / Private Parks	220 GPD/AC
OS / L	Open Space / Landscape	NA
OS / UC	Open Space / Utility Corridor	NA
ES	Elementary School	2,640 GPD/AC
HS	High School	2,640 GPD/AC

Maximum Day Demands (MDD) were determined by increasing ADD by a factor of two (2). Peak Hour Demands (PHD) were determined by increasing the ADD by a factor of three and one-half (3.5).

A summary of Average Day, Maximum Day, and Peak Hour Demands for each planning area within the Westgate SP is provided in Table W1 (see Appendix A).

In addition, the domestic water system must accommodate minimum Fire Flow Demand (FFD) requirements from the California Fire Code. FFD requirements are based on a variety of factors including building square footage and type of building. For the purposes of this analysis, the following Fire Flow Demand requirements were assumed. These are based on engineering judgment and consistent with similar developments.

Land Use Designation	Description	FDD
R - 1 (0-5 du/ac)	Single Family Detached	1,500 GPM
R - 2 (5-12 du/ac)	Single Family Detached	1,500 GPM
R - 3a (12-18 du/ac)	Condominiums	2,500 GPM
R - 3b (18-24 du/ac)	Condominiums	2,500 GPM
R - 4 (24-50 du/ac)	Apartments	2,500 GPM
C	Commercial Retail	4,000 GPM
BP	Business Park	4,000 GPM
BP / PF	Business Park / Public Facilities	4,000 GPM
OS / P1	Open Space / Public Parks	NA
OS / P2	Open Space / Private Parks	NA
OS / L	Open Space / Landscape	NA
OS / UC	Open Space / Utility Corridor	NA
ES	Elementary School	4,000 GPM
HS	High School	4,000 GPM

HYDRAULIC ANALYSIS

It is assumed that supply of domestic water can be provided by the CVWD and FWC infrastructure currently in place. Domestic water pipeline sizes shown on the Water Master Plan were determined using engineering judgment, and roughly based on extending the existing line sizes to serve the Westgate SP area. Pipeline sizes were compared against system demands placed on each pipeline to validate the sizing recommendations. Additional analysis shall be performed as part of the development of final engineering documents.

3. RECYCLED WATER SYSTEM

The intent of the enclosed recycled water analysis is to determine preliminary sizing and alignments for the recycled water infrastructure required to support development of the Westgate SP. It should be noted that this is a planning level document and hydraulic modeling was not performed in making the enclosed recommendations. A detailed recycled water analysis shall be performed as part of the development of final engineering documents.

Recycled water service is currently not available in the Westgate SP area. However, the City of Fontana does have plans to introduce recycled water infrastructure in the future. The enclosed summary references information provided in the *Feasibility Study to Serve Recycled Water in the City of Fontana* (Feasibility Study) dated in May of 2006. For the purposes of the enclosed study and associated Recycled Water Master Plan, recycled water lines identified in the Feasibility Study are shown as existing recycled water lines.

In general, recycled water lines specific to the Westgate SP are proposed to extend what is shown in the Feasibility Study, matching line sizes and completing the loops where necessary.

LAND USE AND WATER SYSTEM DEMANDS

Recycled water demands for the enclosed analysis were obtained from the Feasibility Study. The Feasibility Study projected recycled water demands for park and school land uses. Both land uses averaged roughly 30 gpm/acre for Peak Flows in the Feasibility Study. This is the basis for the pipe size recommendations shown on the Recycled Water Master Plan (see Appendix F).

HYDRAULIC ANALYSIS

It is assumed that supply of recycled water can be provided by the City of Fontana infrastructure proposed in the Feasibility Study. Recycled water pipeline sizes shown on the Recycled Water Master Plan were determined using engineering judgment, and roughly based on extending the line sizes from the Feasibility Study. Pipeline sizes were compared against system demands placed on each pipeline to validate the sizing recommendations. Additional analysis shall be performed as part of the development of final engineering documents.

The intent of the enclosed sewer analysis is to determine preliminary sizing and alignments for the sewer infrastructure required to support development of the Westgate SP. It should be noted that this is a planning level document and hydraulic modeling was not performed in making the enclosed recommendations. A detailed sewer analysis shall be performed as part of the development of final engineering documents.

LAND USE AND FLOW PROJECTIONS

Sewer flows have been projected based on the product allocation and/or land use designated on the Westgate SP Land Use Plan (see Appendix I).

Average flows were determined using the Flow Generation Factors from Table 2.1 in the City of Fontana Sewer Master Plan Update dated in September of 2000. Because the City's Flow Generation Factors do not account for high-density residential land uses, adjustments were made to the flow generation factors to more accurately reflect sewer flows generated from high density land use types. The land uses and flow generation factors used for the Westgate SP are as follows:

Land Use Designation	Description	Flow Generation Factor
R - 1 (0-5 du/ac)	Single Family Detached	279 GPD/DU
R - 2 (5-12 du/ac)	Single Family Detached	279 GPD/DU
R - 3a (12-18 du/ac)	Condominiums	279 GPD/DU
R - 3b (18-24 du/ac)	Condominiums	279 GPD/DU
R - 4 (24-50 du/ac)	Apartments	200 GPD/DU
C	Commercial Retail	3,000 GPD/AC
BP	Business Park	3,000 GPD/AC
BP / PF	Business Park / Public Facilities	3,000 GPD/AC
OS / P1	Open Space / Public Parks	200 GPD/AC
OS / P2	Open Space / Private Parks	200 GPD/AC
OS / L	Open Space / Landscape	NA
OS / UC	Open Space / Utility Corridor	NA
ES	Elementary School	2,400 GPD/AC
HS	High School	2,400 GPD/AC

Peak flows were determined by using the following formula from the City of Fontana Sewer Master Plan Update dated in September of 2000.

$Q_{PEAK} = 2.5 \times (Q_{AVG})^{\wedge 0.91}$, with Q_{PEAK} and Q_{AVG} given in million-gallons per day (MGD).

A summary of Average and Peak flows generated by the Westgate SP is provided in Table S1 (see Appendix B).

HYDRAULIC ANALYSIS

The enclosed sewer analysis is limited to the sewer infrastructure located within the street right-of-way and necessary to serve each respective planning area. Sewer infrastructure internal to each respective planning area is beyond the scope of this analysis.

Currently there is existing sewer infrastructure within Cherry Avenue, San Sevaine Road, South Highland Avenue, Summit Avenue, Lytle Creek Road, Walnut Avenue, and at the southwest corner of the Westgate SP near the Etiwanda Drainage Channel. These existing systems will ultimately receive the sewer flows generated from development of the Westgate SP. New sewer infrastructure will be required in order to serve many of the planning areas within the Westgate SP. Both existing and proposed sewer lines are indicated on the Sewer Master Plan that accompanies this report (see Appendix G).

The proposed sewer reaches indicated on the Sewer Master Plan are sized based on the cumulative average sewer flows multiplied by the peaking factor at a given point in the system.

A summary of sewer flows tributary to each sewer reach, and recommended pipe diameters is shown in Table S2 (see Appendix C). Because of the preliminary nature of this study, minimum slopes were assumed when determining recommended pipe diameters for each respective sewer reach.

The minimum sewer diameter is assumed to be eight (8) inches.

A Manning's 'n' value of 0.013 was used when calculating sewer capacities. Capacity calculations are included as an appendix to this analysis.

Sewer design and evaluation criteria was taken from the City of Fontana Sewer Master Plan Update dated in September of 2000, and as shown in the following table.

Sewer Diameter	Minimum Slope	Allowable D/d	Associated Capacity (cfs)
8-inch	0.0040	0.50	0.38
10-inch	0.0030	0.50	0.60
12-inch	0.0024	0.50	0.87
15-inch	0.0017	0.75	2.43
18-inch	0.0014	0.75	3.58
21-inch	0.0011	0.75	4.79
24-inch	0.0010	0.75	6.52

5. STORM DRAIN SYSTEM

The intent of the enclosed storm drain and hydrology analysis is to determine preliminary sizing and alignments for the storm drain infrastructure required to support development of the Westgate SP. It should be noted that this is a planning level document and hydraulic modeling was not performed in making the enclosed recommendations. A detailed storm drain and hydrology analysis shall be performed as part of the development of final engineering documents.

The project site slopes generally southwesterly at approximately one and a half to two percent. With few exceptions, flows upstream of the site are generally intercepted by the I-15 freeway. Flows migrate through the site in a sheet flow condition. While the old San Sevaine earthen channel still exists, it no longer serves regional drainage needs and will be abandoned and filled in as development occurs.

Storm drainage master planning is a joint responsibility of the City of Fontana and the San Bernardino County Flood Control District (SBCFCD). The SBCFCD is responsible for the regional channels, debris basins, and detention facilities. The City is responsible for the acceptance, maintenance and master plan design of the local drainage collection systems, local detention basins, and the storm drain lines carrying run-off to the County regional facilities.

The City of Fontana has adopted a Master Plan of Drainage for Fontana and the project site is within the Master Plan area. The master planned drainage facilities are designed for various design capacities. The project will be responsible to safely convey the 100-year proposed discharge to a regional or city master planned drainage facility.

The project area is served by three (3) master planned facilities. First is the Summit Avenue Storm Drain, an existing 12' x 8' reinforced concrete box that follows Summit Avenue west to the I-15 freeway, thence southwest along the south side of the I-15 freeway to Cherry Avenue where it crosses under the freeway before connecting to San Sevaine Basin #5. The second is the Highland Channel, an existing concrete open channel and reinforced concrete box. Third is the Baseline Avenue Storm Drain, an existing double 8' x 10' reinforced concrete box. The project includes various connections to these facilities. All of the regional and proposed systems can be seen on the Storm Drain Master Plan Figure 3-26 (included in the Appendix of this report).

Preliminary hydrology and hydraulic calculations are included in the appendix of this report. These calculations support the storm drain pipeline sizes shown on the Storm Drain Master Plan.

6. WATER QUALITY

The Westgate Specific Plan area is located within the jurisdiction of the Santa Ana Regional Water Quality Control Board and the Chino Basin Watershed Management Area. Storm flows from the project are tributary to the San Sevaine Channel, the Santa Ana River - Reach 3, and ultimately, to the Prado Flood Control Basin.

Storm water runoff will be treated during and after construction in conformance with the requirements of the general permits of the Regional Board and the San Bernardino County Water Quality Management Plan. Although the project will generate a number of pollutants because of development, there will be minimal impacts to the Chino Basin Watershed Management Area since the receiving waters are hard-lined channels that are regularly maintained.

Low Impact Development (LID) principals, including the use of Green Streets, will be integrated into the design of the project. The functional goals of Green Streets are to provide source control of stormwater, limit its transport and pollutant conveyance to the collection system, and provide environmentally enhanced roads. Design techniques include drawing street run-off to landscape areas, parkway areas, greenbelts, open spaces and the use of porous pavement or pavers whenever possible and practical. Specific LID and Green Street measures will be addressed during project design and included into the final Water Quality Management Plan (WQMP).

The project will employ site design, source control (both structural and non-structural) and treatment control BMP's (Best Management Practices) utilizing best available technology to the maximum extent practicable (M.E.P.). In particular, the project will provide on-site infiltration devices to minimize the deleterious impacts to the watershed, locally and regionally. Among the expected pollutants in storm water runoff from the developed project, bacteria are of particular concern within the Santa Ana River Reach 3 watershed. Infiltration is the preferred method for treating bacteria-laden storm water.

Storm water treatment in the Westgate Specific Plan will include a variety of infiltration techniques, depending on the nature of the land use within each particular planning area. These will include infiltration basins, vegetated swales, underground infiltration, and bio-retention planters. The particular technique(s) will be determined during more detailed planning and engineering of the planning areas.

Where practical, basins (or other infiltration devices) will be located and sized to treat individual planning areas (PA's) or tracts. If it is impractical to treat an individual PA or tract within its own boundary, then a regional basin concept can be proposed. The regional basin concept provides a common treatment area that can be shared by several adjoining PA's. In such instances, the common regional basin would accommodate the excess above the capacity of the in-tract treatment facilities. It is not intended to have the regional basin(s) eliminate or reduce the number of individual basins within each PA.

Maintenance costs of regional basins that treat multiple tracts will be funded by in-lieu fees paid by the tributary PA's. The regional basins must be constructed by the master developer prior to the development of the tributary tracts / PA's. The storm drain system and water quality facilities will be designed to work in combination with one another. Locations and configurations of the water quality treatment facilities will be established during the site planning of the Westgate Villages and individual PA's.

Figure 3-27, Water Quality Management Plan, illustrates the conceptual locations of the treatment basins (or other devices, as may be appropriate). The commercial, business zones, schools and mixed-use zones will employ a combination of underground and open basin infiltration and other approved mechanical devices. Non-active park grounds will be utilized as water quality treatment basin locations.

Schools have their own jurisdiction so basins are not required on school parcels. However, run-off from a school site to an adjoining parcel would require treatment of the combined run-off within the boundaries of the adjoining property. Therefore, every effort will be made to design the project grading to avoid co-mingling of school site run-off with that of an adjoining property.

The San Bernardino County WQMP design criteria stipulates that water quality facilities be designed for a treatment volume equivalent to 85th percentile storm event of the pre- and post-developed conditions for a 2-year frequency storm event, whichever is greater. The city of Fontana requires fencing around basins that exceed 18" in depth. Such basins must have drawdown times not-to-exceed 72 hours. Basins should not exceed six (6) feet in height from top of slope to toe of slope, including two (2) feet of freeboard. A secondary surface drainage outlet must be provided. Basin design shall follow San Bernardino County Flood Control District standard basin design guideline criteria. The city of Fontana will accept surface swales for infiltration purposes provided the swale has a minimum flow line of 2.0%. The maximum grade accepted for water quality measures is 2.5%.

Non-active park grounds can be utilized as water quality treatment basin locations. Runoff from parking lots within parks must be treated within the park boundaries prior to release of run-off to an adjacent property or drainage facility.

The utility corridor is a desirable surface treatment location. Shallow trenches/swales may be utilized. However, the design and use of such trenches/swales will be subordinated to the requirements of the existing electrical transmission towers, gas mains and water mains. For example, minimum setbacks must be maintained from the electrical transmission towers. Furthermore, it will be necessary to ensure that a drivable maintenance road be preserved within the corridor. Design of the surface treatment facilities within the corridor will require close coordination with, and the consent of, the affected utility companies.

Water quality management can be enhanced by having homebuilders provide yard improvement packages that incorporate LID principles. This would include porous

pavement and pavers to provide increased infiltration surface area. Individual on-site treatment will be required within each lot or site. Therefore, yard drain systems that discharge directly to curb drains will not be allowed.

Site-specific Water Quality Management Plans will be prepared during in the Tentative Tract Map stage. Storm Water Pollution Prevention Plans will be prepared prior to grading permits. Maintenance of the water quality control facilities and devices will be the responsibility of community associations and property owners.

WESTGATE SPECIFIC PLAN
SUMMARY OF DOMESTIC WATER DEMANDS - PER PLANNING AREA

TABLE W1

Planning Area	Land Use	Net Acres	Total Res. DU	DU/AC	Demand Factor [1]		Estimated Average Daily Demands (GPM)	Estimated Average Daily Demands (CFS)	Estimated Maximum Daily Demands [2] (GPM)	Estimated Maximum Daily Demands [2] (CFS)	Estimated Maximum Daily Demands [3] (GPM)	Estimated Maximum Daily Demands [3] (CFS)
FALCON RIDGE VILLAGE												
1	OS/Utility Corridor	2.2			0	GPD/AC	0.00	0.000	0.00	0.000	0.00	0.000
2	R-3a (Condo's)	5.2	73	14	307	GPD/DU	15.56	0.035	31.13	0.069	54.47	0.121
3	OS/Utility Corridor	1.5			0	GPD/AC	0.00	0.000	0.00	0.000	0.00	0.000
4	R-2 (Single Family)	18.6	167	9	307	GPD/DU	35.60	0.079	71.21	0.159	124.61	0.278
5a	OS/Landscape	2.4			0	GPD/AC	0.00	0.000	0.00	0.000	0.00	0.000
5b	OS/Landscape	1.4			0	GPD/AC	0.00	0.000	0.00	0.000	0.00	0.000
5c	OS/Park P2	0.3			220	GPD/AC	0.05	0.000	0.09	0.000	0.16	0.000
6	Elementary School	12.0			2,640	GPD/AC	22.00	0.049	44.00	0.098	77.00	0.172
7	OS/Park P2	1.0			220	GPD/AC	0.15	0.000	0.31	0.001	0.53	0.001
8	R-3a (Condo's)	25.7	463	18	307	GPD/DU	98.71	0.220	197.42	0.440	345.48	0.770
9	Commercial Retail	39.4			3,300	GPD/AC	90.29	0.201	180.58	0.402	316.02	0.704
10	OS/Park P1	14.5			220	GPD/AC	2.22	0.005	4.43	0.010	7.75	0.017
11	OS/Park P1	5.0			220	GPD/AC	0.76	0.002	1.53	0.003	2.67	0.006
Subtotal		**129.2**	**703**				**265.35**	**0.591**	**530.69**	**1.182**	**928.71**	**2.069**
WESTGATE CENTER												
12	Business Park	4.6			3,300	GPD/AC	10.54	0.023	21.08	0.047	36.90	0.082
13	Business Park	2.2			3,300	GPD/AC	5.04	0.011	10.08	0.022	17.65	0.039
14	Business Park	14.1			3,300	GPD/AC	32.31	0.072	64.63	0.144	113.09	0.252
15	OS/Park P1	3.5			220	GPD/AC	0.53	0.001	1.07	0.002	1.87	0.004
15a	OS/Park P1	1.5			220	GPD/AC	0.23	0.001	0.46	0.001	0.80	0.002
16	R-3a (Condo's)	11.8	165	14	307	GPD/DU	35.18	0.078	70.35	0.157	123.12	0.274
16a	OS/Park P2	0.3			220	GPD/AC	0.05	0.000	0.09	0.000	0.16	0.000
17	Business Park	29.5			3,300	GPD/AC	67.60	0.151	135.21	0.301	236.61	0.527
18	R-4 (Apartments)	29.9	1495	50	220	GPD/DU	228.40	0.509	456.81	1.018	799.41	1.781
18a	OS/Park P2	0.3			220	GPD/AC	0.05	0.000	0.09	0.000	0.16	0.000
18b	OS/Park P2	0.3			220	GPD/AC	0.05	0.000	0.09	0.000	0.16	0.000
18c	OS/Park P2	0.3			220	GPD/AC	0.05	0.000	0.09	0.000	0.16	0.000
18d	OS/Park P2	0.3			220	GPD/AC	0.05	0.000	0.09	0.000	0.16	0.000
19	R-3a (Condo's)	11.6	162	14	307	GPD/DU	34.54	0.077	69.08	0.154	120.88	0.269
19a	OS/Park P2	0.3			220	GPD/AC	0.05	0.000	0.09	0.000	0.16	0.000
20	OS/Utility Corridor	2.1			0	GPD/AC	0.00	0.000	0.00	0.000	0.00	0.000
21	OS/Utility Corridor	17.2			0	GPD/AC	0.00	0.000	0.00	0.000	0.00	0.000
22	R-1 (Single Family)	28.7	110	4	307	GPD/DU	23.45	0.052	46.90	0.105	82.08	0.183
23	Business Park	4.2			3,300	GPD/AC	9.63	0.021	19.25	0.043	33.69	0.075
24	Business Park	30.4			3,300	GPD/AC	69.67	0.155	139.33	0.310	243.83	0.543
25	OS/Utility Corridor	11.3			0	GPD/AC	0.00	0.000	0.00	0.000	0.00	0.000
26	R-3a (Condo's)	5.1	71	14	307	GPD/DU	15.14	0.034	30.27	0.067	52.98	0.118
Subtotal		**209.5**	**2003**				**532.54**	**1.186**	**1,065.07**	**2.373**	**1,863.88**	**4.153**
WESTGATE VILLAGE (EAST)												
27	Business Park	18.4			3,300	GPD/AC	42.17	0.094	84.33	0.188	147.58	0.329
28	OS/Utility Corridor	7.3			0	GPD/AC	0.00	0.000	0.00	0.000	0.00	0.000
29	Business Park	2.1			3,300	GPD/AC	4.81	0.011	9.63	0.021	16.84	0.038
30	OS/Utility Corridor	3.8			0	GPD/AC	0.00	0.000	0.00	0.000	0.00	0.000
31	R-3a (Condo's)	32.8	459	14	307	GPD/DU	97.86	0.218	195.71	0.436	342.50	0.763
32	OS/Park P2	1.0			220	GPD/AC	0.15	0.000	0.31	0.001	0.53	0.001
33	High School	60.0			2,640	GPD/AC	110.00	0.245	220.00	0.490	385.00	0.858
34	Business Park	4.4			3,300	GPD/AC	10.08	0.022	20.17	0.045	35.29	0.079
35	OS/Park P2	0.65			220	GPD/AC	0.10	0.000	0.20	0.000	0.35	0.001
36	R-3b (Condo's)	23.1	495	21	307	GPD/DU	105.53	0.235	211.06	0.470	369.36	0.823
37	OS/Park P2	2.8			220	GPD/AC	0.43	0.001	0.86	0.002	1.50	0.003
38	R-3a (Condo's)	11.7	167	14	307	GPD/DU	35.60	0.079	71.21	0.159	124.61	0.278
Subtotal		**168.1**	**1121**				**406.73**	**0.906**	**813.47**	**1.812**	**1,423.57**	**3.172**

[1] Demand Factors are Sewer Generation Factors with a 10% increase to account for evaporation and absorption losses. This rationale is consistent with the City of Los Angeles Design Criteria.

[2] Maximum Day Demands are based on 2 x Average Day Demands.

[3] Peak Hour Demands are based on 3.5 x Average Day Demands.

WESTGATE SPECIFIC PLAN
SUMMARY OF DOMESTIC WATER DEMANDS - PER PLANNING AREA

TABLE W1

Planning Area	Land Use	Net Acres	Total Res. DU	DU/AC	Demand Factor [1]		Estimated Average Daily Demands (GPM)	Estimated Average Daily Demands (CFS)	Estimated Maximum Daily Demands [2] (GPM)	Estimated Maximum Daily Demands [2] (CFS)	Estimated Maximum Daily Demands [3] (GPM)	Estimated Maximum Daily Demands [3] (CFS)
WESTGATE VILLAGE (WEST)												
39	BP/PublicFacilities	0.5			3,300	GPD/AC	1.15	0.003	2.29	0.005	4.01	0.009
40	Business Park	31.0			3,300	GPD/AC	71.04	0.158	142.08	0.317	248.65	0.554
41	OS/Park P1	3.2			220	GPD/AC	0.49	0.001	0.98	0.002	1.71	0.004
42	R-3a (Condo's)	15.1	211	14	307	GPD/DU	44.98	0.100	89.97	0.200	157.44	0.351
42a	OS/Park P2	1.0			220	GPD/AC	0.15	0.000	0.31	0.001	0.53	0.001
43	R-3b (Condo's)	15.5	281	18	307	GPD/DU	59.91	0.133	119.82	0.267	209.68	0.467
44	OS/Park P2	0.5			220	GPD/AC	0.08	0.000	0.15	0.000	0.27	0.001
45	OS/Utility Corridor	21.4			0	GPD/AC	0.00	0.000	0.00	0.000	0.00	0.000
46	R-3a (Condo's)	10.5	147	14	307	GPD/DU	31.34	0.070	62.68	0.140	109.69	0.244
47	OS/Park P2	1.5			220	GPD/AC	0.23	0.001	0.46	0.001	0.80	0.002
48	R-2 (Single Family)	13.2	119	9	307	GPD/DU	25.37	0.057	50.74	0.113	88.80	0.198
49	BP/PublicFacilities	35.6			3,300	GPD/AC	81.58	0.182	163.17	0.364	285.54	0.636
	Current Facilites						0.00	0.000	0.00	0.000	0.00	0.000
50	BP/PublicFacilities	8.4			3,300	GPD/AC	19.25	0.043	38.50	0.086	67.38	0.150
51	BP/PublicFacilities	9.6			3,300	GPD/AC	22.00	0.049	44.00	0.098	77.00	0.172
52	BP/PublicFacilities	15.6			3,300	GPD/AC	35.75	0.080	71.50	0.159	125.13	0.279
53	R-3a (Condo's)	7.8	109	14	307	GPD/DU	23.24	0.052	46.48	0.104	81.33	0.181
53a	OS/Park P2	0.3			220	GPD/AC	0.05	0.000	0.09	0.000	0.16	0.000
54	R-2 (Single Family)	10.5	110	10	307	GPD/DU	23.45	0.052	46.90	0.105	82.08	0.183
55	R-1 (Single Family)	9.7	28	3	307	GPD/DU	5.97	0.013	11.94	0.027	20.89	0.047
56	OS/Park P2	1.0			220	GPD/AC	0.15	0.000	0.31	0.001	0.53	0.001
56a	OS/Park P1	1.0			220	GPD/AC	0.15	0.000	0.31	0.001	0.53	0.001
57	R-3a (Condo's)	20.7	455	22	307	GPD/DU	97.00	0.216	194.01	0.432	339.51	0.756
58	OS/Park P1	3.4			220	GPD/AC	0.52	0.001	1.04	0.002	1.82	0.004
59	OS/Utility Corridor	2.6			0	GPD/AC	0.00	0.000	0.00	0.000	0.00	0.000
60	OS/Utility Corridor	20.4			0	GPD/AC	0.00	0.000	0.00	0.000	0.00	0.000
61	R-2 (Single Family)	3.4	31	9	307	GPD/DU	6.61	0.015	13.22	0.029	23.13	0.052
62	OS/Park P2	1.0			220	GPD/AC	0.15	0.000	0.31	0.001	0.53	0.001
63	OS/Park P1	5.3			220	GPD/AC	0.81	0.002	1.62	0.004	2.83	0.006
64	R-2 (Single Family)	7.7	69	9	307	GPD/DU	14.71	0.033	29.42	0.066	51.49	0.115
65	R-2 (Single Family)	17.7	159	9	307	GPD/DU	33.90	0.076	67.80	0.151	118.64	0.264
66	Elementary School	12.0			2,640	GPD/AC	22.00	0.049	44.00	0.098	77.00	0.172
67	R-3a (Condo's)	9.6	134	14	307	GPD/DU	28.57	0.064	57.14	0.127	99.99	0.223
68	Commercial Retail	12.7			3,300	GPD/AC	29.10	0.065	58.21	0.130	101.86	0.227
69	R-3a (Condo's)	9.2	129	14	307	GPD/DU	27.50	0.061	55.00	0.123	96.26	0.214
70	R-2 (Single Family)	13.6	122	9	307	GPD/DU	26.01	0.058	52.02	0.116	91.03	0.203
71	OS/Park P1	1.1			220	GPD/AC	0.17	0.000	0.34	0.001	0.59	0.001
72	OS/Park P1	2.8			220	GPD/AC	0.43	0.001	0.86	0.002	1.50	0.003
Subtotal		**356.1**	**2104**				**733.81**	**1.635**	**1,467.63**	**3.270**	**2,568.34**	**5.722**
Total		**863**	**5931**				**1,938.43**	**4.319**	**3,876.85**	**8.638**	**6,784.49**	**15.116**

[1] Demand Factors are Sewer Generation Factors with a 10% increase to account for evaporation and absorption losses. This rationale is consistent with the City of Los Angeles Design Criteria.

[2] Maximum Day Demands are based on 2 x Average Day Demands.

[3] Peak Hour Demands are based on 3.5 x Average Day Demands.

WESTGATE SPECIFIC PLAN
SUMMARY OF WASTEWATER FLOWS - PER PLANNING AREA

TABLE S1

Planning Area	Land Use	Net Acres	Total Res. DU	DU/AC	Duty Factor [1]		Estimated Average Dry Weather Flows (GPD)	(GPM)	(CFS)	Estimated Peak Dry Weather Flows [1] (MGD)	(GPD)	(GPM)	(CFS)
FALCON RIDGE VILLAGE													
1	OS/Utility Corridor	2.2			0	GPD/AC	0	0.00	0.000	0.000	0	0.00	0.000
2	R-3a (Condo's)	5.2	73	14	279	GPD/DU	20,367	14.14	0.032	0.072	72,288	50.20	0.112
3	OS/Utility Corridor	1.5			0	GPD/AC	0	0.00	0.000	0.000	0	0.00	0.000
4	R-2 (Single Family)	18.6	167	9	279	GPD/DU	46,593	32.36	0.072	0.154	153,501	106.60	0.238
5a	OS/Landscape	2.4			0	GPD/AC	0	0.00	0.000	0.000	0	0.00	0.000
5b	OS/Landscape	1.4			0	GPD/AC	0	0.00	0.000	0.000	0	0.00	0.000
5c	OS/Park P2	0.3			200	GPD/AC	60	0.04	0.000	0.000	360	0.25	0.001
6	Elementary School	12.0			2,400	GPD/AC	28,800	20.00	0.045	0.099	99,080	68.81	0.153
7	OS/Park P2	1.0			200	GPD/AC	200	0.14	0.000	0.001	1,076	0.75	0.002
8	R-3a (Condo's)	25.7	463	18	279	GPD/DU	129,177	89.71	0.200	0.388	388,256	269.62	0.601
9	Commercial Retail	39.4			3,000	GPD/AC	118,200	82.08	0.183	0.358	358,115	248.69	0.554
10	OS/Park P1	14.5			200	GPD/AC	2,900	2.01	0.004	0.012	12,267	8.52	0.019
11	OS/Park P1	5.0			200	GPD/AC	1,000	0.69	0.002	0.005	4,655	3.23	0.007
Subtotal		**129.2**	**703**				**347,297**	**241.18**	**0.537**	**1.090**	**1,089,598**	**756.67**	**1.686**
WESTGATE CENTER													
12	Business Park	4.6			3,000	GPD/AC	13,800	9.58	0.021	0.051	50,726	35.23	0.078
13	Business Park	2.2			3,000	GPD/AC	6,600	4.58	0.010	0.026	25,925	18.00	0.040
14	Business Park	14.1			3,000	GPD/AC	42,300	29.38	0.065	0.141	140,576	97.62	0.218
15	OS/Park P1	3.5			200	GPD/AC	700	0.49	0.001	0.003	3,365	2.34	0.005
15a	OS/Park P1	1.5			200	GPD/AC	300	0.21	0.000	0.002	1,556	1.08	0.002
16	R-3a (Condo's)	11.8	165	14	279	GPD/DU	46,035	31.97	0.071	0.152	151,827	105.44	0.235
16a	OS/Park P2	0.3			200	GPD/AC	60	0.04	0.000	0.000	360	0.25	0.001
17	Business Park	29.5			3,000	GPD/AC	88,500	61.46	0.137	0.275	275,206	191.12	0.426
18	R-4 (Apartments)	29.9	1495	50	200	GPD/DU	299,000	207.64	0.463	0.833	833,299	578.68	1.289
18a	OS/Park P2	0.3			200	GPD/AC	60	0.04	0.000	0.000	360	0.25	0.001
18b	OS/Park P2	0.3			200	GPD/AC	60	0.04	0.000	0.000	360	0.25	0.001
18c	OS/Park P2	0.3			200	GPD/AC	60	0.04	0.000	0.000	360	0.25	0.001
18d	OS/Park P2	0.3			200	GPD/AC	60	0.04	0.000	0.000	360	0.25	0.001
19	R-3a (Condo's)	11.6	162	14	279	GPD/DU	45,198	31.39	0.070	0.149	149,313	103.69	0.231
19a	OS/Park P2	0.3			200	GPD/AC	60	0.04	0.000	0.000	360	0.25	0.001
20	OS/Utility Corridor	2.1			0	GPD/AC	0	0.00	0.000	0.000	0	0.00	0.000
21	OS/Utility Corridor	17.2			0	GPD/AC	0	0.00	0.000	0.000	0	0.00	0.000
22	R-1 (Single Family)	28.7	110	4	279	GPD/DU	30,690	21.31	0.047	0.105	104,980	72.90	0.162
23	Business Park	4.2			3,000	GPD/AC	12,600	8.75	0.019	0.047	46,696	32.43	0.072
24	Business Park	30.4			3,000	GPD/AC	91,200	63.33	0.141	0.283	282,836	196.41	0.438
25	OS/Utility Corridor	11.3			0	GPD/AC	0	0.00	0.000	0.000	0	0.00	0.000
26	R-3a (Condo's)	5.1	71	14	279	GPD/DU	19,809	13.76	0.031	0.070	70,483	48.95	0.109
Subtotal		**209.5**	**2003**				**697,092**	**484.09**	**1.079**	**2.139**	**2,138,948**	**1,485.38**	**3.309**
WESTGATE VILLAGE (EAST)													
27	Business Park	18.4			3,000	GPD/AC	55,200	38.33	0.085	0.179	179,104	124.38	0.277
28	OS/Utility Corridor	7.3			0	GPD/AC	0	0.00	0.000	0.000	0	0.00	0.000
29	Business Park	2.1			3,000	GPD/AC	6,300	4.38	0.010	0.025	24,851	17.26	0.038
30	OS/Utility Corridor	3.8			0	GPD/AC	0	0.00	0.000	0.000	0	0.00	0.000
31	R-3a (Condo's)	32.8	459	14	279	GPD/DU	128,061	88.93	0.198	0.385	385,203	267.50	0.596
32	OS/Park P2	1.0			200	GPD/AC	200	0.14	0.000	0.001	1,076	0.75	0.002
33	High School	60.0			2,400	GPD/AC	144,000	100.00	0.223	0.429	428,598	297.64	0.663
34	Business Park	4.4			3,000	GPD/AC	13,200	9.17	0.020	0.049	48,715	33.83	0.075
35	OS/Park P2	0.65			200	GPD/AC	130	0.09	0.000	0.001	727	0.50	0.001
36	R-3b (Condo's)	23.1	495	21	279	GPD/DU	138,105	95.91	0.214	0.413	412,601	286.53	0.638
37	OS/Park P2	2.8			200	GPD/AC	560	0.39	0.001	0.003	2,747	1.91	0.004
38	R-3a (Condo's)	11.7	167	14	279	GPD/DU	46,593	32.36	0.072	0.154	153,501	106.60	0.238
Subtotal		**168.1**	**1121**				**532,349**	**369.69**	**0.824**	**1.637**	**1,637,122**	**1,136.89**	**2.533**

[1] Based on Table 2.1 Sewage Flow Generation Factors and Peak Flow Formula, from City of Fontana Sewer Master Plan Update Dated Sept. 18, 2000.

WESTGATE SPECIFIC PLAN
SUMMARY OF WASTEWATER FLOWS - PER PLANNING AREA

TABLE S1

Planning Area	Land Use	Net Acres	Total Res. DU	DU/AC	Duty Factor		Estimated Average Dry Weather Flows (GPD)	Estimated Average Dry Weather Flows (GPM)	Estimated Average Dry Weather Flows (CFS)	Estimated Peak Dry Weather Flows (MGD)	Estimated Peak Dry Weather Flows (GPD)	Estimated Peak Dry Weather Flows (GPM)	Estimated Peak Dry Weather Flows (CFS)
WESTGATE VILLAGE (WEST)													
39	BP/PublicFacilities	0.5			3,000	GPD/AC	1,500	1.04	0.002	0.007	6,733	4.68	0.010
40	Business Park	31.0			3,000	GPD/AC	93,000	64.58	0.144	0.288	287,912	199.94	0.445
41	OS/Park P1	3.2			200	GPD/AC	640	0.44	0.001	0.003	3,101	2.15	0.005
42	R-3a (Condo's)	15.1	211	14	279	GPD/DU	58,869	40.88	0.091	0.190	189,905	131.88	0.294
42a	OS/Park P2	1.0			200	GPD/AC	200	0.14	0.000	0.001	1,076	0.75	0.002
43	R-3b (Condo's)	15.5	281	18	279	GPD/DU	78,399	54.44	0.121	0.246	246,469	171.16	0.381
44	OS/Park P2	0.5			200	GPD/AC	100	0.07	0.000	0.001	573	0.40	0.001
45	OS/Utility Corridor	21.4			0	GPD/AC	0	0.00	0.000	0.000	0	0.00	0.000
46	R-3a (Condo's)	10.5	147	14	279	GPD/DU	41,013	28.48	0.063	0.137	136,678	94.92	0.211
47	OS/Park P2	1.5			200	GPD/AC	300	0.21	0.000	0.002	1,556	1.08	0.002
48	R-2 (Single Family)	13.2	119	9	279	GPD/DU	33,201	23.06	0.051	0.113	112,768	78.31	0.174
49	BP/PublicFacilities	35.6			3,000	GPD/AC	106,800	74.17	0.165	0.327	326,543	226.77	0.505
	Current Facilites						0	0.00	0.000	0.000	0	0.00	0.000
50	BP/PublicFacilities	8.4			3,000	GPD/AC	25,200	17.50	0.039	0.088	87,743	60.93	0.136
51	BP/PublicFacilities	9.6			3,000	GPD/AC	28,800	20.00	0.045	0.099	99,080	68.81	0.153
52	BP/PublicFacilities	15.6			3,000	GPD/AC	46,800	32.50	0.072	0.154	154,122	107.03	0.238
53	R-3a (Condo's)	7.8	109	14	279	GPD/DU	30,411	21.12	0.047	0.104	104,111	72.30	0.161
53a	OS/Park P2	0.3			200	GPD/AC	60	0.04	0.000	0.000	360	0.25	0.001
54	R-2 (Single Family)	10.5	110	10	279	GPD/DU	30,690	21.31	0.047	0.105	104,980	72.90	0.162
55	R-1 (Single Family)	9.7	28	3	279	GPD/DU	7,812	5.43	0.012	0.030	30,224	20.99	0.047
56	OS/Park P2	1.0			200	GPD/AC	200	0.14	0.000	0.001	1,076	0.75	0.002
56a	OS/Park P1	1.0			200	GPD/AC	200	0.14	0.000	0.001	1,076	0.75	0.002
57	R-3a (Condo's)	20.7	455	22	279	GPD/DU	126,945	88.16	0.196	0.382	382,147	265.38	0.591
58	OS/Park P1	3.4			200	GPD/AC	680	0.47	0.001	0.003	3,277	2.28	0.005
59	OS/Utility Corridor	2.6			0	GPD/AC	0	0.00	0.000	0.000	0	0.00	0.000
60	OS/Utility Corridor	20.4			0	GPD/AC	0	0.00	0.000	0.000	0	0.00	0.000
61	R-2 (Single Family)	3.4	31	9	279	GPD/DU	8,649	6.01	0.013	0.033	33,157	23.03	0.051
62	OS/Park P2	1.0			200	GPD/AC	200	0.14	0.000	0.001	1,076	0.75	0.002
63	OS/Park P1	5.3			200	GPD/AC	1,060	0.74	0.002	0.005	4,909	3.41	0.008
64	R-2 (Single Family)	7.7	69	9	279	GPD/DU	19,251	13.37	0.030	0.069	68,674	47.69	0.106
65	R-2 (Single Family)	17.7	159	9	279	GPD/DU	44,361	30.81	0.069	0.147	146,795	101.94	0.227
66	Elementary School	12.0			2,400	GPD/AC	28,800	20.00	0.045	0.099	99,080	68.81	0.153
67	R-3a (Condo's)	9.6	134	14	279	GPD/DU	37,386	25.96	0.058	0.126	125,633	87.25	0.194
68	Commercial Retail	12.7			3,000	GPD/AC	38,100	26.46	0.059	0.128	127,815	88.76	0.198
69	R-3a (Condo's)	9.2	129	14	279	GPD/DU	35,991	24.99	0.056	0.121	121,360	84.28	0.188
70	R-2 (Single Family)	13.6	122	9	279	GPD/DU	34,038	23.64	0.053	0.115	115,353	80.11	0.178
71	OS/Park P1	1.1			200	GPD/AC	220	0.15	0.000	0.001	1,174	0.82	0.002
72	OS/Park P1	2.8			200	GPD/AC	560	0.39	0.001	0.003	2,747	1.91	0.004
Subtotal		**356.1**	**2104**				**960,436**	**666.97**	**1.486**	**3.129**	**3,129,285**	**2,173.11**	**4.842**
Total		**863**	**5931**				**2,537,174**	**1,761.93**	**3.926**	**7.995**	**7,994,953**	**5,552.05**	**12.370**

[1] Based on Table 2.1 Sewage Flow Generation Factors and Peak Flow Formula, from City of Fontana Sewer Master Plan Update Dated Sept. 18, 2000.

WESTGATE SPECIFIC PLAN
SUMMARY OF WASTEWATER FLOWS - PER SEWER REACH

TABLE S2

SEWER REACH	CONTRIBUTING AREA / REACH (Planning Area)	(Reach)	CONTRIBUTING FLOW (MGD)	(CFS)	TOTAL FLOW (MGD)	(CFS)	RECOMMENDED PIPE DIAMETER (IN)
S1	61		0.033	0.051			
	65		0.147	0.227			
					0.180	**0.278**	**8**
S2	62		0.001	0.002			
	63		0.005	0.008			
					0.006	**0.009**	**8**
S3	66		0.099	0.153			
		S2	0.006	0.009			
					0.105	**0.163**	**8**
S4	67		0.126	0.194			
		S1	0.180	0.278			
					0.306	**0.473**	**10**
S5	68		0.128	0.198			
		S3	0.105	0.163			
		S4	0.306	0.473			
					0.538	**0.833**	**12**
S6	64		0.069	0.106			
					0.069	**0.106**	**8**
S7	49		0.327	0.505			
	54		0.105	0.162			
					0.432	**0.668**	**12**
S8	52		0.154	0.238			
	53		0.104	0.161			
	53a		0.000	0.001			
	56		0.001	0.002			
	56a		0.001	0.002			
		S7	0.432	0.668			
					0.692	**1.071**	**15**
S9	57		0.382	0.591			
	58		0.003	0.005			
		S8	0.692	1.071			
					1.078	**1.667**	**15**
S10	70		0.115	0.178			
	71		0.001	0.002			
	72		0.003	0.004			
		S9	1.078	1.667			
					1.197	**1.852**	**15**
S11	69		0.121	0.188			
		S10	1.197	1.852			
					1.318	**2.040**	**15**
S12		S5	0.538	0.833			
		S11	1.318	2.040			
					1.857	**2.873**	**18**
S13	39		0.007	0.010			
	40		0.288	0.445			
	41		0.003	0.005			
	42		0.190	0.294			
	42a		0.001	0.002			
					0.489	**0.756**	**8**
S14	43		0.246	0.381			
	44		0.001	0.001			
		S13	0.489	0.756			
					0.736	**1.138**	**15**
S15	47		0.002	0.002			
	55		0.030	0.047			
		S14	0.736	1.138			
					0.768	**1.188**	**15**
S16	48		0.113	0.174			
		S15	0.768	1.188			
					0.880	**1.362**	**15**
S17	50		0.088	0.136			
	51		0.099	0.153			
					0.187	**0.289**	**8**
S18		S17	0.187	0.289			
					0.187	**0.289**	**8**

NOTE: 8-INCH PIPE FOR S13 ASSUMES 50% OF FLOW FROM PA-40 DOES NOT ENTER SYSTEM UNTIL REACH S14.

WESTGATE SPECIFIC PLAN
SUMMARY OF WASTEWATER FLOWS - PER SEWER REACH

TABLE S2

SEWER REACH	CONTRIBUTING AREA / REACH		CONTRIBUTING FLOW (MGD)	(CFS)	TOTAL FLOW (MGD)	(CFS)	RECOMMENDED PIPE DIAMETER (IN)
S19	12		0.051	0.078			
	13		0.026	0.040			
	14		0.141	0.218			
					0.217	**0.336**	**8**
S20	16		0.152	0.235			
	16a		0.000	0.001			
					0.152	**0.235**	**8**
S21	15		0.003	0.005			
	15a		0.002	0.002			
		S20	0.152	0.235			
					0.157	**0.243**	**8**
S22	17		0.275	0.426			
	18		0.833	1.289			
	18a		0.000	0.001			
	18b		0.000	0.001			
	18c		0.000	0.001			
	18d		0.000	0.001			
		S19	0.217	0.336			
		S21	0.157	0.243			
					1.484	**2.297**	**15**
S23	19		0.149	0.231			
	19a		0.000	0.001			
					0.150	**0.232**	**8**
S24	24		0.283	0.438			
		S23	0.150	0.232			
					0.433	**0.669**	**12**
S25		S22	1.484	2.297			
		S24	0.433	0.669			
					1.917	**2.966**	**18**
S26	22		0.105	0.162			
					0.105	**0.162**	**8**
S27	2		0.072	0.112			
					0.072	**0.112**	**8**
S28	4		0.154	0.238			
	5c		0.000	0.001			
	6		0.099	0.153			
	7		0.001	0.002			
					0.254	**0.393**	**8**
S29	9		0.358	0.554			
	11		0.005	0.007			
					0.363	**0.561**	**Ex. 8-inch**
S30	33		0.429	0.663			
	38		0.154	0.238			
					0.582	**0.901**	**12**
S31	8		0.388	0.601			
		S28	0.254	0.393			
					0.642	**0.994**	**15**

To Cherry Avenue (Existing 21-inch Sewer)							
	23		0.047	0.072			
	31		0.385	0.596			
	32		0.001	0.002			
	34		0.049	0.075			
	35		0.001	0.001			
	36		0.413	0.638			
	37		0.003	0.004			
	46		0.137	0.211			
					1.034	**1.601**	**Ex. 21-inch**

To South Highland Avenue (Existing 15-inch Sewer)							
	27		0.179	0.277			
	29		0.025	0.038			
					0.204	**0.316**	**Ex. 15-inch**

To San Sevaine Road (Existing 8-inch Sewer)							
	26		0.070	0.109			
					0.070	**0.109**	**Ex. 8-inch**

To Lytle Creek Road (Existing 8-inch Sewer)							
	10		0.012	0.019			
					0.012	**0.019**	**Ex. 15-inch**

WESTGATE SP - 8-INCH SEWER CAPACITY

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00400	ft/ft
Normal Depth	0.33	ft
Diameter	0.67	ft

Results

Discharge	0.38	ft^3/s
Flow Area	0.17	ft^2
Wetted Perimeter	1.05	ft
Hydraulic Radius	0.17	ft
Top Width	0.67	ft
Critical Depth	0.29	ft
Percent Full	50.0	%
Critical Slope	0.00670	ft/ft
Velocity	2.19	ft/s
Velocity Head	0.07	ft
Specific Energy	0.41	ft
Froude Number	0.75	
Maximum Discharge	0.82	ft^3/s
Discharge Full	0.76	ft^3/s
Slope Full	0.00100	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	50.00	%
Downstream Velocity	Infinity	ft/s

WESTGATE SP - 8-INCH SEWER CAPACITY

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.33	ft
Critical Depth	0.29	ft
Channel Slope	0.00400	ft/ft
Critical Slope	0.00670	ft/ft

WESTGATE SP - 10-INCH SEWER CAPACITY

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00300	ft/ft
Normal Depth	0.42	ft
Diameter	0.83	ft

Results

Discharge	0.60	ft^3/s
Flow Area	0.27	ft^2
Wetted Perimeter	1.31	ft
Hydraulic Radius	0.21	ft
Top Width	0.83	ft
Critical Depth	0.34	ft
Percent Full	49.9	%
Critical Slope	0.00613	ft/ft
Velocity	2.20	ft/s
Velocity Head	0.08	ft
Specific Energy	0.49	ft
Froude Number	0.68	
Maximum Discharge	1.29	ft^3/s
Discharge Full	1.20	ft^3/s
Slope Full	0.00075	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	49.94	%
Downstream Velocity	Infinity	ft/s

WESTGATE SP - 10-INCH SEWER CAPACITY

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.42	ft
Critical Depth	0.34	ft
Channel Slope	0.00300	ft/ft
Critical Slope	0.00613	ft/ft

WESTGATE SP - 12-INCH SEWER CAPACITY

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00240	ft/ft
Normal Depth	0.50	ft
Diameter	1.00	ft

Results

Discharge	0.87	ft^3/s
Flow Area	0.39	ft^2
Wetted Perimeter	1.57	ft
Hydraulic Radius	0.25	ft
Top Width	1.00	ft
Critical Depth	0.39	ft
Percent Full	50.0	%
Critical Slope	0.00573	ft/ft
Velocity	2.22	ft/s
Velocity Head	0.08	ft
Specific Energy	0.58	ft
Froude Number	0.63	
Maximum Discharge	1.88	ft^3/s
Discharge Full	1.75	ft^3/s
Slope Full	0.00060	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	50.00	%
Downstream Velocity	Infinity	ft/s

WESTGATE SP - 12-INCH SEWER CAPACITY

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.50	ft
Critical Depth	0.39	ft
Channel Slope	0.00240	ft/ft
Critical Slope	0.00573	ft/ft

WESTGATE SP - 15-INCH SEWER CAPACITY

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00170	ft/ft
Normal Depth	0.94	ft
Diameter	1.25	ft

Results

Discharge	2.43	ft^3/s
Flow Area	0.99	ft^2
Wetted Perimeter	2.62	ft
Hydraulic Radius	0.38	ft
Top Width	1.08	ft
Critical Depth	0.62	ft
Percent Full	75.0	%
Critical Slope	0.00570	ft/ft
Velocity	2.46	ft/s
Velocity Head	0.09	ft
Specific Energy	1.03	ft
Froude Number	0.45	
Maximum Discharge	2.86	ft^3/s
Discharge Full	2.66	ft^3/s
Slope Full	0.00141	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	75.00	%
Downstream Velocity	Infinity	ft/s

WESTGATE SP - 15-INCH SEWER CAPACITY

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.94	ft
Critical Depth	0.62	ft
Channel Slope	0.00170	ft/ft
Critical Slope	0.00570	ft/ft

WESTGATE SP - 18-INCH SEWER CAPACITY

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00140	ft/ft
Normal Depth	1.13	ft
Diameter	1.50	ft

Results

Discharge	3.58	ft^3/s
Flow Area	1.42	ft^2
Wetted Perimeter	3.14	ft
Hydraulic Radius	0.45	ft
Top Width	1.30	ft
Critical Depth	0.72	ft
Percent Full	75.0	%
Critical Slope	0.00529	ft/ft
Velocity	2.52	ft/s
Velocity Head	0.10	ft
Specific Energy	1.22	ft
Froude Number	0.42	
Maximum Discharge	4.23	ft^3/s
Discharge Full	3.93	ft^3/s
Slope Full	0.00116	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	75.00	%
Downstream Velocity	Infinity	ft/s

WESTGATE SP - 18-INCH SEWER CAPACITY

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.13	ft
Critical Depth	0.72	ft
Channel Slope	0.00140	ft/ft
Critical Slope	0.00529	ft/ft

WESTGATE SP - 21-INCH SEWER CAPACITY

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00110	ft/ft
Normal Depth	1.31	ft
Diameter	1.75	ft

Results

Discharge	4.79	ft^3/s
Flow Area	1.94	ft^2
Wetted Perimeter	3.67	ft
Hydraulic Radius	0.53	ft
Top Width	1.52	ft
Critical Depth	0.80	ft
Percent Full	75.0	%
Critical Slope	0.00493	ft/ft
Velocity	2.48	ft/s
Velocity Head	0.10	ft
Specific Energy	1.41	ft
Froude Number	0.39	
Maximum Discharge	5.65	ft^3/s
Discharge Full	5.25	ft^3/s
Slope Full	0.00091	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	75.00	%
Downstream Velocity	Infinity	ft/s

WESTGATE SP - 21-INCH SEWER CAPACITY

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.31	ft
Critical Depth	0.80	ft
Channel Slope	0.00110	ft/ft
Critical Slope	0.00493	ft/ft

WESTGATE SP - 24-INCH SEWER CAPACITY

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00100	ft/ft
Normal Depth	1.50	ft
Diameter	2.00	ft

Results

Discharge	6.52	ft^3/s
Flow Area	2.53	ft^2
Wetted Perimeter	4.19	ft
Hydraulic Radius	0.60	ft
Top Width	1.73	ft
Critical Depth	0.90	ft
Percent Full	75.0	%
Critical Slope	0.00470	ft/ft
Velocity	2.58	ft/s
Velocity Head	0.10	ft
Specific Energy	1.60	ft
Froude Number	0.38	
Maximum Discharge	7.69	ft^3/s
Discharge Full	7.15	ft^3/s
Slope Full	0.00083	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

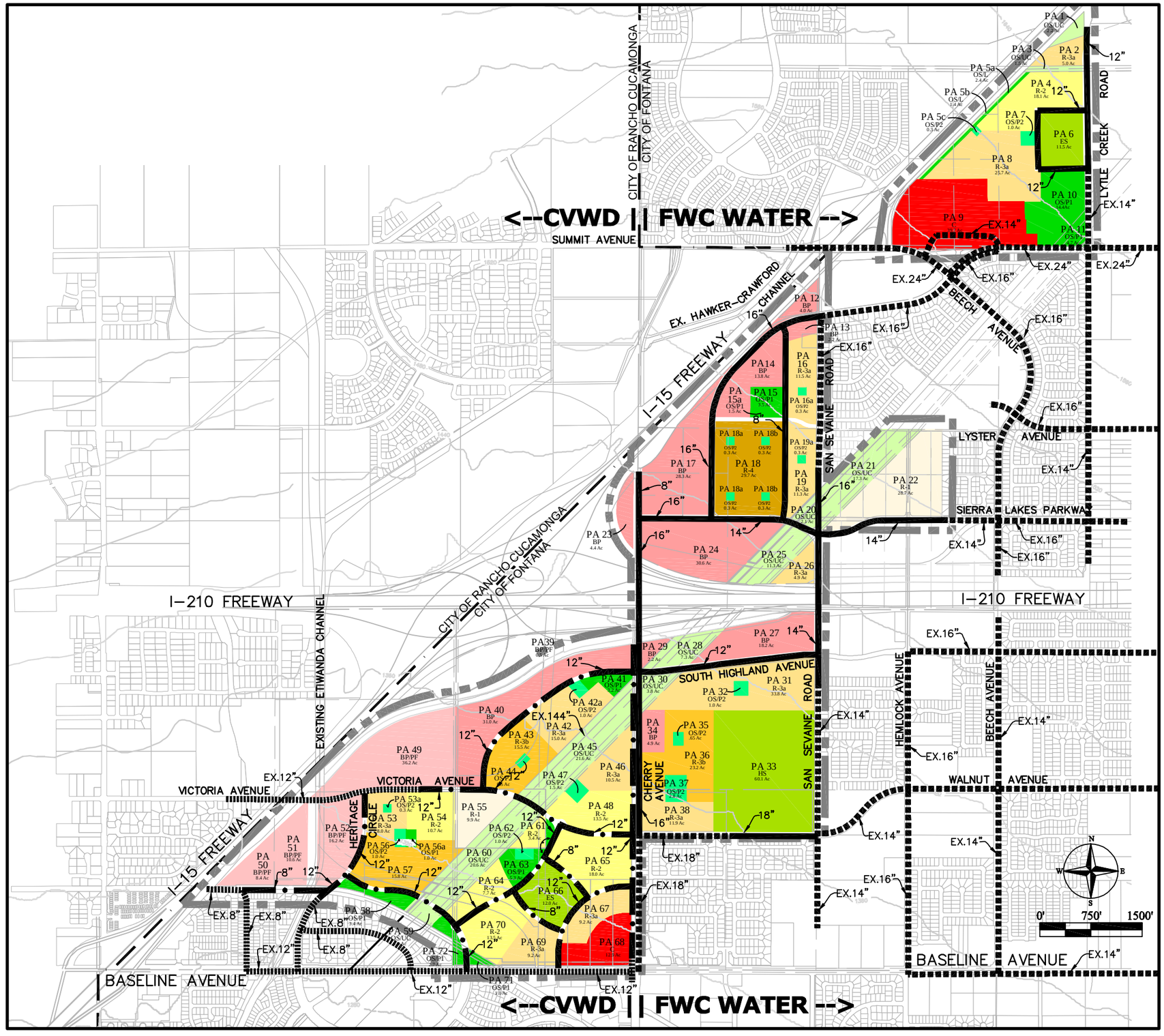
GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	75.00	%
Downstream Velocity	Infinity	ft/s

WESTGATE SP - 24-INCH SEWER CAPACITY

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.50	ft
Critical Depth	0.90	ft
Channel Slope	0.00100	ft/ft
Critical Slope	0.00470	ft/ft



SPECIFIC PLAN

WESTGATE

City of Fontana, CA

EXHIBIT NAME

Water Master Plan

LEGEND:

CITY LIMIT	
SPECIFIC PLAN BOUNDARY	
EXISTING CVWD WATER LINE	
EXISTING FWC WATER LINE	
CVWD WATER LINE	
FWC WATER LINE	
CVWD	CUCAMONGA VALLEY WATER DISTRICT
FWC	FONTANA WATER COMPANY
PA	PLANNING AREA
AC	NET ACREAGE

CREDITS

Applicant:

Unitex Management Corp

Prepared By:

JHA Consulting, Inc.

Source:

Hall & Foreman, Inc.

FIGURE 3-29

Drawing Name: S:\080183\Eng\080183-000\Exhibit\080183exhibit-wa.dwg
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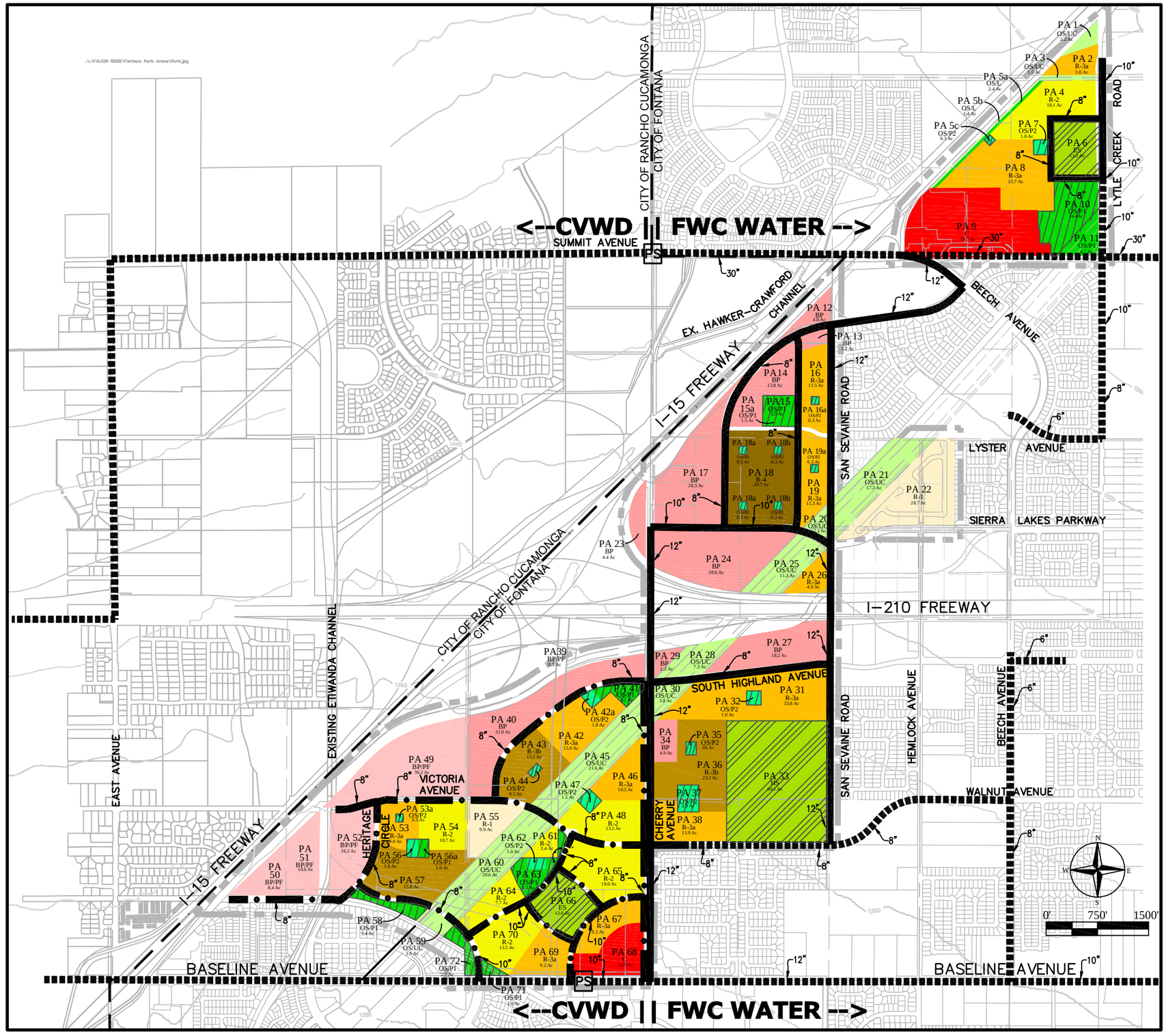

SPECIFIC PLAN

WESTGATE

City of Fontana, CA

EXHIBIT NAME

Recycled Water Master Plan

LEGEND:

CITY LIMIT	
SPECIFIC PLAN BOUNDARY	
FUTURE I.E.U.A./CITY PIPELINE	
FUTURE CVWD PIPELINE	
FUTURE FWC WATER PIPELINE	
SPECIFIC PLAN SCHOOL	
SPECIFIC PLAN OPEN SPACE/PARK	
PA	PLANNING AREA
AC	NET ACREAGE
I.E.U.A.	INLAND EMPIRE UTILITIES AGENCY
CVWD	CUCAMONGA VALLEY WATER DISTRICT
PUMP STATION	PS

CREDITS

Applicant:
Unitex Management Corp

Prepared By:
JHA Consulting, Inc.

Source:
Hall & Foreman, Inc.

FIGURE 3-31

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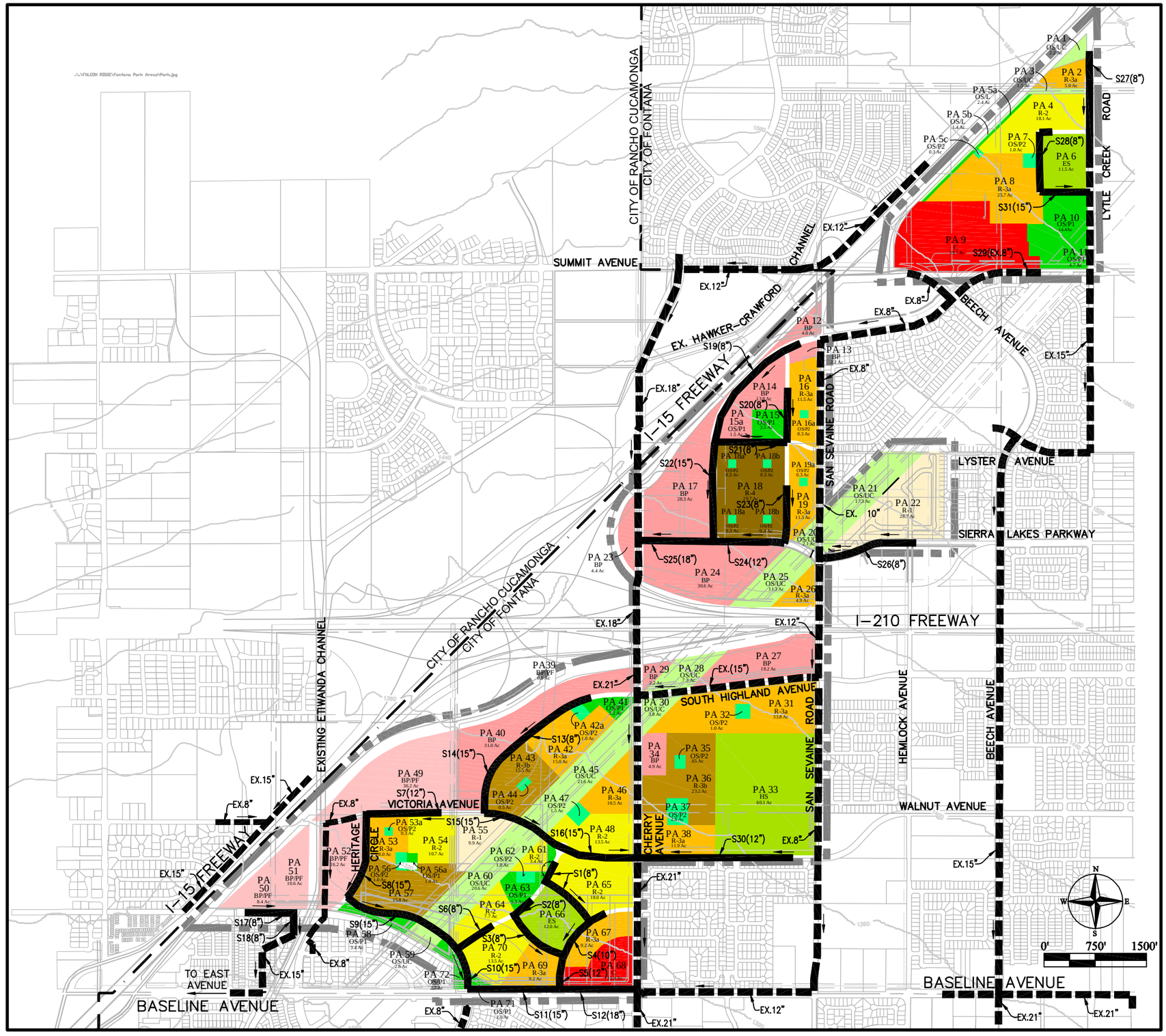

SPECIFIC PLAN

WESTGATE

City of Fontana, CA

EXHIBIT NAME

Sewer Master Plan

LEGEND:

CITY LIMIT	
SPECIFIC PLAN BOUNDARY	
EXISTING SEWER LINE	
SEWER LINE	
PA	PLANNING AREA
AC	NET ACREAGE

CREDITS

Applicant:
Unitex Management Corp

Prepared By:
JHA Consulting, Inc.

Source:
Hall & Foreman, Inc.

FIGURE 3-28

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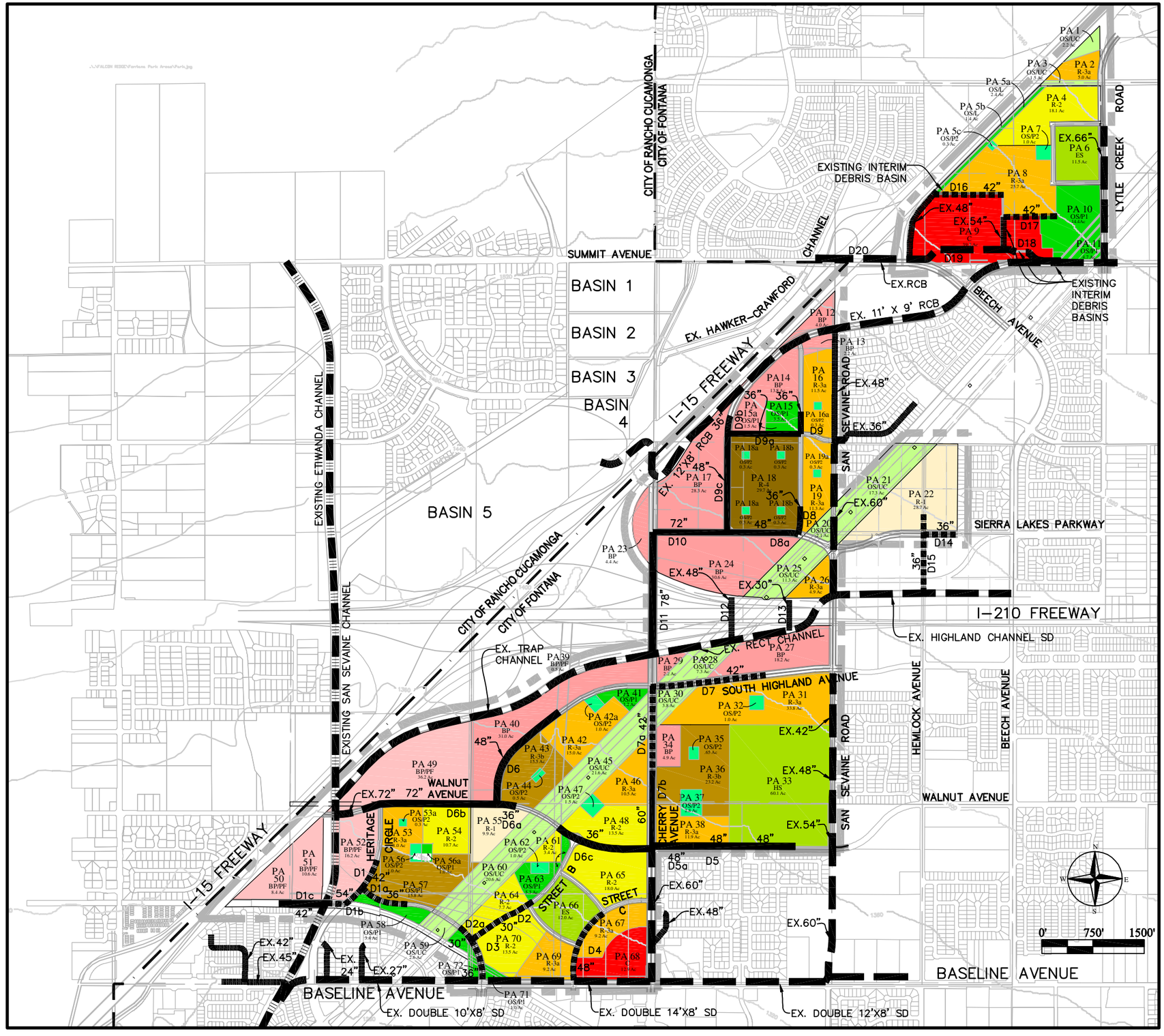

SPECIFIC PLAN

WESTGATE

City of Fontana, CA

EXHIBIT NAME

Storm Drain Master Plan

LEGEND:

CITY LIMIT	
SPECIFIC PLAN BOUNDARY	
MASTER PLAN STORM DRAIN	
EXISTING MASTER STORM DRAIN	
LOCAL STORM DRAIN	
EXISTING LOCAL STORM DRAIN	
PA	PLANNING AREA
AC	NET ACREAGE
SD	STORM DRAIN

CREDITS

Applicant:
Unitex Management Corp

Prepared By:
JHA Consulting, Inc.

Source:
Hall & Foreman, Inc.

FIGURE 3-26

Drawing Name: S:\080183\Eng\080183-000\Exhibit\080183exhibit-sd.dwg
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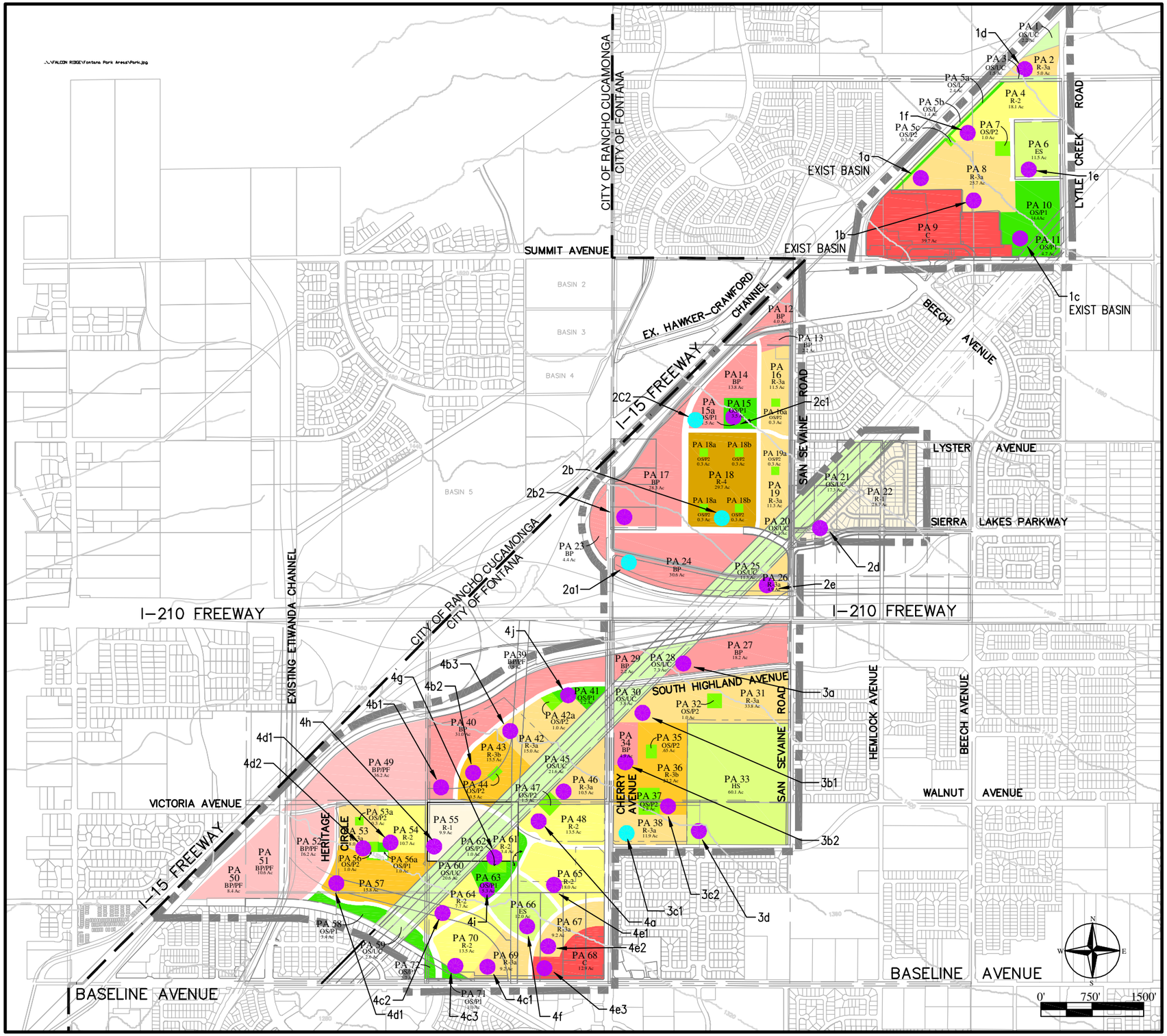

SPECIFIC PLAN

WESTGATE

City of Fontana, CA

EXHIBIT NAME

Water Quality Management Plan

LEGEND:

- LOCAL WATER QUALITY BASIN LOCATION
- 1a BASIN #
- REGIONAL WATER QUALITY BASIN LOCATION
- 3a1 BASIN #

CREDITS

Applicant:

Unitex Management Corp

Prepared By:

JHA Consulting, Inc.

Source:

Hall & Foreman, Inc.

FIGURE 3-27

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STORM DRAIN HYDROLOGY TABLE

REACH	PLANNING AREA PA	PLANNING AREA NET AC.	LAND USE DESIGNATION				AREA IMPERVIOUS Ai	CFS/AC	DESIGN Q_{25} TOTAL	Mannings Equation Solve for Q (Circular Pipe) d (in.)	d (ft.)	s (ft/ft)	n	Q Pipe Capacity	Calc'd. Q >= Estimated Design Q_{25}	Needed Pipe Size d (ft.)	Needed Pipe Size d (in.)	REMARKS
D_1	52	16.2	BP/PF	85.0	0.0	85.0	0.85	2.75	44.6									
	53	8.0	R3a	80.0	0.0	80.0	0.80	2.60	20.8									
	53a	0.3	OS/P2	0.0	15.0	15.0	0.15	1.00	0.3									HERITAGE CIRCLE
		24.5						TOTAL	65.7	42.0	3.5	0.005	0.013	71.12	TRUE	3.40	40.75	42" @ 0.5% = 71 cfs
D_{1a}	54	10.7	R2	70.0	0.0	70.0	0.70	0.00	0.0									
	55	9.9	R1	50.0	0.0	50.0	0.50	1.60	15.8									
	56	1.0	OS/P2	0.0	15.0	15.0	0.15	1.00	1.0									
	56a	1.0	OS/P1	0.0	15.0	15.0	0.15	1.00	1.0									STREET A (West)
	57	15.8	OS/P1	0.0	15.0	15.0	0.15	1.00	15.8									East of Heritage Circle
		38.4						TOTAL	33.6	36.0	3.0	0.005	0.013	47.15	TRUE	2.64	31.72	36" @ 0.5% = 47 cfs
D_{1b}	58	3.4	OS/P1	0.0	15.0	15.0	0.15	1.00	3.4									
	D_1	24.5							65.7									Join Ex.
	D_{1a}	38.4							33.6									San Sevaine Channel
		66.3						TOTAL	102.7	54.0	4.5	0.005	0.013	139.00	TRUE	4.02	48.20	54" @ 0.5% = 139 cfs
D_{1c}	50	8.4	BP/PF	85.0	0.0	85.0	0.85	2.75	23.1									Join Ex.
	51	10.6	BP/PF	85.0	0.0	85.0	0.85	2.75	29.2									San Sevaine Channel
		19						TOTAL	52.3	42.0	3.5	0.005	0.013	71.12	TRUE	3.12	37.41	42" @ 0.5% = 71 cfs
																		42" @ 0.5% = 71 cfs
D_2	61	3.4	R2	70.0	0.0	70.0	0.70	0.00	0.0									
	62	1.0	OS/P2	0.0	15.0	15.0	0.15	1.00	1.0									
	63	5.3	OS/P1	0.0	15.0	15.0	0.15	1.00	5.3									
	64	7.7	R2	70.0	0.0	70.0	0.70	0.00	0.0									STREET B
		17.4						TOTAL	6.3	30.0	2.5	0.005	0.013	28.99	TRUE	1.41	16.92	30" @ 0.5% = 29 cfs
D_{2a}	59	2.6	OS/UC	0.0	15.0	15.0	0.15	1.00	2.6									STREET A
	60	20.6	OS/UC	0.0	15.0	15.0	0.15	1.00	20.6									North of Street B
		23.2						TOTAL	23.2	30.0	2.5	0.005	0.013	28.99	TRUE	2.30	27.59	30" @ 0.5% = 29 cfs
D_3	70	13.5	R2	70.0	0.0	70.0	0.70	0.00	0.0									
	71	1.0	OS/P1	0.0	15.0	15.0	0.15	1.00	1.0									
	72	2.7	OS/P1	0.0	15.0	15.0	0.15	1.00	2.7									STREET A
	D_2	17.4							6.3									South of Street B
	D_{2a}	23.2							23.2									JOIN EX. DOUBLE RCB
		57.8						TOTAL	33.2	36.0	3.0	0.005	0.013	47.15	TRUE	2.63	31.56	36" @ 0.5% = 47 cfs
D_4	65	18.0	R2	70.0	0.0	70.0	0.70	0.00	0.0									
	66	12.0	ES	0.0	40.0	40.0	0.40	1.30	15.6									
	67	9.2	R3a	80.0	0.0	80.0	0.80	2.60	23.9									STREET C
	68	12.9	C	90.0	0.0	90.0	0.90	2.90	37.4									JOIN EX. DOUBLE RCB
	69	9.2	R3a	80.0	0.0	80.0	0.80	2.60	23.9									at Baseline Ave.
		61.3						TOTAL	100.9	48.0	4.0	0.005	0.013	101.54	TRUE	3.99	47.87	48" @ 0.5% = 102 cfs

STORM DRAIN HYDROLOGY TABLE

REACH	PLANNING AREA PA	PLANNING AREA NET AC.	LAND USE DESIGNATION				AREA IMPERVIOUS Ai	CFS/AC	DESIGN Q_{25} TOTAL	Mannings Equation Solve for Q (Circular Pipe) d (in.)	d (ft.)	s (ft/ft)	n	Q Pipe Capacity	Calc'd. Q >= Estimated Design Q_{25}	Needed Pipe Size d (ft.)	Needed Pipe Size d (in.)	REMARKS
D_5	33	60.1	HS	0.0	40.0	40.0	0.40	1.30	78.1									WALNUT AVE
																		Join D5a
		60.1						TOTAL	78.1	48.0	4.0	0.005	0.013	101.54	TRUE	3.63	43.50	48" @ 0.5% = 102 cfs
																		WALNUT AVE
D_{5a}	37	2.8	OS/P2	0.0	15.0	15.0	0.15	1.00	2.8									CONF W/ D7b & D6c
	38	11.9	R3a	80.0	0.0	80.0	0.80	2.60	30.9									
	D_5	60.1							78.1									Join to Ex. 60" in S. Cherry Ave.
		74.8						TOTAL	111.9	48.0	4.0	0.005	0.013	101.54	FALSE	4.15	49.77	48" @ 0.5% = 102 cfs
D_6	41	3.2	OS/P1	0.0	15.0	15.0	0.15	1.00	3.2									South Highland Ave. North of
	42	15.0	R3a	80.0	0.0	80.0	0.80	2.60	39.0									VICTORIA AVENUE WEST
	42a	1.0	OS/P2	0.0	15.0	15.0	0.15	1.00	1.0									Conf. w/. D6a Join D6b
		19.2						TOTAL	43.2	48.0	4.0	0.005	0.013	101.54	TRUE	2.90	34.83	48" @ 0.5% = 102 cfs
D_{6a}	43	15.5	R3b	80.0	0.0	80.0	0.80	2.60	40.3									VICTORIA AVENUE EAST
	44	0.5	OS/P2	0.0	15.0	15.0	0.15	1.00	0.5									of South Highland Ave.
		16.0						TOTAL	40.8	36.0	3.0	0.005	0.013	47.15	TRUE	2.84	34.10	36" @ 0.5% = 47 cfs
D_{6b}	40	31.0	BP	90.0	0.0	90.0	0.90	2.90	89.9									
	49	36.2	BP/PF	85.0	0.0	85.0	0.85	2.75	99.6									VICTORIA AVENUE West of
	D6	19.2							43.2									South Highland Ave. to Ex. 72" SD
	$D6_a$	16.0							40.8									West of Heritage Circle
		102.4						TOTAL	273.5	72.0	6.0	0.005	0.013	299.36	TRUE	5.80	69.59	72" @ 0.5% = 299 cfs
D_{6c}	45	21.6	OS/UC	0.0	15.0	15.0	0.15	1.00	21.6									
	46	10.5	R3a	80.0	0.0	80.0	0.80	2.60	27.3									VICTORIA AVENUE EAST
	47.0	1.5	OS/P2	0.0	15.0	15.0	0.15	1.00	1.5									Conf. w/. D5a & D7b & Join to
	48.0	13.5	R2	70.0	0.0	70.0	0.70	0.00	0.0									Ex. 60" SD in South Cherry Ave.
		47.1						TOTAL	50.4	36.0	3.0	0.005	0.013	47.15	FALSE	3.08	36.91	36" @ 0.5% = 47 cfs
D_7	27	18.2	BP	90.0	0.0	90.0	0.90	2.90	52.8									
	28	7.3	OS/UC	0.0	15.0	15.0	0.15	1.00	7.3									
	29	2.2	BP	90.0	0.0	90.0	0.90	2.90	6.4									SOUTH HIGHLAND AVE
		27.7						TOTAL	66.5	42.0	3.5	0.005	0.013	71.12	TRUE	3.41	40.94	42" @ 0.5% = 71 cfs
D_{7a}	30	3.8	OS/UC	0.0	15.0	15.0	0.15	1.00	3.8									Cherry Ave. South of
	D7	27.7							66.5									SOUTH HIGHLAND AVE
		31.5						TOTAL	70.3	42.0	3.5	0.005	0.013	71.12	TRUE	3.48	41.80	42" @ 0.5% = 71 cfs
D_{7b}	31	33.8	R3a	80.0	0.0	80.0	0.80	2.60	87.9									
	32	1.0	OS/P2	0.0	15.0	15.0	0.15	1.00	1.0									
	34	4.9	BP	90.0	0.0	90.0	0.90	2.90	14.2									
	35	0.65	OS/P2	0.0	15.0	15.0	0.15	1.00	0.7									
	36	23.2	R3b	80.0	0.0	80.0	0.80	2.60	60.3									
	$D7_a$	31.5							70.3									
		95.1							234.3	60.0	5.0	0.005	0.013	184.10	FALSE	5.47	65.67	60" @ 0.5% = 184 cfs
									111.9									D5a
									234.3									D7b
									50.4									D6c
CHERRY AVE EXISTING 60" STORM DRAIN								TOTAL	630.9	60.0	5.0	0.015	0.013	318.86	FALSE	6.46	77.49	Ex. 60" @ 1.5% = 318.9 cfs

STORM DRAIN HYDROLOGY TABLE

REACH	PLANNING AREA PA	PLANNING AREA NET AC.	LAND USE DESIGNATION				AREA IMPERVIOUS Ai	CFS/AC	DESIGN Q_{25} TOTAL	Mannings Equation Solve for Q (Circular Pipe) d (in.)	d (ft.)	s (ft/ft)	n	Q Pipe Capacity	Calc'd. Q >= Estimated Design Q_{25}	Needed Pipe Size d (ft.)	Needed Pipe Size d (in.)	REMARKS
D_8	19	11.3	R3a	80.0	0.0	80.0	0.80	2.60	29.4									Street F (South)
	19a	0.3	OS/P2	0.0	15.0	15.0	0.15	1.00	0.3									Join W/. D8a on
	20	2.1	OS/UC	0.0	15.0	15.0	0.15	1.00	2.1									Sierra Lakes Pkwy.
		13.7						TOTAL	31.8	36.0	3.0	0.005	0.013	47.15	TRUE	2.59	31.05	36" @ 0.5% = 47 cfs
$D8_a$	18	29.7	R4	85.0	0.0	85.0	0.85	2.75	81.7									
	18a	0.3	OS/P2	0.0	15.0	15.0	0.15	1.00	0.3									
	18b	0.3	OS/P2	0.0	15.0	15.0	0.15	1.00	0.3									
	18c	0.3	OS/P2	0.0	15.0	15.0	0.15	1.00	0.3									Sierra Lakes Pkwy.
	18d	0.3	OS/P2	0.0	15.0	15.0	0.15	1.00	0.3									Conf. w/. D9c & D10
	D8	13.7							31.8									SOUTH HIGHLAND AVE
		44.6						TOTAL	114.7	48.0	4.0	0.005	0.013	101.54	FALSE	4.19	50.23	48" @ 0.5% = 102 cfs
D_9	13	2.2	BP	90.0	0.0	90.0	0.90	2.90	6.4									
	16	11.5	R3a	80.0	0.0	80.0	0.80	2.60	29.9									Street F (North)
	16a	0.3	OS/P2	0.0	15.0	15.0	0.15	1.00	0.3									Join D9a on Street G
		14.0						TOTAL	36.6	36.0	3.0	0.005	0.013	47.15	TRUE	2.73	32.73	36" @ 0.5% = 47 cfs
D_{9a}	15	3.5	OS/P1	0.0	15.0	15.0	0.15	1.00	3.5									Street G
	15a	1.5	OS/P1	0.0	15.0	15.0	0.15	1.00	1.5									Conf. w/. D9b at
	D9	14.0							36.6									Summit Ave.
		19.0						TOTAL	41.6	36.0	3.0	0.005	0.013	47.15	TRUE	2.86	34.34	36" @ 0.5% = 47 cfs
																		Summit Ave. North of Street G
D_{9b}	14	13.8	BP	90.0	0.0	90.0	0.90	2.90	40.0									Conf. w/. D9a
		13.8						TOTAL	40.0	36.0	3.0	0.005	0.013	47.15	TRUE	2.82	33.85	36" @ 0.5% = 47 cfs
D_{9c}	D9a	19.0							41.6									Summit Ave.South of Street G.
	D9b	13.8							40.0									Conf. w/. D8a to Sierra Lakes Pkwy.
		32.8						TOTAL	81.6	48.0	4.0	0.005	0.013	101.54	TRUE	3.68	44.22	48" @ 0.5% = 102 cfs
D_{10}	17	28.3	BP	90.0	0.0	90.0	0.90	2.90	82.1									
	D_{8a}	44.6							114.7									Sierra Lakes Pkwy.
	D_{9c}	32.8							81.6									JUNCTION WITH D_{11} CHERRY AVE
		105.7						TOTAL	278.3	72.0	6.0	0.005	0.013	299.36	TRUE	5.84	70.05	72" @ 0.5% = 299 cfs
D_{11}	23	4.4	BP	90.0	0.0	90.0	0.90	2.90	12.8									
	24	30.6	BP	90.0	0.0	90.0	0.90	2.90	88.7									JUNCTION WITH
	D_{10}	105.7							278.3									Ex. HIGHLAND CHANNEL
		140.7						TOTAL	379.8	78.0	6.5	0.005	0.013	370.59	FALSE	6.56	78.71	78" @ 0.5% = 371 cfs
																		JUNCTION WITH
																		Ex. HIGHLAND CHANNEL
D_{12}	25	11.3	OS/UC	0.0	15.0	15.0	0.15	1.00	11.3									JOIN EX. 48" AT I-210
		11.3						TOTAL	11.3	48.0	4.0	0.005	0.013	101.54	TRUE	1.76	21.07	48" @ 0.5% = 102 cfs

STORM DRAIN HYDROLOGY TABLE

REACH	PLANNING AREA PA	PLANNING AREA NET AC.	LAND USE DESIGNATION				AREA IMPERVIOUS Ai	CFS/AC	DESIGN Q_{25} TOTAL	Mannings Equation Solve for Q (Circular Pipe) d (in.)	d (ft.)	s (ft/ft)	n	Q Pipe Capacity	Calc'd. Q >= Estimated Design Q_{25}	Needed Pipe Size d (ft.)	Needed Pipe Size d (in.)	REMARKS
																		JUNCTION WITH
																		Ex. HIGHLAND CHANNEL
D_{13}	26	4.9	R3a	80.0	0.0	80.0	0.80	2.60	12.7									JOIN EX. 30" AT I-210
		4.9						TOTAL	12.7	30.0	2.5	0.005	0.013	28.99	TRUE	1.84	22.04	30" @ 0.5% = 29 cfs
																		Sierra Lakes Pkwy.
																		CONNECT TO D_{15}
D_{14}	OFFSITE	26.0	OS/L	0.0	15.0	15.0	0.15	1.00	26.0	36.0	3.0	0.005	0.013	47.15	TRUE	2.40	28.79	36" @ 0.5% = 47 cfs
D_{15}	Part of 22	7.4	R1	50.0	0.0	50.0	0.50	1.60	11.8									JOIN EX. HIGHLAND CHANNEL
	D_{14}	26.0							26.0									From PA 22 at Sierra Lakes Pkwy.
		33.4						TOTAL	37.8	36.0	3.0	0.005	0.013	47.15	TRUE	2.76	33.15	36" @ 0.5% = 47 cfs
																		Cherry Ave.
	21	17.3	OS/UC	0.0	15.0	15.0	0.15	1.00	17.3									North of Sierra Lakes Pkwy.
	Part of 22	21.3	R1	50.0	0.0	50.0	0.50	1.60	34.1									From PA 21 & Part of PA 22 to
	CHERRY AVE EXISTING 60" STORM DRAIN							TOTAL	51	36.0	3.0	0.015	0.013	81.66	TRUE	2.52	30.25	Ex. 36" @ 1.5% = 81.7 cfs
D_{16}	1	2.2	OS/UC	0.0	15.0	15.0	0.15	1.00	2.2									
	2	5	R3a	80.0	0.0	80.0	0.80	2.60	13.0									
	3	1.5	OS/UC	0.0	15.0	15.0	0.15	1.00	1.5									
	4	18.1	R2	70.0	0.0	70.0	0.70	0.00	0.0									
	5a	2.4	OS/L	0.0	15.0	15.0	0.15	1.00	2.4									
	5b	1.4	OS/L	0.0	15.0	15.0	0.15	1.00	1.4									
	5c	0.3	OS/P2	0.0	15.0	15.0	0.15	1.00	0.3									North of Commercial Center
	7	1	OS/P2	0.0	15.0	15.0	0.15	1.00	1.0									JOIN EX. 48" at Easterly
	PART OF 8	15.6	R3a	80.0	0.0	80.0	0.80	2.60	40.6									side of Commercial Center
		47.5						TOTAL	62.4	42.0	3.5	0.005	0.013	71.12	TRUE	3.33	39.97	42" @ 0.5% = 71 cfs
																		Northeasterly side of
																		Commercial Center
D_{17}	PART OF 8	10.1	R3a	80.0	0.0	80.0	0.80	2.60	26.3									JOIN EX. 54" at
	PART OF 10	2.1	OS/P1	0.0	15.0	15.0	0.15	1.00	2.1									Central Commercial Center
		12.2						TOTAL	28.4	42.0	3.5	0.005	0.013	71.12	TRUE	2.48	29.75	42" @ 0.5% = 71 cfs
D_{18}	PART OF 10	12.4	OS/P1	0.0	15.0	15.0	0.15	1.00	12.4									SE Side of Commercial Center
	11	4.7	OS/P1	0.0	15.0	15.0	0.15	1.00	4.7									Join Ex. 54" @ Easterly side of CC
		17.1						TOTAL	17.1	30.0	2.5	0.005	0.013	28.99	TRUE	2.05	24.61	30" @ 0.5% = 29 cfs
D_{19}	D_{17}	12.2							28.4									Join Ex. " SD in
	D_{18}	17.1							17.1									Commercial Center
		29.3						TOTAL	45.5	54.0	4.5	0.005	0.013	139.00	TRUE	2.96	35.51	54" @ 0.5% = 139 cfs
D_{20}	D_{16}	47.5							62.4									Join Ex. " SD in
	D_{19}	29.3							45.5									Commercial Center
		76.8						TOTAL	107.8	54.0	4.5	0.005	0.013	139.00	TRUE	4.09	49.09	54" @ 0.5% = 139 cfs

Note: Make entries to cells in yellow. Down stream pipe reaches below confluence points add the flows of the up stream Q's to sum the Total Q for Mannings Circular Pipe Equation sizing check.

Pipe reach descriptions & pipe sizes need to match both Exhibit Figure 3-26 and Cost Estimate spread sheet descriptions.

	Ai Factor in CFS/AC		
	0.90=	2.9 CFS/AC	
	0.80=	2.6 CFS/AC	
	0.60=	1.9 CFS/AC	
	0.50=	1.6 CFS/AC	
	0.40=	1.3 CFS/AC	
	0.15=	1.0 CFS/AC	
	0.00=	0.5 CFS/AC	

Planning Areas:	AC	% AC	Land Use	Density DU/AC	Density DU/AC Avg.	% Impervious (SBCFCD)	% Impervious (SBCFCD)	% Impervious (SBCFCD)	Area Impervious AC
Area 1: Northwest									
1	2.2	1.67%	OS/UC			0	15	15	0.33
2	5.0	3.79%	R3a	**12.1-18**	15.05	80	0	80	4.00
3	1.5	1.14%	OS/UC			0	15	15	0.23
4	18.1	13.70%	R2	**5.1-12**	8.55	70	0	70	12.67
5a	2.5	1.89%	OS/L			0	15	15	0.38
5b	1.4	1.06%	OS/L			0	15	15	0.21
5c	0.3	0.23%	OS/P2			0	15	15	0.05
6	11.5	8.71%	ES			0	40	40	4.60
7	4.9	3.71%	OS/P2			0	15	15	0.74
8	25.7	19.45%	R3a	**12.1-18**	15.05	80	0	80	20.56
9	39.9	30.20%	C			90	0	90	35.91
10	14.4	10.90%	OS/P1			0	15	15	2.16
11	4.7	3.56%	OS/P1			0	15	15	0.71
Sub-Total	**132.1**	100.00%				**Total Imp. Acres**			**82.53**
Mjr.Str. RW	**16.7**					95		95	15.85
Total Area:	**148.8**					**Total Imp. Acres w/. RW**			**98.37**
						Avg. % Imp.			**62.47%**
						Avg. % Imp. w/. RW			**66.12%**
Area 2: Golden Triangle									
12	4.0	1.92%	BP			90	0	90	3.60
13	2.2	1.05%	BP			90	0	90	1.98
14	13.9	6.66%	BP			90	0	90	12.51
15	3.4	1.63%	OS/P1			0	15	15	0.51
15a	1.6	0.77%	OS/P1			0	15	15	0.24
16	11.8	5.65%	R3a	**21.1-18**	15.05	80	0	80	9.44
16a	0.3	0.14%	OS/P2			0	15	15	0.05
17	28.3	13.55%	BP			90	0	90	25.47
18	30.9	14.80%	R4	**24.1-50**	15.05	85	0	85	26.27
18a	0.3	0.14%	OS/P2			0	15	15	0.05
18b	0.3	0.14%	OS/P2			0	15	15	0.05
18c	0.3	0.14%	OS/P2			0	15	15	0.05
18d	0.3	0.14%	OS/P2			0	15	15	0.05
19	11.6	5.56%	R3a	**12.1-18**	15.05	80	0	80	9.28
19a	0.3	0.14%	OS/P2			0	15	15	0.05
20	2.1	1.01%	OS/UC			0	15	15	0.32
21	17.3	8.29%	OS/UC			0	15	15	2.60
22	28.7	13.75%	R1	**0-5**	2.5	50	0	50	14.35
23	4.4	2.11%	BP			90	0	90	3.96
24	30.6	14.66%	BP			90	0	90	27.54
25	11.3	5.41%	OS/UC			0	15	15	1.70
26	4.9	2.35%	R3a	**12.1-18**	15.05	80	0	80	3.92
Sub-Total	**208.8**	100.00%				**Total Imp. Acres**			**143.94**
Mjr.Str. RW	**26.4**					95		95	25.05
Total Area:	**235.2**					**Total Imp. Acres w/. RW**			**168.99**
						Avg. % Imp.			**68.94%**
						Avg. % Imp. w/. RW			**71.86%**
Area 3: East of Cherry Ave., Below 210 Fwy.									
27	18.2	10.65%	BP			90	0	90	16.38
28	7.3	4.27%	OS/UC			0	15	15	1.10
29	2.2	1.29%	BP			90	0	90	1.98
30	3.9	2.28%	OS/UC			0	15	15	0.59
31	33.9	19.84%	R3a	**12.1-18**	15.05	80	0	80	27.12
32	1.0	0.59%	OS/P2			0	15	15	0.15
33	60.1	35.17%	HS			0	40	40	24.04
34	5.0	2.93%	BP			90	0	90	4.50
35	0.7	0.41%	OS/P2			0	15	15	0.11
36	23.9	13.98%	R3b	**18.1-24**	21.05	80	0	80	19.12
37	2.8	1.64%	OS/P2			0	15	15	0.42
38	11.9	6.96%	R3a	**12.1-18**	15.05	80	0	80	9.52
Sub-Total	**170.9**	100.00%				**Total Imp. Acres**			**105.02**
Mjr.Str. RW	**21.6**					95		95	20.50
Total Area:	**192.5**					**Total Imp. Acres w/. RW**			**125.51**
						Avg. % Imp.			**61.45%**
						Avg. % Imp. w/. RW			**65.21%**

Planning Areas:	AC	% AC	Land Use	Density DU/AC	Density DU/AC Avg.	% Impervious (SBCFCD)	% Impervious (SBCFCD)	% Impervious (SBCFCD)	Area Impervious AC
Area 4: West of Cherry Ave.									
40	31.0	10.75%	BP			90	0	90	27.90
41	3.2	1.11%	OS/P1			0	15	15	0.48
42	15.0	5.20%	R3a	**12.1-18**	15.05	80	0	80	12.00
42a	1.0	0.35%	OS/P2			0	15	15	0.15
43	16.0	5.55%	R3b	**18.1-24**	21.05	80	0	80	12.80
44	0.5	0.17%	OS/P2			0	15	15	0.08
45	21.6	7.49%	OS/UC			0	15	15	3.24
46	10.5	3.64%	R3a	**12.1-18**	15.05	80	0	80	8.40
47	1.5	0.52%	OS/P2			0	15	15	0.23
48	13.5	4.68%	R2	**5.1-12**	8.55	70	0	70	9.45
53	8.3	2.88%	R3a	**12.1-18**	15.05	80	0	80	6.64
53a	0.3	0.10%	OS/P2			0	15	15	0.05
54	10.7	3.71%	R2	**5.1-12**	8.55	70	0	70	7.49
55	9.9	3.43%	R1	**0-5**	2.5	50	0	50	4.95
56	1.0	0.35%	OS/P2			0	15	15	0.15
56a	1.0	0.35%	OS/P1			0	15	15	0.15
57	20.8	7.21%	3Ra	**12.1-18**	15.05	0	0	0	0.00
58	3.4	1.18%	OS/P1			0	15	15	0.51
59	2.6	0.90%	OS/UC			0	15	15	0.39
60	20.6	7.14%	OS/UC			0	15	15	3.09
61	3.4	1.18%	R2	**5.1-12**	8.55	70	0	70	2.38
62	1.0	0.35%	OS/P2			0	15	15	0.15
63	5.4	1.87%	OS/P1			0	15	15	0.81
64	7.8	2.70%	R2	**5.1-12**	8.55	70	0	70	5.46
65	18.0	6.24%	R2	**5.1-12**	8.55	70	0	70	12.60
66	12.0	4.16%	ES			0	40	40	4.80
67	9.3	3.22%	R3a	**12.1-18**	15.05	80	0	80	7.44
68	12.9	4.47%	MH			0	0	0	0.00
69	9.2	3.19%	C			90	0	90	8.28
70	13.4	4.64%	R3a	**12.1-18**	15.05	80	0	80	10.72
71	1.0	0.35%	R2	**5.1-12**	8.55	70	0	70	0.70
72	2.7	0.94%	OS/P1			0	15	15	0.41
Sub-Total	**288.5**	100.00%				**Total Imp. Acres**			**151.88**
Mjr.Str. RW	**36.4**					95		95	34.61
Total Area:	**324.9**					**Total Imp. Acres w/. RW**			**186.49**
						Avg. % Imp.			**52.64%**
						Avg. % Imp. w/. RW			**57.39%**
Major Street RW	**101.05**					95		95	**96.00**
	Mjr. St. RW entry from Figure 3-1 Table								
Total AC:	**800.3**								
Total AC w/. RW:	**901.4**								
Check:	901.4								
Infiltration Area Needed									
5-Year Total AC		25.75	ac						

Note: Parcels 39, 49-52 Not a part of these calculations since outside of the drainage areas. Schools and commercial planning areas are included with these over-all calculations.

AREA 1											
Infitration Basin Calculation											
1			**Determine Runoff Coefficient**								
	1	**a.**	Determine total impervious area	$I_{mpervious}$							
	2	**b.**	Determine total tributary area	A_{Total}				148.8			
	3	**c.**	Determine impervious fraction	**i**	**= (1) / (2)**			66.12%			
	4	**d.**	Composite Runoff Coefficient	C_{BMP}	= 0858*i^3-0.780*i^2+0.744*i+0.040			0.4389			
2			**Determine the Area Averaged "6-hour Mean Storm Rainfall"**								
	5	**a.**	Regression Coefficient From **Table 1**	**P6r**				1.4807			
	6	**b.**	Rainfall from **Figure D.1**	**I**				0.65			
	7	**c.**	6 Hour Mean Storm Rainfall	**P6**	**= (5)*(6)**			0.9625			
3											
	8	**a.**	Drawdown time a=1.582 for 24 hours	**a**				1.963			
			a=1.963 for 48 hours								
	9	**b.**	P0=a*CBMP*P6	P_0	**= (8)*(4)*(7)**			0.8293			
4			**Calculate Target Storage Volume**								
	10	**a.**	V0=(P0*A)/12	**V0**	**= (9)*(2)/12 [in-feet]**			**10.28**	ft-acre		
	11			**V0**	**= (10)*43,560**			**447,867.90**	cf		
CASQA Design Guidelines for Sizing of Infiltration Basin											
	12		**Water Quality Volume (WQV)**		**= (11)**			447,867.90	cf		
	13		**Percolation Rate**		0.007		cm/sec	0.828	ft/hr		
	14		**k=Perc Rate x 0.5**	0.5 times the perc. Rate			0.5	0.414			
	15		**t=**	72 hour draw down time				72			
	16		**A=**	Basin invert area							
	17		**A=WQV/kt**		**=(12)/((14)*(15))**			15,025.09	sf	0.34	ac
	18		**H=Depth based on minimum perc. Area**		**=(11)/(17)**			29.81	ft		
	19		**Max. Depth**					3.0	ft		
	20		$A_{Basin\ invert\ area\ based\ on\ 3'\ max.\ depth}$		**=(11)/(19)**			149,289.30	sf	3.43	ac
	21		T_{DD} **= Max. Depth / Perc. Rate**		**=(19)/(13)**			3.62	hr		
	22		$Q_{100/AC\ Developed}$					4	cfs/ac		
	23		$Q_{100\ Developed}$		**=(22)*(2)**			595.12	cfs		
	24		**Q_2=Q_{100}*0.13 Developed**		Reduction Factor		0.13	79.35	cfs		
	25		**Q_5=Q_{100}*0.38 Developed**		Reduction Factor		0.38	223.17	cfs		
	26		**Percolation Rate Converted to cfs**		**=(13)*(20)/3600**			34.34	cfs		
	27		= 0.828 x $A_{Basin\ invert\ area\ based\ on\ 36'\ max.\ depth}$								
	28		$Q_{100/AC\ Un\text{-}Developed}$					2	cfs/ac		
	29		i Un-Developed					10.00%			
	30		$Q_{100\ Un\text{-}Developed}$		**=(28)*(2)**			297.56	cfs		
	31		**Q_2=Q_{100}*0.06 Un-Developed**		Reduction Factor		0.06	17.25	cfs		
	32		**Q_5=Q_{100}*0.17 Un-Developed**		Reduction Factor		0.17	49.59	cfs		

AREA 1										
Infitration Basin Calculation										
	33		**Q_2=Developed - UnDeveloped difference**		**=(24)-(31)**		62.10	cfs		
	34		**0.80 x Q_2=Developed - UnDeveloped difference**			0.8	49.68	cfs		
					=(33)*0.80					
	35		**$V0_5$**	1 hr rainfall	**=(33)*3600**		223,557.56	cf		
	36		**$V0_5$**	1 hr rainfall	**=(35)/43560**		5.13	ft-acre		
			Basin invert area with in-flow added and infiltration applied							
	37		**1.5 : 1.0 Area $_{2\text{-Year}}$**			L=	331.00	ft		
	38			**=(20)/(37)**		W=	451.03	ft		
	39			**=(37)/(38)**		Ratio	0.73			
	40			**=(39)>=1.5**		>=1.5	FALSE			
			Basin Area Needed							
			3' Max. Depth, 2' Freeboard, 3:1 side slope, 15' Wide Maint. Road.							
			5' High Basin with 15' Side Slope							
	41		2-Year		**=((37)+30'+30')*((38)+30'+30')**		199,810.80	sf	4.59	ac
	42		L=	391.00	ft	W=	511.03	ft		
				=(37)+30'+30'			**=(38)+30'+30'**			
			Treatment SF/AC Avg.							
	43	a	Ave. Storage Vol. / Ac. of Devel't (Invert Only)			**=(20)/(2)**	1,003.43	sf/ac		
		b	Ave. Storage Vol. / Ac. of Devel't (Include Maint. Rd.)			**=(41)/(2)**	1,343.00	sf/ac		
	44		Area 1a	34.6	ac	23.26%	2.39	ft-acre		
			Area 1b	17.2	ac	11.56%	1.19	ft-acre		
			Area 1c	23.9	ac	16.06%	1.65	ft-acre		
			Sub-Total	**75.7**	**ac**		**5.23**	**ft-acre**		
			PA 3	12	ac	8.07%	0.83	ft-acre		
			PA 2A	8.9	ac	5.98%	0.62	ft-acre		

AREA 2

Infiltration Basin Calculation

1			**Determine Runoff Coefficient**							
	1	a.	Determine total impervious area	$I_{impervious}$						
	2	b.	Determine total tributary area	A_{Total}			235.2			
	3	c.	Determine impervious fraction	**i**	**= (1) / (2)**		71.86%			
	4	d.	Composite Runoff Coefficient	C_{BMP}	= 0858*i^3-0.780*i^2+0.744*i+0.040		0.4902			
2			**Determine the Area Averaged "6-hour Mean Storm Rainfall"**							
	5	a.	Regression Coefficient From **Table 1**	**P6r**			1.4807			
	6	b.	Rainfall from **Figure D.1**	**I**			0.65			
	7	c.	6 Hour Mean Storm Rainfall	**P6**	**= (5)*(6)**		0.9625			
3										
	8	a.	Drawdown time a=1.582 for 24 hours	**a**			1.963			
			a=1.963 for 48 hours							
	9	b.	P0=a*CBMP*P6	P_0	**= (8)*(4)*(7)**		0.9262			
4			**Calculate Target Storage Volume**							
	10	a.	V0=(P0*A)/12	**V0**	**= (9)*(2)/12 [in-feet]**		**18.15**	ft-acre		
	11			**V0**	**= (10)*43,560**		**790,635.18**	cf		

CASQA Design Guidelines for Sizing of Infiltration Basin

12		**Water Quality Volume (WQV)**		**= (11)**		790,635.18	cf		
13		**Percolation Rate**		0.007	cm/sec	0.828	ft/hr		
14		**k=**	0.5 times the perc. Rate		0.5	0.414			
15		**t=**	72 hour draw down time			72			
16		**A=**	Basin invert area						
17		**A=WQV/kt**				26,524.26	sf	0.61	ac
18		**H=Depth based on minimum perc. Area**				29.81	ft		
19		**Max. Depth**				3.0	ft		
20		$A_{Basin\ invert\ area\ based\ on\ 3'\ max.\ depth}$				263,545.06	sf	6.05	ac
21		**T_{DD} = Max. Depth / Perc. Rate**				3.62	hr		
22		$Q_{100/AC\ Developed}$				4	cfs/ac		
23		$Q_{100\ Developed}$				940.66	cfs		
24		**Q_2=Q_{100}*0.13 Developed**	Reduction Factor		0.13	125.42	cfs		
25		**Q_5=Q_{100}*0.38 Developed**	Reduction Factor		0.38	352.75	cfs		
26		**Percolation Rate Converted to cfs**				60.62	cfs		
27		= 0.828 x $A_{Basin\ invert\ area\ based\ on\ 36'\ max.\ depth}$							
28		$Q_{100/AC\ Un\text{-}Developed}$				2	cfs/ac		
29		i Un-Developed				10.00%			
30		$Q_{100\ Un\text{-}Developed}$				470.33	cfs		
31		**Q_2=Q_{100}*0.06 Un-Developed**	Reduction Factor		0.06	27.27	cfs		
32		**Q_5=Q_{100}*0.17 Un-Developed**	Reduction Factor		0.17	78.39	cfs		

					AREA 2						
Infitration Basin Calculation											
	33		**Q_2=Developed - UnDeveloped difference**		**=(24)-(31)**			98.16	cfs		
	34		**0.80 x Q_2=Developed - UnDeveloped difference**				0.8	78.52	cfs		
					=(33)*0.80						
	35		**$V0_5$**	1 hr rainfall	**=(33)*3600**			353,359.72	cf		
	36			**$V0_5$**	1 hour rainfall			8.11	ft-acre		
			Basin invert area with in-flow added and infiltration applied								
	37		**1.5 : 1.0 Area $_{2\text{-Year}}$**				L=	644.00	ft		
	38						W=	409.23	ft		
	39						Ratio	1.57			
	40						>=1.5	TRUE			
			Basin Area Needed								
			3' Max. Depth, 2' Freeboard, 3:1 side slope, 15' Wide Maint. Road.								
			5' High Basin with 15' Side Slope								
	41		2-Year					330,338.95	sf	7.58	ac
	42		L=	704.00	ft	W=		469.23	ft		
			Treatment SF/AC Avg.								
	43	a	Ave. Storage Vol. / Ac. of Devel't (Invert Only)			**=(20)/(2)**		1,120.69	sf/ac		
		b	Ave. Storage Vol. / Ac. of Devel't (Include Maint. Rd.)			**=(41)/(2)**		1,404.72	sf/ac		
	44		Area 2a	94.5	ac	40.18%		7.29	ft-acre		
			Road	6.70	ac	2.85%		0.52			
			Total		ac						
			Area 2b	37.5	ac	15.95%		2.89	ft-acre		
			Road		ac						
			Total		ac						
			Area 2c	6.1	ac	2.59%		0.47	ft-acre		
			Road		ac						
			Total		ac						
			Area 2d	45.9	ac	19.52%		3.54	ft-acre		
			Road		ac						
			Total		ac						
			Area 2e	48.8	ac	20.75%		3.77	ft-acre		
			Road		ac						
			Total		ac						
			Area 2f	5.7	ac	2.42%		0.44	ft-acre		
			Road		ac						
			Total		ac						
			Sub-total	**245.202657**	**ac**			**18.93**	**ft-acre**		

AREA 3											
Infiltration Basin Calculation											
1			**Determine Runoff Coefficient**								
	1	**a.**	Determine total impervious area	$I_{mpervious}$							
	2	**b.**	Determine total tributary area	A_{Total}				192.5			
	3	**c.**	Determine impervious fraction	**i**	**= (1) / (2)**			65.21%			
	4	**d.**	Composite Runoff Coefficient	C_{BMP}	= 0858*i^3-0.780*i^2+0.744*i+0.040			0.4314			
2			**Determine the Area Averaged "6-hour Mean Storm Rainfall"**								
	5	**a.**	Regression Coefficient From **Table 1**	**P6r**				1.4807			
	6	**b.**	Rainfall from **Figure D.1**	**I**				0.65			
	7	**c.**	6 Hour Mean Storm Rainfall	**P6**	**= (5)*(6)**			0.9625			
3											
	8	**a.**	Drawdown time a=1.582 for 24 hours	**a**				1.963			
			a=1.963 for 48 hours								
	9	**b.**	P0=a*CBMP*P6	P_0	**= (8)*(4)*(7)**			0.8150			
4			**Calculate Target Storage Volume**								
	10	**a.**	V0=(P0*A)/12	**V0**	**= (9)*(2)/12 [in-feet]**			**13.07**	ft-acre		
	11			**V0**	**= (10)*43,560**			**569,464.48**	cf		
CASQA Design Guidelines for Sizing of Infiltration Basin											
	12		**Water Quality Volume (WQV)**		**= (11)**			569,464.48	cf		
	13		**Percolation Rate**		0.007		cm/sec	0.828	ft/hr		
	14		**k=**	0.5 times the perc. Rate			0.5	0.414			
	15		**t=**	72 hour draw down time				72			
	16		**A=**	Basin invert area							
	17		**A=WQV/kt**					19,104.42	sf	0.44	ac
	18		**H=Depth based on minimum perc. Area**					29.81	ft		
	19		**Max. Depth**					3.0	ft		
	20		$A_{Basin\ invert\ area\ based\ on\ 3'\ max.\ depth}$					189,821.49	sf	4.36	ac
	21		T_{DD} **= Max. Depth / Perc. Rate**					3.62	hr		
	22		$Q_{100/AC\ Developed}$					4	cfs/ac		
	23		$Q_{100\ Developed}$					769.91	cfs		
	24		**Q_2=Q_{100}*0.13 Developed**		Reduction Factor		0.13	102.66	cfs		
	25		**Q_5=Q_{100}*0.38 Developed**		Reduction Factor		0.38	288.72	cfs		
	26		**Percolation Rate Converted to cfs**					43.66	cfs		
	27		= 0.828 x $A_{Basin\ invert\ area\ based\ on\ 36'\ max.\ depth}$								
	28		$Q_{100/AC\ Un\text{-}Developed}$					2	cfs/ac		
	29		i Un-Developed					10.00%			
	30		$Q_{100\ Un\text{-}Developed}$					384.96	cfs		
	31		**Q_2=Q_{100}*0.06 Un-Developed**		Reduction Factor		0.06	22.32	cfs		
	32		**Q_5=Q_{100}*0.17 Un-Developed**		Reduction Factor		0.17	64.16	cfs		

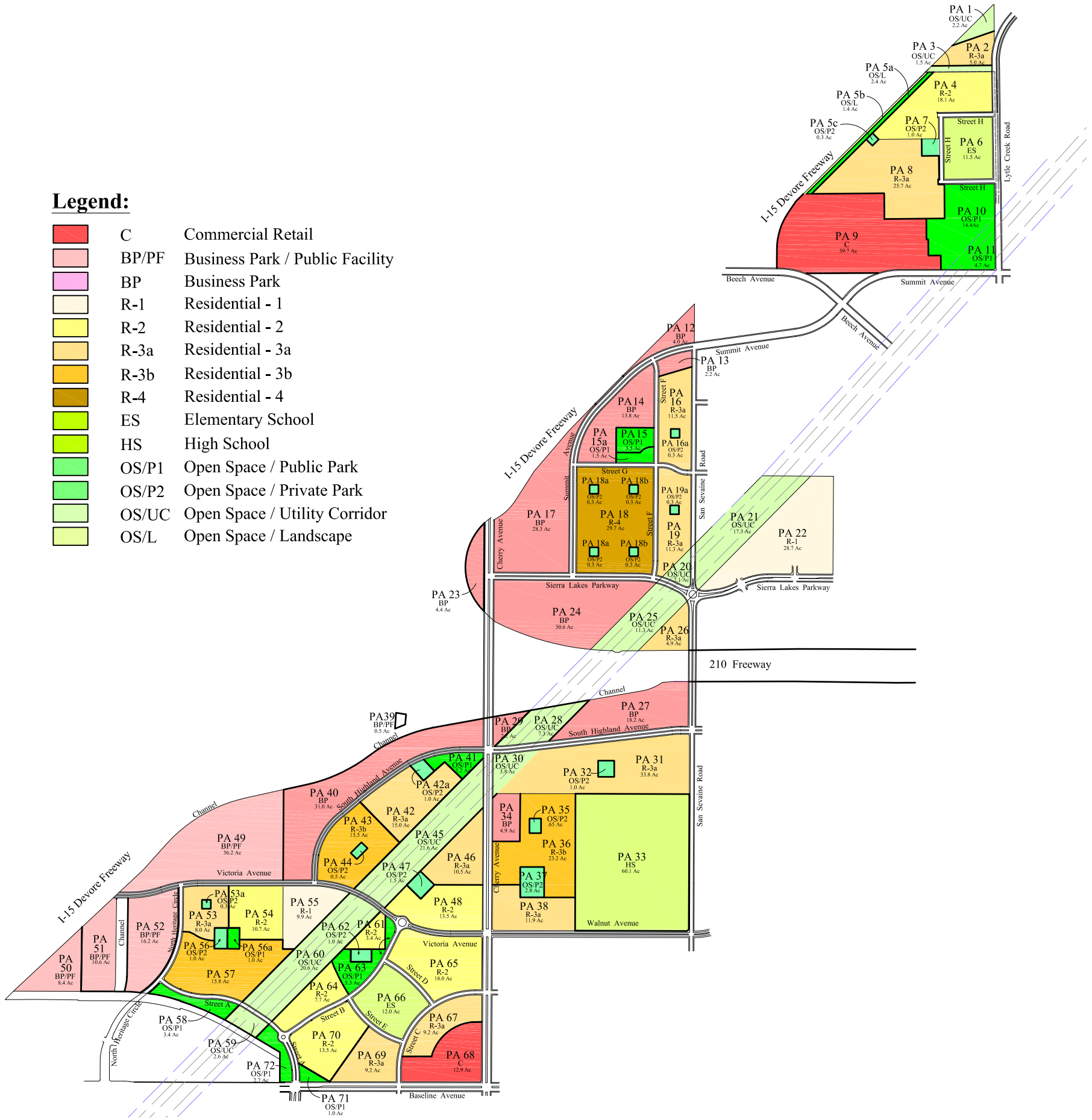
					AREA 3						
Infitration Basin Calculation											
	33		**Q_2=Developed - UnDeveloped difference**			**=(24)-(31)**		80.34	cfs		
	34		**0.80 x Q_2=Developed - UnDeveloped difference**				0.8	64.27	cfs		
						=(33)*0.80					
	35		**$V0_5$**	1 hr rainfall		**=(33)*3600**		289,220.19	cf		
	36			**$V0_5$**		1 hour rainfall		6.64	ft-acre		
			Basin invert area with in-flow added and infiltration applied								
	37		**1.5 : 1.0 Area $_{2\text{-Year}}$**				L=	501.00	ft		
	38						W=	378.89	ft		
	39						Ratio	1.32			
	40						>=1.5	FALSE			
			Basin Area Needed								
			3' Max. Depth, 2' Freeboard, 3:1 side slope, 15' Wide Maint. Road.								
			5' High Basin with 15' Side Slope								
	41		2-Year					246,214.61	sf	5.65	ac
	42		L=	561.00	ft		W=	438.89	ft		
			Treatment SF/AC Avg.								
	43	a	Ave. Storage Vol. / Ac. of Devel't (Invert Only)				**=(20)/(2)**	986.19	sf/ac		
		b	Ave. Storage Vol. / Ac. of Devel't (Include Maint. Rd.)				**=(41)/(2)**	1,279.18	sf/ac		
	44		Area 3a	21.2	ac		11.01%	1.44	ft-acre		
			Area 3b	11	ac		5.71%	0.75	ft-acre		
			Area 3c	92.5	ac		48.06%	6.28	ft-acre		
			Sub-Total	**124.7**	**ac**			**8.47**	**ft-acre**		
			PA 25	60.1	ac		31.22%	4.08	ft-acre		

AREA 4											
Infiltration Basin Calculation											
1			**Determine Runoff Coefficient**								
	1	**a.**	Determine total impervious area	$I_{impervious}$							
	2	**b.**	Determine total tributary area	A_{Total}				324.9			
	3	**c.**	Determine impervious fraction	**i**	**= (1) / (2)**			57.39%			
	4	**d.**	Composite Runoff Coefficient	C_{BMP}	= 0858*i^3-0.780*i^2+0.744*i+0.040			0.3723			
2			**Determine the Area Averaged "6-hour Mean Storm Rainfall"**								
	5	**a.**	Regression Coefficient From **Table 1**	**P6r**				1.4807			
	6	**b.**	Rainfall from **Figure D.1**	**I**				0.65			
	7	**c.**	6 Hour Mean Storm Rainfall	**P6**	**= (5)*(6)**			0.9625			
3											
	8	**a.**	Drawdown time a=1.582 for 24 hours	**a**				1.963			
			a=1.963 for 48 hours								
	9	**b.**	P0=a*CBMP*P6	P_0	**= (8)*(4)*(7)**			0.7034			
4			**Calculate Target Storage Volume**								
	10	**a.**	V0=(P0*A)/12	**V0**	**= (9)*(2)/12 [in-feet]**			**19.04**	ft-acre		
	11			**V0**	**= (10)*43,560**			**829,592.91**	cf		
CASQA Design Guidelines for Sizing of Infiltration Basin											
	12		**Water Quality Volume (WQV)**		**= (11)**			829,592.91	cf		
	13		**Percolation Rate**		0.007		cm/sec	0.828	ft/hr		
	14		**k=**	0.5 times the perc. Rate			0.5	0.414			
	15		**t=**	72 hour draw down time				72			
	16		**A=**	Basin invert area							
	17		**A=WQV/kt**					27,831.22	sf	0.64	ac
	18		**H=Depth based on minimum perc. Area**					29.81	ft		
	19		**Max. Depth**					3.0	ft		
	20		$A_{Basin\ invert\ area\ based\ on\ 3'\ max.\ depth}$					276,530.97	sf	6.35	ac
	21		T_{DD} **= Max. Depth / Perc. Rate**					3.62	hr		
	22		$Q_{100/AC\ Developed}$					4	cfs/ac		
	23		$Q_{100\ Developed}$					1299.71	cfs		
	24		**Q_2=Q_{100}*0.13 Developed**		Reduction Factor		0.13	173.29	cfs		
	25		**Q_5=Q_{100}*0.38 Developed**		Reduction Factor		0.38	487.39	cfs		
	26		**Percolation Rate Converted to cfs**					63.60	cfs		
	27		= 0.828 x $A_{Basin\ invert\ area\ based\ on\ 36'\ max.\ depth}$								
	28		$Q_{100/AC\ Un\text{-}Developed}$					2	cfs/ac		
	29		i Un-Developed					10.00%			
	30		$Q_{100\ Un\text{-}Developed}$					649.85	cfs		
	31		**Q_2=Q_{100}*0.06 Un-Developed**		Reduction Factor		0.06	37.67	cfs		
	32		**Q_5=Q_{100}*0.17 Un-Developed**		Reduction Factor		0.17	108.31	cfs		

					AREA 4						
Infitration Basin Calculation											
	33		**Q_2=Developed - UnDeveloped difference**		**=(24)-(31)**			135.62	cfs		
	34		**0.80 x Q_2=Developed - UnDeveloped difference**				0.8	108.50	cfs		
					=(33)*0.80						
	35		**$V0_5$**	1 hr rainfall	**=(33)*3600**			488,238.88	cf		
	36			**$V0_5$**	1 hour rainfall			11.21	ft-acre		
			Basin invert area with in-flow added and infiltration applied								
	37		**1.5 : 1.0 Area $_{2\text{-Year}}$**				L=	670.00	ft		
	38						W=	412.73	ft		
	39						Ratio	1.62			
	40						>=1.5	TRUE			
			Basin Area Needed								
			3' Max. Depth, 2' Freeboard, 3:1 side slope, 15' Wide Maint. Road.								
			5' High Basin with 15' Side Slope								
	41		2-Year					345,094.94	sf	7.92	ac
	42		L=	730.00	ft		W=	472.73	ft		
			Treatment SF/AC Avg.								
	43	a	Ave. Storage Vol. / Ac. of Devel't (Invert Only)				**=(20)/(2)**	851.05	sf/ac		
		b	Ave. Storage Vol. / Ac. of Devel't (Include Maint. Rd.)				**=(41)/(2)**	1,062.07	sf/ac		
	44		Area 4a	40.1	ac		12.34%	2.35	ft-acre		
			Area 4b	85.4	ac		26.28%	5.01	ft-acre		
			Area 4c	9.3	ac		2.86%	0.55	ft-acre		
			Area 4d	90.8	ac		27.94%	5.32	ft-acre		
			Area 4e	61.8	ac		19.02%	3.62	ft-acre		
			Sub-total	**287.4**	**ac**			**16.85**	**ft-acre**		
			PA 49	12.9	ac		3.97%	0.76	ft-acre		
			PA 47	12.3	ac		3.79%	0.72	ft-acre		
			PA 43	3.3	ac		1.02%	0.19	ft-acre		
			PA 38	9.7	ac		2.99%	0.57	ft-acre		

Legend:

	C	Commercial Retail
	BP/PF	Business Park / Public Facility
	BP	Business Park
	R-1	Residential - 1
	R-2	Residential - 2
	R-3a	Residential - 3a
	R-3b	Residential - 3b
	R-4	Residential - 4
	ES	Elementary School
	HS	High School
	OS/P1	Open Space / Public Park
	OS/P2	Open Space / Private Park
	OS/UC	Open Space / Utility Corridor
	OS/L	Open Space / Landscape



SPECIFIC PLAN

WESTGATE

City of Fontana, CA

EXHIBIT NAME

Land Use Plan

RESIDENTIAL	Density	DU	Acres
Residential - 1	0-5 du/ac	193 du	57.8 ac
Residential - 2	5.1-12 du/ac	795 du	86.8 ac
Residential - 3a	12.1-18 du/ac	1,832 du	155.4 ac
Residential - 3b	18.1-24 du/ac	1,239 du	38.6 ac
Residential - 4	24.1-50 du/ac	1,495 du	29.9 ac
		5,554 du	368.5 ac

COMMERCIAL	
Commercial Retail (C)	52.1 ac
Business Park (BP)	140.9 ac
Business Park / Public Facilities (BP/PF)	69.7 ac

OPEN SPACE	
Open Space / Public Parks (OS/P1)	42.7 ac
Open Space / Private Parks (OS/P2)	13.85 ac
Open Space / Landscape (OS/L)	1.4 ac
Open Space / Utility Corridor (OS/UC)	89.8 ac
Elementary Schools (ES)	24.0 ac
High School (HS)	60.0 ac

OTHER	
Major Street Rights-of-Way	101.05 ac
TOTALS	**5,554 du 964.0 ac**

CREDITS

Applicant:

Unitex Management Corp

Prepared By:

JHA Consulting, Inc.

FIGURE 3-1

WESTGATE SPECIFIC PLAN (Sent to HFI Nov 10, 2010)

Land Use Concept Statistical Summary

Prepared by : JHA Consulting, Inc.

10-Nov-10

			Total Business Acres and SF							Total Residential Acres and Dwelling Units (rounded)									School/OS/Park/UC				
Planning Area #	Net Acres	Land Use	Retail Ac.	Retail SF	BP Ac.	BP SF*	Total Building SF*	Total Net Res Ac.	Total SuperNet Ac.	R-1 0-5 du/ac	R-2 5.1-12 du/ac.	R-3a 12.1-18 du/ac.	R-3b 18.1-24 du/ac.	R-4 24.1-50 du/ac	DU/AC Net		Total Res. DU	Non-Rounded DU	Planning Area #'s	School	OS/Park Public P1	OS/Park Private P2	OS/L Landscape	OS/UC
FALCON RIDGE VILLAGE																								
1	2.2	OS/Utility Corridor																	1					2.2
2	5.2	R-3a						5.2	4.5			73.00			14.04		73.00	72.8	2					
3	1.5	OS/Utility Corridor																	3					1.5
4	18.6	R-2						18.6	18.2		167.00				8.98		167.00	167.4	4					
5a	2.4	OS/Landscape																	5a				2.4	
5b	1.4	OS/Landscape																	5b				1.4	
5c	0.3	OS/Park P2																	5c			0.3		
6	12.0	Elementary School																	6	12.0				
7	1.0	OS/Park P2																	7			1.0		
8	25.7	R-3a						25.7	25.7			463.00			18.02		463.00	462.6	8					
9	39.4	Commercial Retail	39.4	446,000			446,000												9					
10	14.5	OS/Park P1																	10		14.5			
11	5.0	OS/Park P1			0.0														11		5.0			
	129.2	Subtotal	39.4	446,000	0.0	0.0	446,000	49.5	48.4	0	167.00	536.00	0.00	0			703.00	702.8		12.0	19.5	1.3	3.8	3.7
WESTGATE CENTER																								
12	4.6	Business Park			4.6	80,150	80,150												12					
13	2.2	Business Park			2.2	38,333	38,333												13					
14	14.1	Business Park			14.1	245,678	245,678												14					
15	3.5	OS/Park P1																	15		3.5			
15a	1.5	OS/Park P1																	15a		1.5			
16	11.8	R-3a						11.8	10.9			165.00			13.98		165.00	165.2	16					
16a	0.3	OS/Park P2																	16a			0.3		
17	29.5	Business Park			29.5	514,008	514,008												17					
18	29.9	R-4						29.9	28.5					1495	50.00		1495.00	1495.0	18					
18a	0.3	OS/Park P2																	18a			0.3		
18b	0.3	OS/Park P2																	18b			0.3		
18c	0.3	OS/Park P2																	18c			0.3		
18d	0.3	OS/Park P2																	18d			0.3		
19	11.6	R-3a						11.6	10.8			162.00			13.97		162.00	162.4	19					
19a	0.3	OS/Park P2																	19a			0.3		
20	2.1	OS/Utility Corridor																	20					2.1
21	17.2	OS/Utility Corridor																	21					17.2
22	28.7	R-1						28.7	28.0	110					3.83		110.00	110.0	22					
23	4.2	Business Park			4.2	73,181	73,181												23					
24	30.4	Business Park			30.4	529,690	529,690												24					
25	11.3	OS/Utility Corridor																	25					11.3
26	5.1	R-3a						5.1	4.9			71.00			13.92		71.00	71.4	26					
	209.5	Subtotal	0.0	0.0	85.0	1,481,040	1,481,040	87.1	83.1	110.00	0.00	398.00	0.00	1495			2003.00	2004.0		0.0	5.0	1.8	0.0	30.6
WESTGATE VILLAGE (EAST)																								
27	18.4	Business Park			18.4	320,602	320,602												27					
28	7.3	OS/Utility Corridor																	28					7.3
29	2.1	Business Park			2.1	36,590	36,590												29					
30	3.8	OS/Utility Corridor																	30					3.8
31	32.8	R-3a						32.8	32.0			459.00			14.00		459.00	459.2	31					
32	1.0	OS/Park P2																	32			1.0		
33	60.0	High School																	33	60.0				
34	4.4	Business Park		0.0	4.4	76,666	76,666												34					
35	0.65	OS/Park P2																	35			0.65		
36	23.1	R-3b						23.1	23.0				495.00		21.43		495.00	495.0	36					
37	2.8	OS/Park P2																	37			2.8		
38	11.7	R-3a						11.7	11.3			167.00			14.27		167.00	167.0	38					
	168.1	Subtotal	0.0	0.0	24.9	433,858	433,858	67.6	66.3	0	0.00	626.00	495.00	0			1121.00	1121.2		60.0	0.0	4.5	0.0	11.1
WESTGATE VILLAGE (WEST)																								
39	0.5	BP/PublicFacilities			0.5		0												39					
40	31.0	Business Park			31.0	540,144	540,144												40					
41	3.2	OS/Park P1																	41		3.2			
42	15.1	R-3a						15.1	14.9			211.00			13.97		211.00	211.4	42					
42a	1.0	OS/Park P2																	42a			1.0		
43	15.5	R-3b						15.5	15.0				281.00		18.13		281.00	280.6	43					
44	0.5	OS/Park P2																	44			0.5		
45	21.4	OS/Utility Corridor																	45					21.4
46	10.5	R-3a						10.5	10.0			147.00			14.00		147.00	147.0	46					
47	1.5	OS/Park P2																	47			1.5		
48	13.2	R-2						13.2	12.5	119.00					9.02		119.00	118.8	48					
49	35.6	BP/PublicFacilities			19.0	331,056	331,056												49					
		Current Facilites	actual		16.6	124,000	124,000																	
50	8.4	BP/PublicFacilities			8.4	146,362	146,362												50					
51	9.6	BP/PublicFacilities			9.6	167,270	167,270												51					
52	15.6	BP/PublicFacilities			15.6	271,814	271,814												52					
53	7.8	R-3a						7.8	7.6			109.00			13.97		109.00	109.0	53					
53a	0.3	OS/Park P2																	53a			0.3		
54	10.5	R-2						10.5	10.3	110.00					10.48		110.00	110.0	54					
55	9.7	R-1						9.7	9.4	28.00					2.89		28.00	28.0	55					
56	1.0	OS/Park P2																	56			1.0		
56a	1.0	OS/Park P1																			1.0			
57	20.7	R-3a						20.7	20.4				455.00		21.98		455.00	455.0	57					
58	3.4	OS/Park P1																	58		3.4			
59	2.6	OS/Utility Corridor																	59					2.6
60	20.4	OS/Utility Corridor																	60					20.4
61	3.4	R-2						3.4	3.3	31.00					9.12		31.00	30.6	61					
62	1.0	OS/Park P2																	62			1.0		
63	5.3	OS/Park P1																	63		5.3			
64	7.7	R-2						7.7	7.4	69.00					8.96		69.00	69.3	64					
65	17.7	R-2						17.7	16.5	159.00					8.98		159.00	159.3	65					
66	12.0	Elementary School																	66	12.0				
67	9.6	R-3a						9.6	8.7			134.00			13.96		134.00	134.4	67					
68	12.7	Commercial Retail	12.7	138,303			138,303												68					
69	9.2	R-3a						9.2	8.4			129.00			14.02		129.00	128.8	69					
70	13.6	R-2						13.6	13.0	122.00					8.97		122.00	122	70					
71	1.1	OS/Park P1																	71		1.1			
72	2.8	OS/Park P1																	72		2.8			
	356.1	Subtotal	12.7	138,303	100.7	1,580,646	1,718,949	164.2	157.3	28.00	610.00	730.00	736	0			2104.00	2104.6		12.0	16.8	5.3	0.0	44.4
	101.05	Major Street ROW's																						
Total	**964**		**52.1**	**584,303**	**210.6**	**3,495,544**	**4,079,847**	**368.4**	**355.1**	**138.00**	**777.00**	**2290.00**	**1231.00**	**1495.00**	**5931.00**		**5931.00**	**5932.6**		**84.0**	**41.3**	**12.85**	**3.8**	**89.8**

Note:
PA 9 and PA 49 (124,000sf) square feet input per City staff input.
*Building Square feet totals are estimates. For greater detail and accuracy, refer also to Bldg. SF Summary prepared by Kunzman Assoc.10-6-2010 for the WG traffic study.

Use 5931 DU based on columns to left

PCR Irvine
2121 Alton Parkway
Suite 100
Irvine, California 92606
TEL 949.753.7001
FAX 949.753.7002
PCRinfo@pcrnet.com

PCR Santa Monica
201 Santa Monica Boulevard
Suite 500
Santa Monica, California 90401
TEL 310.451.4488
FAX 310.451.5279
PCRinfo@pcrnet.com

PCR Pasadena
80 South Lake Avenue
Suite 570
Pasadena, California 91101
TEL 626.204.6170
FAX 626.204.6171
PCRinfo@pcrnet.com