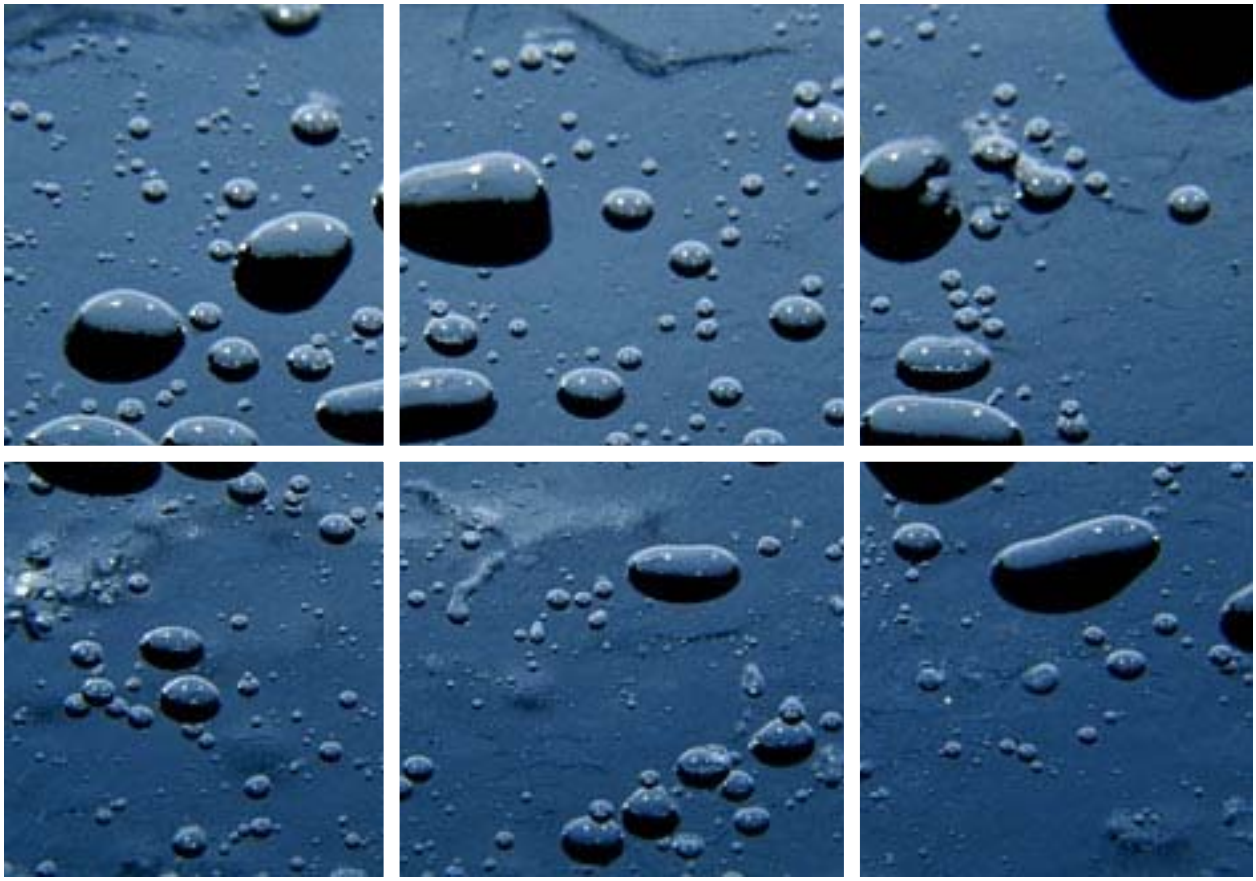

Draft Environmental Impact Report

Beaumont Avenue Recharge Facility and Pipeline
City of Beaumont, County of Riverside, California

State Clearinghouse No. 2012111033

June 6, 2013

SAN GORGONIO PASS WATER AGENCY
Established 1961

FirstCarbon® SOLUTIONS
MICHAEL BRANDMAN ASSOCIATES

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June 6, 2013

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EXECUTIVE SUMMARY

Introduction

The San Gorgonio Pass Water Agency (SGPWA) proposes to construct a groundwater recharge facility on a vacant, undeveloped property in the City of Beaumont, California. The project would increase recharge capabilities with the delivery of State Water Project (SWP) water, as well as other supplemental water sources via a proposed underground pipeline and service connection facility. The recharge facility would enable the SGPWA to replenish the groundwater basin and provide water supply for the ongoing and projected needs of the SGPWA's service area.

Purpose

The most heavily developed portion of the SGPWA's service area is the Beaumont Basin. Currently, the Beaumont Basin is experiencing an overdraft condition, which means that the amount of water withdrawn by pumping exceeds the average amount of water that naturally recharges the groundwater basin on an annual basis. The estimated hydrologic safe yield, which is the amount of groundwater that can be continuously withdrawn from the Beaumont Basin without adverse impact, is estimated at 6,100 acre-feet per year (AFY) (Boyle 2002). In 2007 and 2009, the annual precipitation was among the driest on record in Beaumont while 2010 was one of the wettest (SGPWA 2012). In 2011, the annual precipitation was below normal (SGPWA 2012). In 2010, the total production within the Beaumont Basin was 13,469 acre-feet (af) while in 2011, the total production was 13,908 af (SGPWA 2012), which means that the estimated exceedance of the hydrologic safe yield for 2010 was approximately 7,369 af and for 2011 was approximately 7,808 af. The cumulative overdraft of the Beaumont Basin since development of the region began in the 1920s is over 100,000 af (Albert A. Webb Associates 2008).

In 2003, Phase I of SWP's East Branch Extension (EBX) was completed, bringing raw SWP water into SGPWA's service area. However, the capacity of Phase I allows for a maximum of approximately 12,000 AFY of the SGPWA's Table A amount (i.e., amount of SWP water that SGPWA has contracted for) which is 17,300 AFY (SGPWA 2012). Based on fluctuating precipitation and supply conditions, SWP yearly distribution can differ from Table A amounts. For example, in 2011, the SGPWA was distributed approximately 10,000 af of SWP water (SGPWA 2012), although the SGPWA has capacity for 12,000 AFY, and it's full Table A amount is 17,300 AFY. Following completion of both Phase II of the EBX (estimated 2015), which would increase overall capacity to the region, and the project as proposed in this Draft EIR, the SGPWA would be able to obtain its full Table A amount of 17,300 AFY of SWP water. The proposed recharge facility could also provide capacity to receive water from the SWP under the Article 21 Water Program or other supplemental water such as exchange water. The Article 21 Program was established to allow the California Department of Water Resources to provide water to State Water Project contractors

(i.e., SGPWA) when water levels within the San Luis Reservoir in Northern California exceed certain water elevations. Furthermore, the proposed recharge facility could also provide recharge capacity for retail water agencies. The proposed recharge facility will allow SGPWA to receive the full Table A amount of SWP water as well as take advantage of wet years to receive more water to replenish the groundwater basin.

In 2008, the SGPWA evaluated six potential recharge sites within the Beaumont Basin. A recharge site would allow the SGPWA to recharge the groundwater basin with SWP water. Initially, SGPWA provided a detailed review of the Brookside South Recharge project that included an in-stream recharge facility within Noble Creek. The SGPWA decided not to proceed with the Brookside South Recharge project and is currently proposing a recharge facility southeast of Noble Creek.

This Draft Environmental Impact Report (EIR) provides project-level analysis of the environmental effects related to implementation of the Beaumont Avenue Recharge Facility and Pipeline project (project). The level of impact analysis in this Draft EIR corresponds to the degree of specificity deemed appropriate in accordance with CEQA Guidelines (Title 14, Cal. Code Regs., 15146). This document addresses the potentially significant adverse environmental effects that may be associated with the planning, construction, and operation of the project. The document also identifies appropriate and feasible mitigation measures and alternatives that may be adopted to significantly reduce or avoid these potential impacts.

Proposed Project

Project Location

The proposed project is located in both the City of Beaumont and the Cherry Valley area, an unincorporated portion of Riverside County. The project site encompasses a recharge facility, pipeline, and a service connection site. The recharge facility is located at the southwest corner of Beaumont Avenue and Brookside Avenue. The pipeline is proposed to extend north from the recharge facility to Brookside Avenue, east to Beaumont Avenue, north along Beaumont Avenue to Orchard Street, west along Orchard Street to the west side of the Mountain View Channel, and south to the proposed service connection facility. The service connection facility site is located south of Orchard Street and immediately west of Mountain View Channel. Additionally, there would be a potential that excavation activities associated with construction of the project would require the depositing of excess soil at up to three locations: the southern end of the recharge facility site; an offsite triangular parcel located south of Brookside Avenue, north of Noble Creek, and east of the Mountain View Channel; and the service connection site.

Project Characteristics

Recharge Facility

The recharge facility would consist of a series of five tiered basins, each separated by berms. The facility would have raised embankments along its perimeter so that a portion of the basins will be above the current ground elevation and a portion of the basins will be below the current ground elevation. A maximum 3:1 slope would be used for the interior basin portions of the facility, while 3:1 cut/fill slopes would be used for the exterior perimeter of the facility. The raised embankments would extend a maximum of approximately 9.5 feet above the surrounding grade along the majority of Beaumont Avenue. The southern end of the embankment adjacent to Beaumont Avenue would extend approximately 14 feet above the existing surrounding grade. The embankment along the southern property line will raise approximately 15.5 feet above the existing surrounding grade. The raised embankment along the western property line will be up to 6.5 feet above the existing surrounding grade. The embankment along the northern portion of the recharge facility will raise approximately 9.5 to 11 feet adjacent to three middle basins within the recharge facility and the embankment adjacent to the northern basin will range from 10.5 to -11.2 feet compared to the surrounding grade.

The recharge facility has been designed for an infiltration rate of two feet per day and to accommodate a maximum flow rate of 20 cubic feet per second (cfs). With a capacity of 20 cfs, the normal operation of the facility would allow recharge of 3,000 AFY to 4,000 AFY because the existing Beaumont Cherry Valley Water District's recharge basins located northeast of the proposed recharge basin has a current capacity of approximately 14,000 AFY. The proposed recharge basin would be operating during wet periods of the year when the SGPWA can take advantage of surplus water, and when it needs to import its full Table A amount. However, in a very wet year when surplus water is available through the California Department of Water Resources Article 21 Program and exchanges, the proposed recharge facility could have a capacity up to a maximum of 14,500 AFY.

The floor of the basin in the northeast portion of the facility would be approximately 40 to 45 feet higher in elevation than the floor of the basin in the southwest portion of the facility. Emergency spillways would be placed on the embankments of each basin and directed into the adjacent basin. The southernmost basin would have a spillway draining to the west and an emergency outflow swale to the south that would convey the emergency runoff south to Mountain View Avenue. The proposed recharge facility site would include an onsite polyvinyl chloride (PVC) pipe distribution system.

Each basin would have a maximum ponding depth of 5.5 feet and a minimum freeboard of 1.5 feet from water surface to the basin rim. Maintenance roads would be provided along both the perimeter of the facility and between each of the basins. The perimeter maintenance road would be 20 feet wide, while the roads between the basins will be 15 feet and the ramps to the floor of the basins will be 12 feet. These roads would be engineered to prevent erosion and would be slightly angled towards

the basins to allow for drainage into the basins. Site access is proposed along Brookside Avenue and from Mountain View Avenue.

The recharge facility is proposed with berms that would prevent stormwater flows from entering the basins from outside of the recharge facility. The outlet structure located towards the southwesterly corner of the recharge facility would only be used in an unusual event that the basins must be quickly drained.

Periodic maintenance activities of the recharge facility would be required once the basins are operational. If the recharge basins continue to infiltrate at an acceptable rate, the time between maintenance activities would be extended. It is anticipated that each recharge basin may require servicing on an annual basis. Maintenance activities would involve temporarily taking an individual basin out of commission, allowing the basin to thoroughly dry over several weeks, re-grading and ripping the basin bottom with a dozer, and, if necessary, re-grading and tracking the basin slopes, although this final step is not expected to be regularly required. Each basin would take approximately one day to grade, rip, and track. Since SGPWA has plans to temporarily take the pipeline offline every year to perform mandatory annual maintenance activities, it is also possible that the recharge facility would be shut down during this period, with each basin being serviced during the shut down period.

The proposed recharge facility would include landscaping along its perimeter. To provide irrigation water for landscaping, an irrigation well is proposed. The well is proposed to include an electric pump that would include an electrical line to the recharge basin site and have a capacity to pump a maximum of 100 gallons per minute of non-potable water. A storage pressure vessel may be located next to the well to accommodate a small volume of irrigation water.

Pipeline

A 24-inch pipeline is proposed to extend east from the recharge facility along Brookside Avenue for approximately 180 linear feet, along Beaumont Avenue for approximately 5,600 linear feet, and west along Orchard Street for approximately 1,400 feet toward the service connection facility. The pipeline is planned to be located within the southern side of Brookside Avenue (eastbound travel lane), within the western side of the Beaumont Avenue centerline (southbound traffic lane) and the southern side of the Orchard Street centerline (eastbound traffic lane). The pipeline would transfer SWP water from the service connection site to the recharge facility for groundwater recharge. The pipeline has been designed to convey a flow rate of 20 cfs.

Service Connection

The service connection facility would convey SWP water from the existing 36-inch East Branch Extension/Noble Creek pipeline located at the intersection of Orchard Street and Mountain View Avenue to the pipeline and ultimately downstream to the recharge facility. A pipe outlet, not to

exceed 24-inch diameter, would be extended from the service connection facility to the 24-inch pipeline along Orchard Street. While up to half of the service connection site could be disturbed during construction of the project, the service connection facility itself would disturb a smaller, approximately 120-foot by 110-foot portion (0.3 acre) representing less than 10 percent of the overall site. The service connection site would consist of a precast concrete control building and various below- and above-grade pipelines and ancillary infrastructure. Site access would be provided by a driveway from Orchard Street.

Offsite Triangular Parcel

The offsite triangular parcel located northwest of the recharge facility site on the north side of Noble Creek could potentially be used, along with three other locations, as a staging area during construction of the project. Additionally, this parcel could potentially be used for depositing excess excavated soil as a result of excavation of the pipeline.

Project Objectives

Implementation of the project is needed to meet the following SGPWA objectives:

- To enable the Agency to deliver its entire Table A amount of water from the State Water Project.
- To enable the Agency to purchase Article 21 water or other supplemental water sources that become available over and above the Agency's Table A water.
- To provide a regional recharge facility that would be available to all retail water agencies.
- To augment regional storage capacity.
- To provide water supply for the ongoing and projected needs of the SGPWA's service area.

Applicability of City and County Land Use Plans, Policies, and Regulations

According to California Government Code Section 53091(d) and 53091 (e), as a municipal water storage/recharge facility, the project would be exempt from the land use policies and zoning ordinances of a county or city, including the provisions contained in the City of Beaumont General Plan and Zoning Ordinance, as well as the County of Riverside General Plan and Zoning Ordinance.

In accordance with Sections 53091(d) and 53091(e) of the California Government Code, the proposed recharge facility, pipeline, and service connection facility, and offsite triangular parcel are exempt from the provisions of the City of Beaumont and County of Riverside's Land Use Plan and Zoning Ordinance. Although the proposed project is exempt from City and County plans and ordinances, the SGPWA has chosen to provide an analysis of the project's consistency with those plans and zoning ordinance, and in some instances, to use them as thresholds for determining the project's potential environmental impacts.

Approvals

The proposed recharge facility and pipeline project will require approvals from the lead agency, San Gorgonio Pass Water Agency (approval of the project and approval of construction contracts). In addition, the SGPWA will be required to obtain encroachment permits for the proposed project. The encroachment permits require approvals from other agencies including Riverside County Flood Control and Water Conservation District (approval of an encroachment permit for pipeline construction under the Mountain View Channel and Noble Creek), Riverside County Transportation Department (approval of an encroachment permit for the pipeline in Beaumont Avenue and Orchard Street), and the City of Beaumont (approval of an encroachment permit for pipeline construction in Brookside Avenue).

Areas of Controversy/Issues To Be Resolved

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, which includes the choice among alternatives and whether or how to mitigate significant impacts. The major issues to be resolved within the project include the decisions by the Lead Agency as to whether:

- The Draft EIR adequately describes the environmental impacts of the project;
- The recommended mitigation measures should be adopted or modified; and/or
- Additional mitigation measures need to be applied to the project.

Table ES-1 summarizes the detailed discussion contained in Section 3, Environmental Impact Analysis, of this Draft EIR.

Alternatives to the Proposed Project

Section 15126.6(a) of the State CEQA Guidelines requires that an EIR, "Describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives."

This following discussion focuses upon the alternatives to the proposed project with the potential of avoiding or substantially lessening any significant impacts associated with implementation, even if these alternatives would impede attainment of project objectives or prove more costly. These alternatives could result in new impacts that would not result from implementation of the proposed project. This Draft EIR evaluates the following three alternatives:

No Project Alternative

Under the No Project Alternative (Alternative 1), the proposed recharge facility, pipeline, and service connection facility would not be constructed. The recharge facility site and the service connection site would remain vacant and undeveloped, as they currently are under existing conditions. Since the recharge basins would not be constructed, the associated pipeline along Beaumont Avenue and Orchard Street and the service connection facility connecting this pipeline to the existing EBX pipeline, would not be required. The proposed groundwater recharge operations resulting from the project would not occur.

Reduced Footprint/Alternate Site Location Alternative

This alternative is based on parameters identified for the Brookside South site in the "Evaluation of Potential Recharge Sites for San Gorgonio Pass Water Agency" prepared by Albert A. Webb Associates in 2008. Under the Reduced Footprint/Alternate Site Location Alternative (Alternative 2), the recharge facility would be constructed on 18.2 acres downstream of the confluence of Noble Creek and Mountain View Channel, totaling approximately 6,400 feet long. Alternative 2 involves using the Noble Creek stream channel south of Brookside Avenue to impound and recharge SWP water during the non-storm season. This Alternative consists of constructing multiple earthen berms within and perpendicular to Noble Creek. The berms would create shallow impoundments that would cover the channel bottom and serve as temporary barriers, causing ponding of the released SWP water during the non-storm season. The berms would slow flows and allow the SWP water to form shallow ponds. The ponded water would then percolate into the channel bottom, migrate through the vadose zone, and ultimately recharge the main water table of the Beaumont Basin. Since these berms would be constructed within Noble Creek, which serves as flood control facility during the storm season, Alternative 2 would be constructed and removed on an annual basis. The estimated recharge potential of Alternative 2 is 5,700 AFY.

Because of the adjacent location of the Alternative 2 site, the pipeline length would generally remain the same as under the proposed project. The service connection facility would be constructed as proposed without any modifications.

Secondary Alternate Site Location Alternative

This alternative is based on parameters identified for the Noble Creek Meadows site in the "Evaluation of Potential Recharge Sites for San Gorgonio Pass Water Agency" prepared by Albert A. Webb Associates in 2008 as well as revised assumptions regarding the number of recharge days and the recharge capability of the site in terms of acre-feet per day. Under the Secondary Alternate Site Location Alternative (Alternative 3), the recharge facility would be constructed on the 101-acre site located north of Oak Valley Parkway, east and south of Noble Creek, and west of Mountain View Avenue. The Alternative 3 site includes 101 acres, 40.4 acres available for spreading, and 36,400 AFY of estimated recharge potential. However, based on the presence of the approximately 200-foot wide Southern California utility easement, as well as irregular terrain, on the southern portion of this

site, this alternative assumes the construction of a recharge facility of the same size as the proposed project (e.g., +/-44 acres, 20 acres available for spreading, 3,000 to 4,000 AFY of estimated recharge during normal operations and a capacity of up to 14,500 AFY) on the northern half of the Alternative 3 site.

Due to the more southwesterly location of the Alternative 3 site, the pipeline length would be increased approximately 1,250 feet as compared to the proposed project. The service connection facility would be constructed as proposed without any modifications.

Environmentally Superior Alternative

Each of the three alternatives would have a reduction of at least one environmental impact relative to the proposed project. As previously addressed, if the No Project Alternative is the environmentally superior alternative, which is the case with the conclusions in this alternatives analysis, the EIR must also identify another environmentally superior alternative among the remaining alternatives.

Based on a comparison of the two build alternatives (Alternatives 2 and 3), impacts associated with air quality, cultural resources, greenhouse gas emissions, noise, and traffic would be less under Alternative 2 compared to Alternative 3. Impacts associated with geology and soils, and hazards and hazardous materials under Alternative 2 would be similar to Alternative 3. Impacts associated with biological resources and hydrology and water quality would be greater under Alternative 2 compared to Alternative 3. Overall, based on the above evaluations, the Reduced Footprint/Alternate Site Alternative (Alternative 2) is considered the environmentally superior alternative.

Review of the Draft EIR

Upon completion of this Draft EIR, the SGPWA prepared and filed a Notice of Completion (NOC) with the California Office of Planning and Research/State Clearinghouse to begin the public review period (Public Resources Code, Section 21161). Concurrent with the NOC, the SGPWA distributed a Notice of Availability (NOA) in accordance with Section 15087 of the CEQA Guidelines. The NOA was mailed to the organizations and individuals who previously requested such a notice in writing. This Draft EIR was distributed to responsible and trustee agencies, other affected agencies, surrounding cities and municipalities, and all interested parties requesting a copy of this Draft EIR in accordance with Public Resources Code, Section 21092(b)(3). During the public review period, this Draft EIR, including the appendices, is available for review at the following locations:

San Gorgonio Pass Water Agency
1210 Beaumont Avenue
Beaumont, CA 92223
Monday through Friday: 7:30 a.m. to 4:30 p.m.
Saturday and Sunday: Closed

Beaumont Library District
125 E Eighth Street
Beaumont, CA 92223
Monday, Friday, and Saturday: 10 a.m. to 6 p.m.
Tuesday and Thursday: 10 a.m. to 8 p.m.
Sunday: 1 p.m to 6 p.m.
Wednesday: Closed

In addition, the Draft EIR, including the appendices, is available for review at the following SGPWA website.

http://www.sgpwa.com/reports.asp

Agencies, organizations, individuals, and all other interested parties not previously contacted, or who did not respond to the NOP, currently have the opportunity to comment on this Draft EIR during the 45-day public review period. Written comments on this Draft EIR should be addressed to:

Jeff Davis, P.E., General Manager
San Gorgonio Pass Water Agency
1210 Beaumont Avenue
Beaumont, CA 92223

Comments may also be sent by email to Jeff Davis at:

Email: JDavis@sgpwa.com

Upon completion of the public review period, written responses to all significant environmental issues raised will be prepared and made available for review at least 10 days prior to the public hearing on the project before the SGPWA, at which the certification of the Final EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision-makers for the project.

Summary of Impacts and Mitigation Measures

Table ES-1 summarizes the potential environmental effects of the proposed project, the recommended mitigation measures, if applicable, and the level of significance after mitigation. Per CEQA Section 15093, should the project be approved as proposed, any impact noted in the summary as "significant" after mitigation would require the adoption of a statement of overriding considerations. However, as shown in Table ES-1, the proposed project would not result in any significant and unavoidable adverse impacts. Therefore, a statement of overriding considerations for the proposed project is not required.

Table ES-1: Executive Summary of Impacts and Mitigation Measures

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
Section 3.1 - Air Quality		
Impact AIR-1: The project could conflict with or obstruct implementation of the applicable air quality plan. *(Significant Impact)*	**MM AIR-1.** During construction of the recharge basin, the construction contractor can use the construction equipment assumed in this analysis and the two scrapers shall be equipped with a Tier 3 level engine capable of achieving a NO_X emission rate of 2.7 grams per horsepower-hour. Based on the peak hours per day of construction and horse-power as reflected in Table 3.1-8 of this Draft EIR, the emission reduction rate would reduce regional emissions of NO_X by the project to below 100 pounds per day. If the construction contractor chooses an alternative mix of construction equipment, the construction contractor shall demonstrate through modeling that potential construction emissions do not exceed the regional or local significance thresholds. If the contractor cannot demonstrate that emissions would be below 100 pounds per day, the contractor will not be allowed to use the alternative mix of construction equipment. **MM AIR-2.** Under unforeseen conditions, if there is an overlap of construction phases due to delays in design or weather, the construction contractor shall demonstrate through modeling that potential construction emissions do not exceed the regional significance thresholds. If the contractor cannot demonstrate that emissions would be below the regional significance thresholds, the contractor will not be allowed to use the alternative mix of construction equipment.	Less than Significant Impact with Mitigation.
Impact AIR-2: The project would not violate an air quality standard or contribute substantially to an existing or projected air quality violation. *(Less than Significant Impact)*	No mitigations are required.	Less than Significant Impact.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
Impact AIR-3: The project could 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). *(Significant Impact)*	Mitigation Measures AIR-1 and AIR-2 are required to reduce project's regional construction emissions of NO_X to less than significant levels.	Less than Significant with Mitigation.
Impact AIR-4: The project would not expose sensitive receptors to substantial pollutant concentrations. *(Less than Significant Impact)*	No mitigations are required.	Less than Significant Impact.
Impact AIR-5: The project would not create objectionable odors affecting a substantial number of people. *(Less than Significant Impact)*	No mitigations are required.	Less than Significant Impact.
Section 3.2 - Biological Resources		
Impact BIO-1: The project could 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. *(Significant Impact)*	**MM BIO-1.** A pre-construction survey shall be conducted in accordance with the MSHCP guidelines. The survey shall be conducted by a qualified biologist within 30-days of any vegetation removal or ground disturbing activities on the project sites to ensure that no nesting BUOW occur within the sites. If BUOW are observed on any of the project sites during the pre-construction survey, MM BIO-2 shall be implemented. **MM BIO-2.** If BUOW are observed on any of the project sites during the pre-construction survey, they shall be passively relocated in accordance with the MSHCP guidelines. If BUOW are occupying a burrow between March and August, it shall be considered an active nest, unless otherwise determined by a qualified biologist, and passive relocation shall be delayed until September, or until the nestlings have fledged the nest. **MM BIO-3.** Prior to any soil storage activities within the offsite triangular parcel located north of Noble Creek, east of Mountain View Channel, and south of Brookside Avenue and the construction activities within the northern portion of the proposed recharge facility, the occupied habitat of the Los Angeles Pocket Mouse on	Less than Significant with Mitigation.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	the triangular parcel and along Noble Creek (i.e., 0.4-acre area) shall be flagged by a qualified biologist at least 15 days prior to any construction activities. No construction activities including soil storage or staging of construction materials, equipment, or vehicles shall occur within the flagged areas. **MM BIO-4.** Within maintained areas, all excavated, steep-walled holes or trenches more than two feet deep shall be either covered at the end of each construction day with plywood or one or more escape ramps constructed of earth fill or wooden planks shall be placed to prevent entrapment of LAPM during project construction. The ramps shall be located at no greater than 100-foot intervals, contain slopes less than 45 percent, and be at least one-foot wide. **MM BIO-5.** All trenches and holes shall be inspected for entrapped wildlife each morning prior to the onset of project construction. Before holes or trenches are filled, they shall be thoroughly inspected for entrapped animals. Any animals discovered during these inspections shall be removed from the trench or hole by the project biologist and released. **MM BIO-6.** Any pipes, poles, culverts, or similar construction materials with a diameter of 1.5 inches or greater stored overnight at the proposed recharge facility site that are within 200 feet of occupied LAPM habitat shall be thoroughly inspected for the presence of LAPM before the materials are subsequently buried, capped, or otherwise used or moved. Unburied pipes laid in trenches overnight shall be capped. If LAPM are discovered inside a pipe, that section of pipe shall not be moved until the project biologist has been consulted. If necessary and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activities until the animal has been removed and released. **MM BIO-7.** The maintenance of equipment; dispensing of fuel, oil, or coolant; and all other similar construction activities shall be restricted to designated staging areas located outside of Noble Creek to prevent the release of any hazardous substances into the drainage. Any accidental spills shall be immediately contained and properly remediated according to local, State, and federal regulations.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	MM BIO-8. No pets shall be allowed on and adjacent to environmentally sensitive areas. **MM BIO-9.** Rodenticides, herbicides, insecticides, or other chemicals that could potentially harm sensitive species shall only be used by a qualified applicator. Chemical application shall not be applied in any areas of occupied LAPM habitat. **MM BIO-10.** Trash shall be collected and stored so that it is inaccessible to scavengers (i.e., crows, raccoons, and coyotes) and shall be removed daily so as not to attract potential LAPM predators. **MM BIO-11.** No nighttime construction or maintenance activities shall occur. Nighttime shall be defined as when the sun sets below the horizon. **MM BIO-12.** A pre-construction survey shall be conducted by a qualified biologist within 30-days of any vegetation removal or ground disturbing activities on the project sites to ensure that no nesting birds occur within the sites. This survey shall occur each year prior to the construction of the recharge basin berms, and may coincide with the mandatory BUOW pre-construction survey outlined in MM BIO-1. If nesting birds are observed on any of the project sites during the pre-construction survey, MM BIO-13 and MM BIO-14 shall be implemented. **MM BIO-13.** If nesting birds are present within the project footprint, they shall be avoided until the nesting activities are complete, as determined by a qualified biologist. In the event that nesting birds are observed during the pre-construction survey, a buffer area shall be established around the nest. The buffer area shall be no less than 200 feet around any active nest and shall be established by a qualified biologist based on the specific avian species and type of disturbance in the area. Construction activities may occur within the buffer area at the discretion of a qualified biologist. All construction activities with the potential to cause a nest failure shall be prohibited from the area until the nestlings have fledged.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	MM BIO-14. A qualified biologist shall be present during all vegetation removal and ground disturbing activities. The nest monitoring will continue during construction activities until all nesting activities have ceased.	
Impact BIO-2: The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. *(Less than Significant Impact)*	No mitigation measures are required.	Less than Significant Impact.
Impact BIO-3: The project would not 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 Impact)*	No mitigation measures are required.	No Impact.
Impact BIO-4: The project could 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 wildlife nursery sites. *(Significant Impact)*	Implementation of Mitigation Measures BIO-12 through BIO-14 are required.	Less than Significant with Mitigation
Impact BIO-5: The project would not 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 mitigation measures are required.	No Impact.
Section 3.3 - Cultural Resources		
Impact CUL-1: The project could potentially cause a substantial adverse change in the significance of a historical resource as defined in §15064.5. *(Significant Impact)*	**MM CUL-1.** Prior to the issuance of grading permits, a Project Archaeologist approved by the County of Riverside for portions of the project sites located within the jurisdiction of the County of Riverside and the City of Beaumont for the portions of the sites	Less than Significant with Mitigation

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	located within the jurisdiction of the City of Beaumont shall initiate and supervise cultural resource mitigation monitoring during project-related earthmoving activities in the project area, subject to certain constraints found in Mitigation Measure CUL-2. **MM CUL-2.** The following monitoring measures that provide a framework for monitoring shall be followed: a) All earthmoving activities shall be monitored by the approved Project Archaeologist or his/her designated representative. Monitoring shall begin along the pipeline segments once two feet of surface fill has been removed. b) Once 50 percent of the earth to be moved has been examined by the approved Project Archaeologist, the Project Archaeologist may, at his or her discretion, terminate monitoring if and only if no buried cultural resources have been detected. c) If buried cultural resources are detected during monitoring, monitoring must continue until 100 percent of virgin earth within the study area has been disturbed and inspected by the Project Archaeologist or his/her designated representative. d) Earthmoving activities shall cease in the immediate area of a potential cultural artifact find as delineated by the Project Archaeologist or his/her designated representative. Such activities shall be permitted to continue in other areas while the particular find(s) is investigated. e) If cultural artifacts are uncovered during earthmoving activities, the resources shall be examined by a professional archaeologist subject to Mitigation Measures CUL-1 and CUL-2, then curated in a museum facility chosen by the County of Riverside. A mitigation monitoring report shall accompany the artifacts once they are donated to the museum facility.	
Impact CUL-2: The project could potentially cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5. *(Significant Impact)*	Mitigation Measures CUL-1 and CUL-2 are required.	Less than Significant with Mitigation

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
Impact CUL-3: The project could potentially directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. *(Significant Impact)*	**MM CUL-3.** If grading and excavation plans show that a depth of 10 feet could be reached, a County of Riverside-qualified Project Paleontologist shall develop a mitigation monitoring program to reduce any potential impacts. If the paleontological monitor finds that underlying soils are conducive to the preservation of fossil resources, then Mitigation Measures CUL-4 through CUL-7 shall apply. **MM CUL-4.** Excavation monitoring in areas identified as likely to contain paleontologic resources shall occur. Paleontologic monitors shall be equipped to salvage fossils, as they are unearthed, to avoid construction delays, and to remove samples of sediments likely to contain the remains of small fossil invertebrates and vertebrates. Monitors shall be empowered to temporarily halt or divert construction activities to allow for the removal of abundant or large specimens. **MM CUL-5.** Preparation of recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates, shall occur. Preparation and stabilization of all recovered fossils shall be deemed necessary to fully reduce impacts to significant paleontological resources. **MM CUL-6.** Identification and curation of specimens into an established, accredited museum repository with permanent retrievable paleontologic storage shall occur. These procedures shall be deemed necessary steps in effective paleontologic mitigation and CEQA compliance. Prior to the initiation of any mitigation activities, the paleontologist shall have a written repository agreement in writing. Mitigation of impacts shall not be deemed complete until such curation into a museum repository has been fully completed and documented.	Less than Significant with Mitigation

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	MM CUL-7. The paleontologists shall prepare a report of findings with an appended itemized inventory of specimens. The report and inventory, when submitted to the appropriate lead agency along with confirmation of the curation of recovered specimens into an established, accredited museum repository, shall signify completion of the mitigation program to reduce impacts to significant paleontologic resources.	
Impact CUL-4: The project would not disturb any human remains, including those interred outside of formal cemeteries. *(Less than Significant Impact)*	No mitigation measures are required.	Less than Significant Impact.
Section 3.4 - Geology and Soils		
Impact GEO-1: The project would not 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)*	No mitigation measures are required.	Less than Significant Impact.
Impact GEO-2: The project could expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving: ii) Strong seismic ground shaking. *(Significant Impact)*	**MM GEO-1:** The prefabricated service connection building shall be founded on dense, stable soils. The upper 12 inches of soils below the footing sub-grade shall be scarified and recompacted to a minimum of 90 percent of laboratory maximum dry density and within ±3 percent of optimum moisture density. Such scarification and recompaction shall extend horizontally outside the structure footprint to a distance of at least three feet. **MM GEO-2:** Jack and bore pit excavations to receive backfill shall be free of trash, debris, or other unsatisfactory materials at the time of backfill placement. The bottoms of the excavations shall be scarified to a depth of at least 12 inches where possible. The	Less than Significant with Mitigation.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	scarified soils shall be brought to near-optimum moisture content and compacted to at least 90 percent of the laboratory maximum dry density to produce a firm and unyielding surface. Fill shall then be placed on the compacted soils in loose lifts of eight inches or less, moisture conditioned to within ±3 percent of optimum, and compacted to at least 90 percent of the laboratory maximum dry density determined by the ASTM D1557 test method. The project contractor shall select the equipment and processes to be used to achieve the specified density without damage to adjacent ground, facilities, utilities, and completed work. **MM GEO-3:** Pipe design generally requires a granular material with a Sand Equivalent greater than 30. Bedding material for the pipes shall be free from oversized particles (greater than one inch). Migration of fines from the surrounding native and/or fill soils shall be considered in selecting the gradation of any imported bedding material. Pipe bedding material shall satisfy the following criteria: D15 < 2.5 mm (0.098-inch) and D50 < 19.0 mm (0.75-inch) Where D15 and D50 represent particle sizes of the bedding material corresponding to 15 percent and 50 percent passing by weight, respectively. **MM GEO-4:** Trench excavations to receive backfill shall be free of trash, debris, or other unsatisfactory materials at the time of backfill placement. **MM GEO-5:** Trench backfill shall be compacted to at least 90 percent of the laboratory maximum dry density as per ASTM D1557 test method or as required by the local agency standards. At least the upper one foot of trench backfill underlying pavement shall be compacted to at least 95 percent of the laboratory maximum dry density as per ASTM D1557 test method. **MM GEO-6:** Particles larger than one inch shall not be placed within 12 inches of the pavement sub-grade. No more than 30 percent of the backfill volume shall be larger than 0.75 inch in the largest dimension. Gravel shall be well mixed with finer soil. Rocks larger than three inches in the largest dimension shall not be placed as trench backfill.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	MM GEO-7: Trench backfill shall be compacted by mechanical methods, such as sheepsfoot, vibrating, or pneumatic rollers or mechanical tampers, to achieve the density specified in the 2013 Geotechnical Investigation Report. The backfill materials shall be brought to within ±3 percent of optimum moisture content then placed in horizontal layers. The thickness of uncompacted layers shall not exceed eight inches. Each layer shall be evenly spread, moistened, or dried as necessary, and then tamped or rolled until the specified density has been achieved. **MM GEO-8:** Trench backfill shall not be placed, spread, or rolled during unfavorable weather conditions. When the work is interrupted by heavy rain, fill operations shall not resume until field tests by the project engineer indicate that the moisture content and density of the fill are in compliance with project specifications. **MM GEO-9:** The prefabricated service connection building and pipeline shall be fitted with flexible couplings, automatic shut-off valves, or other similar measures. **MM GEO-10.** Lightweight structures such as the prefabricated service connection building shall be supported on continuous (strip) and/or isolated spread footings. Continuous and isolated spread footings shall be at least 12-inches wide. The depth of embedment below lowest adjacent soil grade shall be at least 12 inches. Footings shall be founded on at least 12 inches of scarified and compacted soil. For shallow spread footings founded on scarified and compacted soil, an allowable net bearing capacity of 1,200 pounds per square foot (psf), plus 300 psf for each additional foot of depth, shall be used. The maximum allowable bearing capacity shall be limited to 2,500 psf. **MM GEO-11.** Installation of the pipeline shall adhere to the required soil parameters for the pipeline as established in the California Building Code and identified in the 2013 Geotechnical Investigation Report.	

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
Impact GEO-3: The project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving: iii) Seismic-related ground failure, including liquefaction. *(Less than Significant Impact)*	No mitigation measures are required.	Less than Significant.
Impact GEO-4: The project would not be located on a geologic unit or soil that is unstable, or that could become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. *(Less than Significant Impact)*	No mitigation measures are required.	Less than Significant.
Section 3.5 - Greenhouse Gas Emissions		
Impact GHG-1: The project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. *(Less than Significant Impact)*	No mitigation measures are required.	Less than Significant Impact.
Impact GHG-2: The project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. *(Less than Significant Impact)*	No mitigation measures are required.	Less than Significant Impact.
Section 3.6 - Hazards and Hazardous Materials		
Impact HAZ-1: The project would not 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. *(Less than Significant Impact)*	No mitigation measures are required.	Less than Significant Impact.

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
Impact HAZ-2: The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. *(Less than Significant Impact)*	No mitigation measures are required.	Less than Significant Impact.
Impact HAZ-3: The project would not 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 not create a significant hazard to the public or the environment. *(Less than Significant Impact)*	No mitigation measures are required.	Less than Significant Impact.
Section 3.7 - Hydrology and Water Quality		
Impact HYD-1: The project would not place within a 100-year flood hazard area structures which would impede or redirect flood flows. *(Less than Significant Impact)*	No mitigation measures are required.	Less than Significant Impact.
Impact HYD-2: The project would not 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. *(Less than Significant Impact)*	No mitigation measures are required.	Less than Significant Impact.
Section 3.8 - Noise		
Impact NOI-1: The project would not result in 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. *(Significant Impact)*	**MM NOI-1.** The pump associated with the proposed irrigation well shall be located a minimum of 150 feet from the southern property line, 250 feet from the western property line, and 110 feet from the eastern property line if the pump has no attenuation. If the irrigation pump is located closer to the existing property lines than identified above, the irrigation pump shall be housed in a structure that adequately attenuates noise levels so that the noise levels do not exceed the City of Beaumont noise regulations	Less than Significant with Mitigation

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
Impact NOI-2: The project would not result in expose persons to or generation of excessive groundborne vibration or groundborne noise levels. *(Less than Significant Impact)*	No mitigation measures are required.	Less than Significant Impact.
Impact NOI-3: The project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. *(Significant Impact)*	Implementation of Mitigation Measure NOI-1 is required.	Less than Significant Impact.
Impact NOI-4: The project would not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. *(Less than Significant Impact)*	No mitigation measures are required.	Less than Significant Impact.
Section 3.9 - Transportation and Traffic		
Impact TRANS-1: The project could 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. *(Significant Impact)*	**MM TRANS-1.** To reduce potential operational impacts during pipeline construction, the following measures shall be implemented depending on whether the two-traffic lanes scenario or the single-traffic lane scenario is implemented. **Two-Traffic Lanes Scenario** • Temporary "All-Way STOP" signs at each of the currently signalized adjacent intersections shall be required. **Single-Traffic Lanes Scenario** • Temporary "All-Way STOP" signs at each currently signalized adjacent intersection shall be required. In addition, the project contractor shall utilize a "flagman" to direct one-way traffic, ensure adequate traffic flow, and avoid traffic flow conflicts.	Less than Significant with Mitigation.
Impact TRANS-2: The project would not 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. *(Less than Significant Impact)*	No mitigation measures are required.	Less than Significant Impact.

SECTION 1: INTRODUCTION

1.1 - Overview of the CEQA Process

This Draft Environmental Impact Report (Draft EIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental effects associated with implementation of the Beaumont Avenue Recharge Facility and Pipeline project (project). This Draft EIR has been prepared in accordance with the California Environmental Regulations, Title 14, Section 15000 et seq., and the rules, regulations and procedures for implementing CEQA as adopted by the San Gorgonio Pass Water Agency (SGPWA). This document is a Project EIR, in conformance with Section 15161 of CEQA Guidelines and examines the environmental impacts associated with a specific project. As the lead agency for this project, the SGPWA must complete the environmental review to determine if the proposed project would create significant adverse environmental impacts.

1.1.1 - Overview

The SGPWA was formed with the purpose of importing water from the State Water Project (SWP) into the San Gorgonio Pass area in 1961. The SGPWA's mission is to import and sell supplemental water to protect and enhance local water supplies for use by present and future water users within SGPWA's service area. This service area encompasses approximately 228 square miles and includes the Cities of Beaumont, Calimesa, and Banning, as well as the unincorporated areas of Cherry Valley, Cabazon, Poppet Flat, Banning Bench, and San Timoteo and Live Oak Canyons.

The most heavily developed portion of the SGPWA's service area is the Beaumont Basin. Currently, the Beaumont Basin is experiencing an overdraft condition, which means that the amount of water withdrawn by pumping exceeds the average amount of water that naturally recharges the groundwater basin on an annual basis. The estimated hydrologic safe yield, which is the amount of groundwater that can be continuously withdrawn from the Beaumont Basin without adverse impact, is estimated at 6,100 acre-feet per year (AFY) (Boyle 2002). In 2007 and 2009, the annual precipitation was among the driest on record in Beaumont while 2010 was one of the wettest (SGPWA 2012). In 2011, the annual precipitation was below normal (SGPWA 2012). In 2010, the total production within the Beaumont Basin was 13,469 acre-feet (af) while in 2011, the total production was 13,908 af (SGPWA 2012), which means that the estimated exceedance of the hydrologic safe yield for 2010 was approximately 7,369 af and for 2011 was approximately 7,808 af. The cumulative overdraft of the Beaumont Basin since development of the region began in the 1920s is over 100,000 af (Albert A. Webb Associates 2008).

In 2003, Phase I of SWP's East Branch Extension (EBX) was completed, bringing raw SWP water into SGPWA's service area. However, the capacity of Phase I allows for a maximum of approximately 12,000 AFY of the SGPWA's Table A amount (i.e., amount of SWP water that

SGPWA has contracted for) which is 17,300 AFY (SGPWA 2012). Based on fluctuating precipitation and supply conditions, SWP yearly distribution can differ from Table A amounts. For example, in 2011, the SGPWA was distributed approximately 10,000 af of SWP water (SGPWA 2012), although the SGPWA has capacity for 12,000 AFY, and it's full Table A amount is 17,300 AFY. Following completion of both Phase II of the EBX (estimated 2015), which would increase overall capacity to the region, and the project as proposed in this Draft EIR, the SGPWA would be able to obtain its full Table A amount of 17,300 AFY of SWP water. The proposed recharge facility could also provide capacity to receive water from the SWP under the Article 21 Water Program or other supplemental water such as exchange water. The Article 21 Program was established to allow the California Department of Water Resources to provide water to State Water Project contractors (i.e., SGPWA) when water levels within the San Luis Reservoir in Northern California exceed certain water elevations. Furthermore, the proposed recharge facility could also provide recharge capacity for retail water agencies. The proposed recharge facility will allow SGPWA to receive the full Table A amount of SWP water as well as take advantage of wet years to receive more water to replenish the groundwater basin.

In 2008, the SGPWA evaluated six potential recharge sites within the Beaumont Basin. A recharge site would allow the SGPWA to recharge the groundwater basin with SWP water. Initially, SGPWA provided a detailed review of the Brookside South Recharge project that included an in-stream recharge facility within Noble Creek. The SGPWA decided not to proceed with the Brookside South Recharge project and is currently proposing a recharge facility southeast of Noble Creek.

1.1.2 - Purpose and Authority

This Draft EIR provides project-level analysis of the environmental effects related to implementation of the project. The level of impact analysis in this Draft EIR corresponds to the degree of specificity deemed appropriate in accordance with CEQA Guidelines (Title 14, California Code Regulations, Section 15146). This document addresses the potentially significant adverse environmental effects that may be associated with the planning, construction, and operation of the project. The document also identifies appropriate and feasible mitigation measures and includes alternatives that may be adopted to reduce or avoid potential significant impacts.

This Draft EIR is intended to serve as an informational document for the public agency decision-makers and the public, allowing informed decisions to be formed regarding the objectives and components of the proposed project. This Draft EIR is the primary reference document for the formulation and implementation of a mitigation monitoring program for the project, in compliance with Public Resource Code (PRC) Section 21081.6. Environmental impacts cannot always be mitigated to a level that is considered less than significant. In accordance with Section 15093(b) of the CEQA Guidelines, if a lead agency approves a project that has significant impacts that are not substantially mitigated (i.e., significant unavoidable impacts), the agency shall state in writing the specific reasons for approving the project, based on the final CEQA documents and any other

information in the public record for the project. This is defined in Section 15093 of the CEQA Guidelines as "a statement of overriding considerations." Based on the findings and conclusions in Section 3, Environmental Impact Analysis of this Draft EIR, there are no environmental issues that would result in significant and unavoidable adverse impacts, and therefore, a statement of overriding considerations will not be required.

1.1.3 - Lead Agency Determination and Project Applicant

Section 15367 of the CEQA Guidelines defines the Lead Agency as, "The public agency, which has the principal responsibility for carrying out or approving a project." Criteria considered in identifying the Lead Agency include whether the agency: (1) has the greatest responsibility for supervising or approving the project as a whole; (2) is an agency with the general governmental powers; and (3) will act first on the project in question (Section 15051 of the CEQA Guidelines). The Lead Agency for this project is the SGPWA. In this capacity, the SGPWA is responsible for review of the environmental documentation process through certification of a Final EIR and subsequent implementation of the project.

The project applicant is the SGPWA who will be constructing and operating the components of the proposed project.

Lead Agency and Project Applicant

San Gorgonio Pass Water Agency
1210 Beaumont Avenue
Beaumont, CA 92223
951.845.2577
Contact: Jeff Davis, P.E., General Manager

1.1.4 - Applicability of City and County Land Use Plans, Policies, and Regulations

According to California Government Code Section 53091(d) and 53091 (e), as a municipal water storage/recharge facility, the project would be exempt from the land use policies and zoning ordinances of a county or city, including the provisions contained in the City of Beaumont General Plan and Zoning Ordinance, as well as the County of Riverside General Plan and Zoning Ordinance.

Per California Government Code Section 53091(d):

> Building ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency.

Additionally, California Government Code Section 53091(e) establishes that:

> Zoning ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, or for

the production or generation of electrical energy, facilities that are subject to Section 12808.5 of the Public Utilities Code, or electrical substations in an electrical transmission system that receives electricity at less than 100,000 volts. Zoning ordinances of a county or city shall apply to the location or construction of facilities for the storage or transmission of electrical energy by a local agency, if the zoning ordinances make provision for those facilities.

In accordance with Sections 53091(d) and 53091(e) of the California Government Code, the proposed recharge facility, pipeline, service connection facility, and offsite triangular parcel are exempt from the provisions of the City of Beaumont and County of Riverside's Land Use Plan and Zoning Ordinance. Although the proposed project is exempt from City and County plans and ordinances, the SGPWA has chosen to provide an analysis of the project's consistency with those plans and zoning ordinance, and in some instances, to use them as thresholds for determining the project's potential environmental impacts.

In addition to the SGPWA approval, the SGPWA will be required to obtain encroachment permits for the proposed project. The encroachment permits require approvals from other agencies including Riverside County Flood Control and Water Conservation District (approval of an encroachment permit for pipeline construction under the Mountain View Channel and Noble Creek), Riverside County Transportation Department (approval of an encroachment permit for the pipeline in Beaumont Avenue and Orchard Street), and the City of Beaumont (approval of an encroachment permit for pipeline construction in Brookside Avenue).

1.2 - Scope of the EIR

The purpose of this Draft EIR is to evaluate the potential environmental effects associated with implementation of the project. The SGPWA concluded that implementation of the project could potentially have a direct or indirect impact on the environment. Accordingly, the SGPWA determined the need for the preparation and evaluation of an EIR for the project. The scope of this Draft EIR includes the potential environmental effects identified in the Initial Study/Notice of Preparation (IS/NOP) that was circulated for public review from November 13, 2012 to December 13, 2012; comments obtained during a public scoping meeting held on December 3, 2012 at the SGPWA office; and agency and public comment letters received in response to the IS/NOP. These comment letters, as well as commentors providing comments at the scoping meeting, are listed in Table 1-1. The comment letters and the IS/NOP are included as Appendix A of this Draft EIR.

Table 1-1: Summary of IS/NOP and Scoping Meeting Comments

Commentor	Summary of Environmental Issues Raised in Comment Letter	Section Where Addressed
Governor's Office of Planning and Research, State Clearinghouse	The letter acknowledged receipt of the IS/NOP by the State Clearinghouse, provided guidance to responsible agencies regarding commenting on the IS/NOP, and included a list of reviewing agencies that were provided with a copy of the IS/NOP by the State Clearinghouse.	No substantive comment on the environmental issues; therefore no response required.
Native American Heritage Commission	The letter summarized the roles that the State, Native American Heritage Commission, and the Lead Agency play during the development process in regards to cultural, and in particular, Native American resources.	Section 3.3, Cultural Resources
California Department of Fish and Game	The Letter summarized the concerns that the Department of Fish and Game has regarding the project, including consistency with the Western Riverside MSHCP, impacts to sensitive species and habitats, impacts to Noble Creek, and impacts to Waters of the State.	Section 3.2, Biological Resources
Riverside County Transportation Commission	The letter stated that the Riverside County Transportation Commission reviewed the IS/NOP and had no comment.	No substantive comment on the environmental issues; therefore no response required.
Orange County Water District	The letter stated that the Orange County Water District would like to be added to the distribution list for all future CEQA documents related to the proposed project.	No substantive comment on the environmental issues; therefore no response required.
City of Calimesa	The letter stated that the City of Calimesa reviewed the IS/NOP and had no comment.	No substantive comment on the environmental issues; therefore no response required.
Morongo Band of Mission Indians	The letter stated that local water and groundwater data and analysis should be included as part of the hydrology and water quality evaluation in the EIR.	Section 3.7, Hydrology and Water Quality
Commentor	**Summary of Environmental Issues Raised at Scoping Meeting**	**Section Where Addressed**
Mr. Blair Ball, Beaumont-Cherry Valley Water District	Commented at the public scoping meeting that the following environmental topics should be evaluated in the Draft EIR: Subsurface Hydrology	Section 3.7, Hydrology and Water Quality; Section 6.9, Hydrology and Water Quality, and IS/NOP (Appendix A)
	Setbacks along Beaumont Avenue, concerning trees	Section 3.2, Biological Resources and Section 3.3, Cultural Resources
	Jurisdictional waters.	Section 3.2, Biological Resources

Table 1-1 (cont.): Summary of IS/NOP and Scoping Meeting Comments

Commentor	Summary of Environmental Issues Raised at Scoping Meeting	Section Where Addressed
Duane Burk, City of Banning	Commented at the public scoping meeting that aesthetics and views from Beaumont Avenue and Brookside Avenue should be evaluated in the Draft EIR	Section 6.1, Aesthetics and IS/NOP (Appendix A)

1.2.1 - Effects Found Not To Be Significant

Based on the analysis and findings in the IS/NOP in Appendix A of this Draft EIR as well as additional information in Section 6 of this Draft EIR that supports the findings in the IS/NOP, the following environmental issues were determined not to be significantly affected by implementation of the project.

- Aesthetics
- Agriculture and Forestry Resources
- Mineral Resources
- Population/Housing
- Public Services
- Recreation
- Utilities/Service Systems

The evaluation of the environmental effects that were found not to be significant provide adequate environmental documentation.

1.2.2 - Effects Determined To Be Potentially Significant

Based on the analysis and findings in the IS/NOP, a determination was made that an EIR would be prepared to address the potentially significant adverse environmental effects related to the implementation of the project. The scope of this Draft EIR includes environmental issues identified by the SGPWA during the preparation of the IS/NOP, as well as issues raised by agencies, organizations, and individuals in response to the IS/NOP. The following environmental issues were determined to be potentially significant and are addressed in this EIR:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials

- Hydrology and Water Quality
- Noise
- Transportation and Traffic

Land Use/Planning was also an additional issue identified as having a potentially significant impact in the IS/NOP. The IS/NOP concluded that the proposed project could conflict with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) and that further analysis of this issue would be incorporated into the EIR. This issue is addressed in Section 3.2, Biological Resources, and therefore, there is no Land Use/Planning section in this EIR.

1.3 - Organization of the EIR

This Draft EIR is organized into the following sections, which contain the contents of an EIR as required by Sections 15120 through 15132 of the CEQA Guidelines. The main document is printed, while the appendices are included as a CD attached to the back cover of this printed copy.

- **Section ES: Executive Summary.** This section provides a summary of the project and the project alternatives that will be addressed in this Draft EIR, including a summary table of project and cumulative impacts, recommended mitigation measures, and the level of significance after mitigation for each environmental issue.
- **Section 1: Introduction.** This section includes an introduction and overview describing the purpose of this Draft EIR, along with its scope and components.
- **Section 2: Project Description.** This section provides a detailed description of the project, including the location and project characteristics. A discussion of the intended uses of this Draft EIR, project background, project objectives, and project approvals needed for the project are also included.
- **Section 3: Environmental Impact Analysis.** This section analyzes the environmental impacts of the project. Impacts are organized into major topical areas. Each topical area includes a description of the environmental setting, regulatory setting, significance criteria, impacts, mitigation measures, and level of significance after mitigation, as applicable. The specific environmental topics that are addressed in Section 3 are:
  - Section 3.1 Air Quality
  - Section 3.2 Biological Resources
  - Section 3.3 Cultural Resources
  - Section 3.4 Geology and Soils
  - Section 3.5 Greenhouse Gas Emissions
  - Section 3.6 Hazards and Hazardous Materials
  - Section 3.7 Hydrology and Water Quality

- Section 3.8 Noise
- Section 3.9 Transportation and Traffic

- **Section 4: Cumulative Impact Analysis.** This section evaluates the combined effect of project impacts with the impacts of other past, present, and reasonably foreseeable future projects in the project area.
- **Section 5: Other CEQA Considerations.** This section provides a summary of significant environmental impacts, including unavoidable, irreversible, and growth-inducing impacts.
- **Section 6: Effects Found Not To Be Significant.** This section includes a summary of environmental impacts determined through preparation of the IS to be less than significant or no impact. This summary includes information from the IS as well as additional information.
- **Section 7: Alternatives to the Proposed Project.** This section compares the project impacts with three project alternatives: the No Project Alternative, Reduced Footprint/Alternative Site Location Alternative, and the Secondary Alternative Site Location Alternative.
- **Section 8: Persons and Organizations Consulted.** This section provides a list of the organizations, persons consulted, and the various individuals who contributed to the preparation of this Draft EIR. This section also provides a list of documents cited in the body of this Draft EIR.
- **Section 9: List of Preparers.** This section includes a listing of the lead agency personnel and technical consultants used to prepare this Draft EIR.
- **Section 10: References.** This section provides a listing of the technical studies and other documents used to prepare this Draft EIR.
- **Appendices.** The appendices contain the IS/NOP (including comments) and technical studies prepared to support the analyses and conclusions in this Draft EIR.

The Final EIR will be prepared after the public review period for this Draft EIR has been completed. The Final EIR will include comments and recommendations received on the Draft EIR during the public review period; a list of persons, organizations, and public agencies commenting on the Draft EIR; written responses to significant environmental issues identified in the comments received; and any other information added by the SGPWA.

1.4 - Documents Incorporated by Reference

In accordance with Section 15150 of the CEQA Guidelines, this Draft EIR has referenced several technical studies, analyses, and previously certified environmental documents. Information from these documents, which has been incorporated by reference, has been briefly summarized in the

appropriate Draft EIR sections. The documents that have been used to prepare this Draft EIR include, but are not limited to:

- City of Beaumont General Plan (2007)
- City of Beaumont Municipal Code (2012 [Updated])
- County of Riverside General Plan (2003)
- County of Riverside Code of Ordinances (2012 [Updated])
- County of Riverside Pass Area Plan (2000)

These reference documents, per Section 15150(b) of the CEQA Guidelines, are available for review at the following locations:

City of Beaumont General Plan and City of Beaumont Municipal Code
General Plan
http://www.ci.beaumont.ca.us/index.aspx?nid=121

Municipal Code
http://www.ci.beaumont.ca.us/index.aspx?nid=246

County of Riverside General Plan, Riverside County Code of Ordinances, and County of Riverside Pass Area Plan
General Plan
http://www.rctlma.org/genplan/

Code of Ordinances
http://library.municode.com/index.aspx?clientID=16320&stateID=5&statename=California

Pass Area Plan
http://www.rctlma.org/genplan/general_plan_2008/area_plan_vol_2/the_pass_area_plan_2008.pdf

1.5 - Documents Prepared for the Project

The following technical studies and analyses were prepared for the project:

- Initial Study/Notice of Preparation (IS/NOP), Appendix A
- South Coast Air Quality Management District (SCAQMD) CalEEMod Emissions Estimator Model, Appendix B
- Habitat Assessment and Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis, Appendix C.1.
- Focused Los Angeles Pocket Mouse Survey Report, Appendix C.2

- Delineation of Jurisdictional Waters and Wetlands, Appendix C.3
- Cultural Resource Addendum Survey, Appendix D
- Geotechnical Review - Proposed Recharge Facility, Appendix E.1
- Geotechnical Investigation Report - Proposed Pipeline and Service Connection Site, Appendix E.2
- Phase I Environmental Site Assessment (ESA) - Proposed Recharge Facility, Appendix F.1
- Environmental Data Resources, Inc. (EDR) Radius Search Report - Proposed Pipeline and Service Connection Site, Appendix F.2
- Federal Highway Administration (FHWA) Roadway Noise Construction Model (RCNM), Appendix G
- Traffic Impact Analysis (TIA), Appendix H

1.6 - Review of the Draft EIR

Upon completion of this Draft EIR, the SGPWA prepared and filed a Notice of Completion (NOC) with the California Office of Planning and Research/State Clearinghouse to begin the public review period (Public Resources Code, Section 21161). Concurrent with the NOC, the SGPWA distributed a Notice of Availability (NOA) in accordance with Section 15087 of the CEQA Guidelines. The NOA was mailed to the organizations and individuals who previously requested such a notice in writing. This Draft EIR was distributed to responsible and trustee agencies, other affected agencies, surrounding cities and municipalities, and all interested parties requesting a copy of this Draft EIR in accordance with Public Resources Code, Section 21092(b)(3). During the public review period, this Draft EIR, including the appendices, is available for review at the following locations:

San Gorgonio Pass Water Agency
1210 Beaumont Avenue
Beaumont, CA 92223
Monday through Friday: 7:30 a.m. to 4:30 p.m.
Saturday and Sunday: Closed

Beaumont Library District
125 E Eighth Street
Beaumont, CA 92223
Monday, Friday and Saturday: 10 a.m. to 6 p.m.
Tuesday and Thursday: 10 a.m. to 8 p.m.
Sunday: 1 p.m. to 6 p.m.
Wednesday: Closed

In addition, the Draft EIR, including the appendices, is available for review at the following SGPWA website.

http://www.sgpwa.com/reports.asp

Agencies, organizations, individuals, and all other interested parties not previously contacted, or who did not respond to the NOP, currently have the opportunity to comment on this Draft EIR during the 45-day public review period. Written comments on this Draft EIR should be addressed to:

Jeff Davis, P.E., General Manager
San Gorgonio Pass Water Agency
1210 Beaumont Avenue
Beaumont, CA 92223

Comments may also be sent by email to Jeff Davis at:

Email: JDavis@sgpwa.com

Upon completion of the public review period, written responses to all substantive environmental issues raised will be prepared and made available for review at least 10 days prior to the public hearing on the project before the SGPWA, at which the certification of the Final EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision-makers for the project.

SECTION 2: PROJECT DESCRIPTION

2.1 - Project Background

The most heavily developed portion of the SGPWA's service area is the Beaumont Basin. Currently, the Beaumont Basin is experiencing an overdraft condition, which means that the amount of water withdrawn by pumping exceeds the average amount of water that naturally recharges the groundwater basin on an annual basis. The estimated hydrologic safe yield, which is the amount of groundwater that can be continuously withdrawn from the Beaumont Basin without adverse impact, is estimated at 6,100 acre-feet per year (AFY) (Boyle 2002). In 2007 and 2009, the annual precipitation was among the driest on record in Beaumont while 2010 was one of the wettest (SGPWA 2012). In 2011, the annual precipitation was below normal (SGPWA 2012). In 2010, the total production within the Beaumont Basin was 13,469 acre-feet (af) while in 2011, the total production was 13,908 af (SGPWA 2012), which means that the estimated exceedance of the hydrologic safe yield for 2010 was approximately 7,369 af and for 2011 was approximately 7,808 af. The cumulative overdraft of the Beaumont Basin since development of the region began in the 1920s is over 100,000 af (Albert A. Webb Associates 2008).

In 2003, Phase I of SWP's East Branch Extension (EBX) was completed, bringing raw SWP water into SGPWA's service area. However, the capacity of Phase I allows for a maximum of approximately 12,000 AFY of the SGPWA's Table A amount (i.e., amount of SWP water that SGPWA has contracted for) which is 17,300 AFY (SGPWA 2012). Based on fluctuating precipitation and supply conditions, SWP yearly distribution can differ from Table A amounts. For example, in 2011, the SGPWA was distributed approximately 10,000 af of SWP water (SGPWA 2012), although the SGPWA has capacity for 12,000 AFY, and it's full Table A amount is 17,300 AFY. Following completion of both Phase II of the EBX (estimated 2015), which would increase overall capacity to the region, and the project as proposed in this Draft EIR, the SGPWA would be able to obtain its full Table A amount of 17,300 AFY of SWP water. The proposed recharge facility could also provide capacity to receive water from the SWP under the Article 21 Water Program or other supplemental water such as exchange water. The Article 21 Program was established to allow the California Department of Water Resources to provide water to State Water Project contractors (i.e., SGPWA) when water levels within the San Luis Reservoir in Northern California exceed certain water elevations. Furthermore, the proposed recharge facility could also provide recharge capacity for retail water agencies. The proposed recharge facility will allow SGPWA to receive the full Table A amount of SWP water as well as take advantage of wet years to receive more water to replenish the groundwater basin.

In 2008, the SGPWA evaluated potential recharge sites within the Beaumont Basin. A recharge site would allow the SGPWA to recharge the groundwater basin with SWP water. Initially, SGPWA provided a detailed review of the Brookside South Recharge project that included a recharge facility

within Noble Creek. The SGPWA decided not to proceed with the Brookside South Recharge project and is currently proposing a recharge facility southeast of Noble Creek.

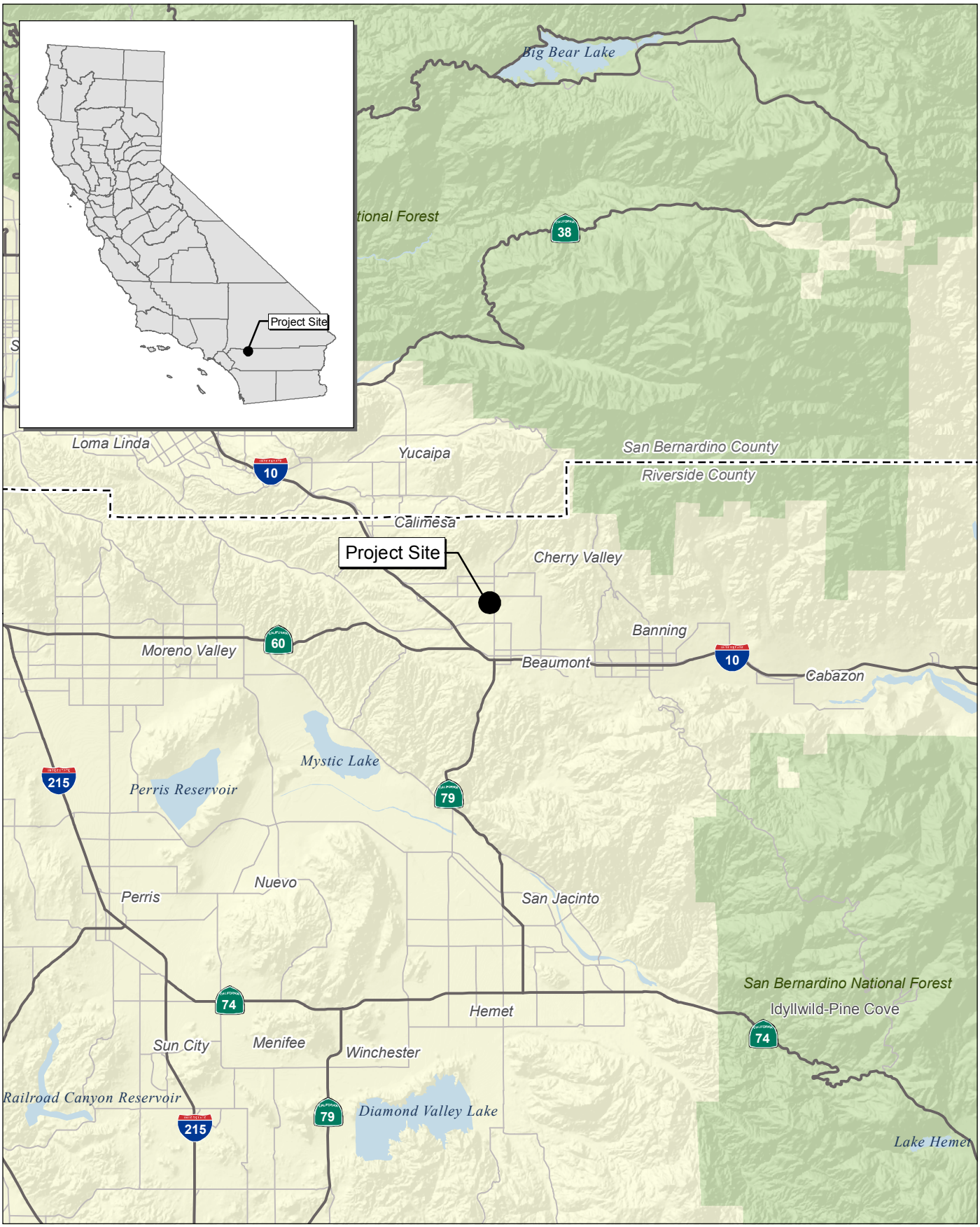
2.2 - Project Location

The proposed project is located in both the City of Beaumont and the Cherry Valley area, an unincorporated portion of Riverside County (Exhibit 2-1). The project site encompasses a recharge facility at the southwest corner of Beaumont Avenue and Brookside Avenue, a pipeline that extends north from the recharge facility along Beaumont Avenue to Orchard Street and then west along Orchard Street to approximately Mountain View Channel, and a service connection facility located south of Orchard Street and immediately west of Mountain View Channel (Exhibit 2-2). Additionally, there would be potential that excavation activities associated with construction of the project would require the depositing of excess soil at up to three locations: the southern end of the recharge facility site; an offsite triangular parcel located south of Brookside Avenue, north of Noble Creek, and east of the Mountain View Channel; and the service connection site (Exhibit 2-2).

The recharge facility site consists of approximately 44 acres within the City of Beaumont and is located directly west of Beaumont Avenue, south of Brookside Avenue, east of Noble Creek, and north of the Mountain View Middle School. The recharge facility site is owned by SGPWA (Assessor's Parcel Number [APN] 406-080-032) and is located within Section 34, Township 2 South, Range 1 West of the Beaumont U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (Exhibit 2-3).

The majority of the pipeline would be installed underground in the unincorporated Cherry Valley area of Riverside County, although the southernmost portion of the pipeline that connects to the recharge facility would be located in the City of Beaumont. The pipeline is proposed to extend from the recharge basin along the southern side of Brookside Avenue to Beaumont Avenue. At Beaumont Avenue, the pipeline is proposed to traverse in a north/south direction along Beaumont Avenue from Brookside Avenue to Orchard Street and in an east/west direction along Orchard Street from Beaumont Avenue to the service connection facility. The pipeline would be located in Sections 27, 28, 34, Township 2 South, Range 1 West of the Beaumont USGS 7.5-minute topographic quadrangle (Exhibit 2-3).

The service connection site consists of approximately 3.5 acres within the unincorporated Cherry Valley area of Riverside County and is located south of Orchard Street and immediately west of Mountain View Channel. Construction of the service connection facility would disturb roughly 1.75 acres, or half the 3.5-acre site, while operations of the facility will disturb approximately 0.3 acre of the northeast portion of the site. The service connection site is owned by SGPWA (APN 405-060-013) and is located within Section 28, Township 2 South, Range 1 West of the Beaumont USGS 7.5-minute topographic quadrangle (Exhibit 2-3).



Source: Census 2000 Data, The CaSIL, MBA GIS 2013.

NORTH

5 2.5 0 5

Miles

Michael Brandman Associates

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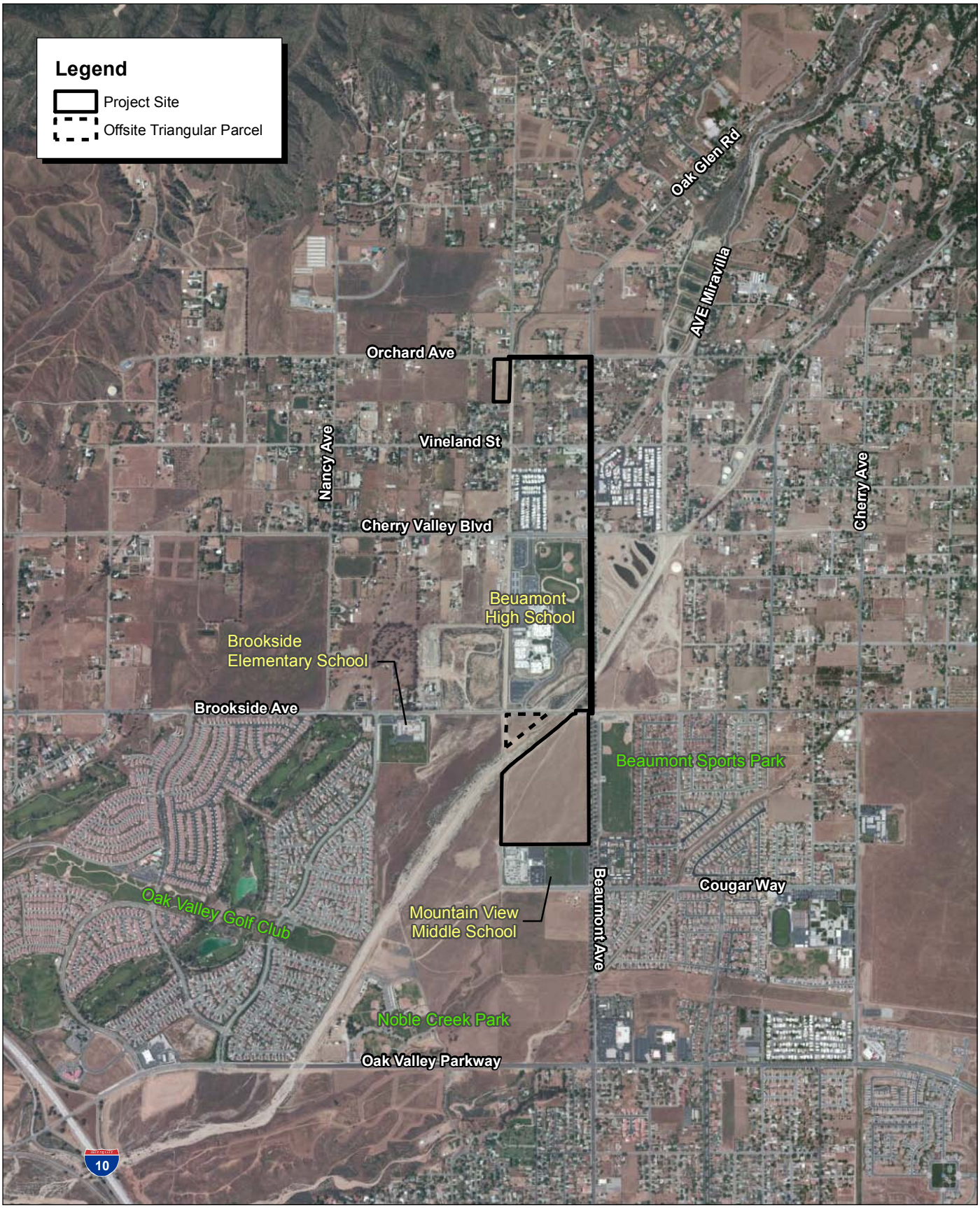
Exhibit 2-1
Regional Location Map

SAN GORGONIO PASS WATER AGENCY
BEAUMONT AVENUE RECHARGE FACILITY AND PIPELINE PROJECT
ENVIRONMENTAL IMPACT REPORT



Source: ESRI Aerial Imagery. MBA Field Survey and GIS Data, 2013.

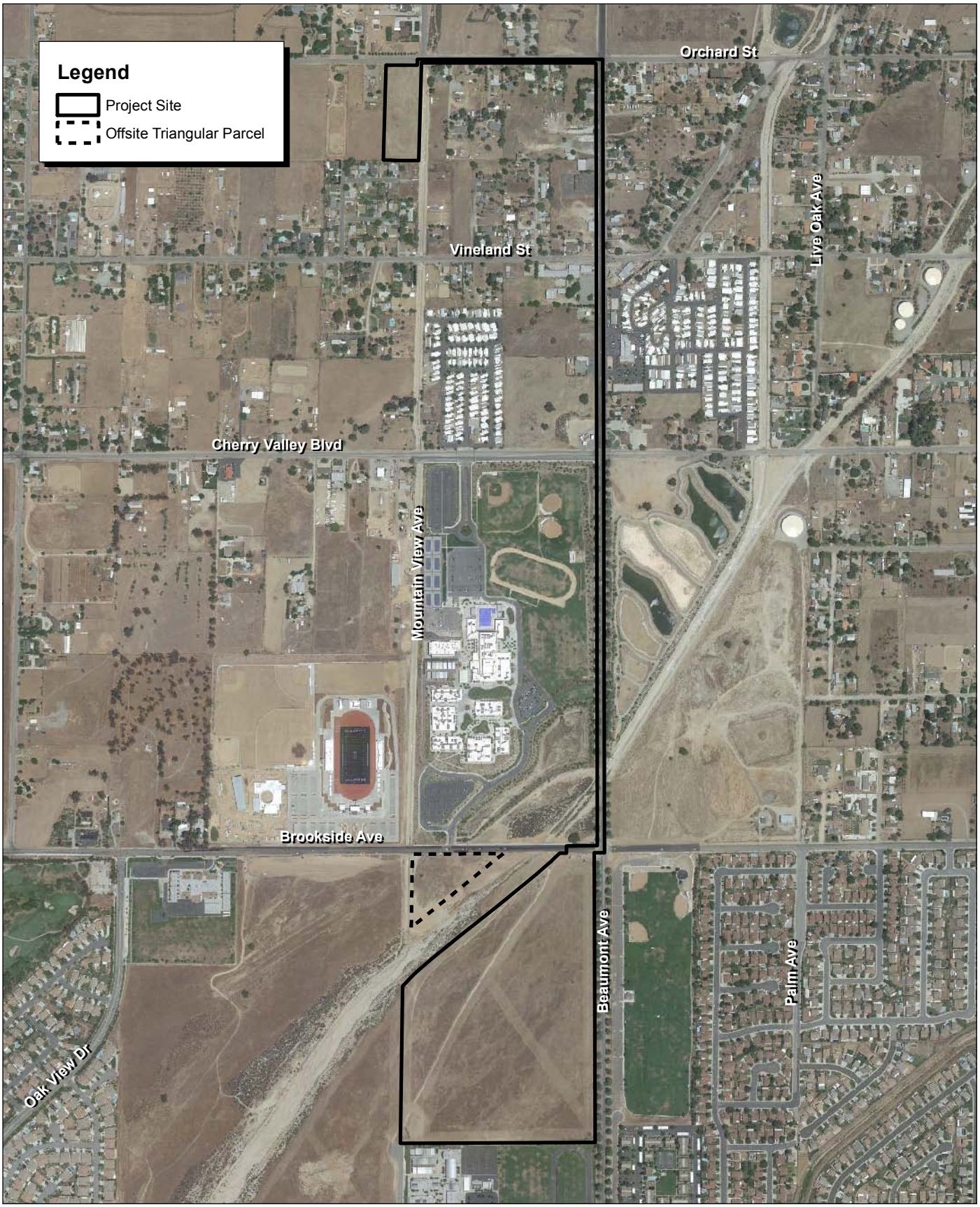
Michael Brandman Associates

NORTH

2,000 1,000 0 2,000

Feet

Exhibit 2-2
Local Vicinity Map
Aerial Base



Source: Google Earth Pro.

NORTH

900 450 0 900

Feet

Michael Brandman Associates

Exhibit 2-3
Project and Offsite Components

The approximately 3.4-acre offsite triangular parcel that could potentially be used for a staging area and/or for depositing excess excavated soil is located south of Brookside Avenue, north of Noble Creek, and east of the Mountain View Channel. This offsite parcel is owned by SGPWA (APN 404-010-012) and is located within Section 34, Township 2 South, Range 1 West of the Beaumont USGS 7.5-minute topographic quadrangle (Exhibit 2-3)

2.3 - Project Characteristics

2.3.1 - Project Components

Recharge Facility

The recharge facility would consist of a series of five tiered basins, each separated by berms (Exhibit 2-4). The facility would have raised embankments along its perimeter so that a portion of the basins will be above the current ground elevation and a portion of the basins will be below the current ground elevation. A maximum 3:1 slope would be used for the interior basin portions of the facility, while 3:1 cut/fill slopes would be used for the exterior perimeter of the facility. The raised embankments would extend a maximum of approximately 9.5 feet above the surrounding grade along the majority of Beaumont Avenue. The southern end of the embankment adjacent to Beaumont Avenue would extend approximately 14 feet above the existing surrounding grade. The embankment along the southern property line will raise approximately 15.5 feet above the existing surrounding grade. The raised embankment along the western property line will be up to 6.5 feet above the existing surrounding grade. The embankment along the northern portion of the recharge facility will raise approximately 9.5 to 11 feet adjacent to three middle basins within the recharge facility and the embankment adjacent to the northern basin will range from 10.5 to -11.2 feet compared to the surrounding grade.

The recharge facility has been designed for an infiltration rate of two feet per day and to accommodate a maximum flow rate of 20 cubic feet per second (cfs). With a capacity of 20 cfs, the normal operation of the facility would allow recharge of 3,000 AFY to 4,000 AFY because the existing Beaumont Cherry Valley Water District's recharge basins located northeast of the proposed recharge basin has a current capacity of approximately 14,000 AFY. The proposed recharge basin would be operating during wet periods of the year when the SGPWA can take advantage of surplus water, and when it needs to import its full Table A amount. However, in a very wet year when surplus water is available through the California Department of Water Resources Article 21 Program and exchanges, the proposed recharge facility could have a capacity up to a maximum of 14,500 AFY.

The floor of the basin in the northeast portion of the facility would be approximately 40 to 45 feet higher in elevation than the floor of the basin in the southwest portion of the facility. Emergency spillways would be placed on the embankments of each basin and directed into the adjacent basin. The southernmost basin would have a spillway draining to the west and an emergency outflow swale

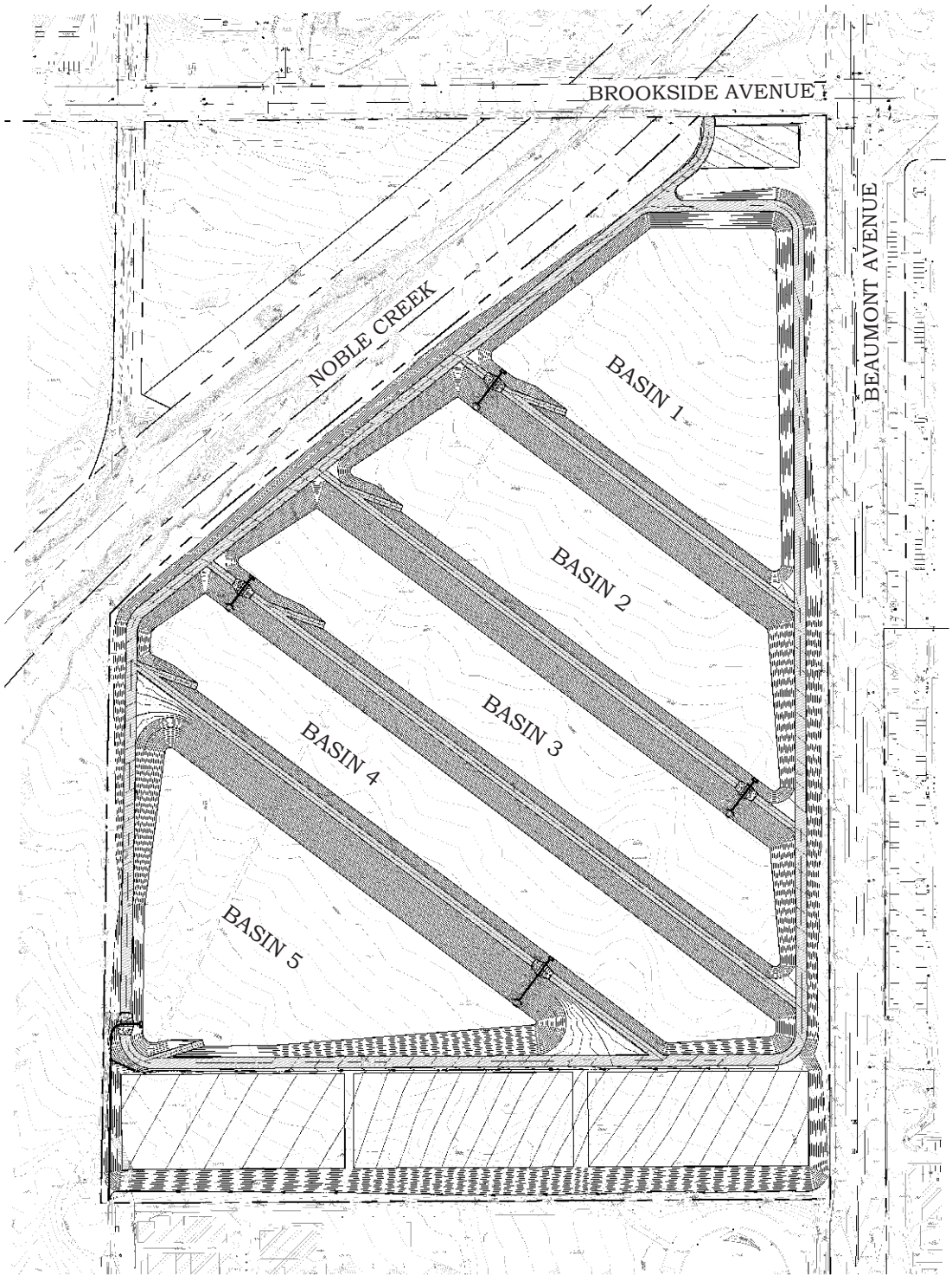
to the south that would convey the emergency runoff south to Mountain View Avenue. The proposed recharge facility site would include an onsite polyvinyl chloride (PVC) pipe distribution system.

Each basin would have a maximum ponding depth of 5.5 feet and a minimum freeboard of 1.5 feet from water surface to the basin rim. Maintenance roads would be provided along both the perimeter of the facility and between each of the basins. The perimeter maintenance road would be 20 feet wide, while the roads between the basins will be 15 feet and the ramps to the floor of the basins will be 12 feet. These roads would be engineered to prevent erosion and would be slightly angled towards the basins to allow for drainage into the basins. Site access is proposed along Brookside Avenue and from Mountain View Avenue on the south.

The recharge facility is proposed with berms that would prevent stormwater flows from being conveyed to the basins from outside of the recharge facility. The outlet structure located towards the southwesterly corner of the recharge facility would only be used in an unusual event that the basins must be quickly drained.

Periodic maintenance activities of the recharge facility would be required once the basins are operational. If the recharge basins continue to infiltrate at an acceptable rate, the time between maintenance activities would be extended. It is anticipated that each recharge basin may require servicing on an annual basis. Maintenance activities would involve temporarily taking an individual basin out of commission, allowing the basin to thoroughly dry over several weeks, re-grading and ripping the basin bottom with a dozer, and, if necessary, re-grading and tracking the basin slopes, although this final step is not expected to be regularly required. Each basin would take approximately one day to grade, rip, and track. Since SGPWA has plans to temporarily take the pipeline offline every year to perform mandatory annual maintenance activities, it is also possible that the recharge facility would be shut down during this period, with each basin being serviced during the shut down period.

The proposed recharge facility would include landscaping along its perimeter. To provide irrigation water for landscaping, an irrigation well is proposed. The well is proposed to include an electric pump that would include an electrical line to the recharge basin site and have a capacity to pump a maximum of 100 gallons per minute of non-potable water. A storage pressure vessel may be located next to the well to accommodate a small volume of irrigation water. The exact location of the groundwater pump is still unknown; however, as a worst-case, it is assumed that the pump will be located along the property line.



NORTH

Michael Brandman Associates

Exhibit 2-4
Recharge Facility Site Plan

Pipeline

A 24-inch pipeline is proposed to extend east from the recharge facility along Brookside Avenue for approximately 180 linear feet, north along Beaumont Avenue for approximately 5,600 linear feet, and west along Orchard Street for approximately 1,400 feet toward the service connection facility. The pipeline is planned to be located within the southern side of Brookside Avenue (eastbound travel lane), within the western side of the Beaumont Avenue centerline (southbound traffic lane) and the southern side of the Orchard Street centerline (eastbound traffic lane). The pipeline would transfer SWP water from the service connection site to the recharge facility for groundwater recharge. The pipeline has been designed to convey a flow rate of 20 cfs.

Service Connection

The service connection facility would convey SWP water from the existing 36-inch East Branch Extension/Noble Creek pipeline located at the intersection of Orchard Street and Mountain View Avenue to the pipeline and ultimately downstream to the recharge facility. A pipe outlet, not to exceed 24-inch diameter, would be extended from the service connection facility to the 24-inch pipeline along Orchard Street. While up to half of the service connection site could be disturbed during construction of the project, the service connection facility itself would disturb a smaller, approximately 120-foot by 110-foot portion (0.3 acre) representing less than 10 percent of the overall site (Exhibit 2-5). The service connection site would consist of a precast concrete control building and various below- and above-grade pipelines and ancillary infrastructure. Site access would be provided by a driveway from Orchard Street.

Offsite Triangular Parcel

The offsite triangular parcel located northwest of the recharge facility site on the north side of Noble Creek could potentially be used, along with three other locations, as a staging area during construction of the project. Additionally, this parcel could potentially be used for depositing excess excavated soil as a result of excavation of the pipeline.

2.3.2 - Project Construction

Construction of the project is anticipated to occur over approximately one year beginning in 2013 and extending into 2014. The construction phase of the project would include construction of the recharge facility beginning in 2013 and completing in 2014, the construction of the pipeline is anticipated to occur in 2014 while the public schools are not in session; however, the northerly portion of the pipeline, north of Vineland Street may be constructed while the public schools are in session, and the construction of the service connection site is also anticipated to occur in 2014. Of the three primary project components, the recharge facility would take the longest amount of time to construct, taking approximately four months to complete. Aside from the recharge facility, the pipeline would take roughly six weeks to construct, and construction of the service connection facility would take an estimated two weeks to complete. Although the approximate timeframes are identified

above, there could be potential delays due to the contractor or the weather and could extend the construction timeframes.

Since the project would disturb one or more acres of soil, the project would be required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ). Construction activities subject to the Construction General Permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation. The Construction General Permit requires development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). Among other mandated items that are included within a SWPPP, the SWPPP would contain project features designed to protect against substantial soil erosion as a result of water and wind erosion, known as Best Management Practices (BMPs). Common BMPs include maintaining or creating drainages to convey and direct surface runoff from bare areas and installing physical barriers such as berms, silt fencing, waddles, straw bales, and gabions.

Pipeline Excavation and Construction

Construction of the pipeline would include trenching for the majority of the pipeline, with jacking and boring occurring under the Noble Creek creek bed at Beaumont Avenue and under the Mountain View Channel at Orchard Street. Excavation activities along the pipeline alignment would require the export of approximately 1,100 cubic yards of soil. The export soil is anticipated to be transported to one of the soil sites identified below. If the contractor discovers soil that is classified as hazardous, then the soil that is classified as hazardous will be disposed of in accordance with local and state regulations.

Recharge Facility and Service Connection Facility Construction

In the existing condition, both the recharge facility site and service connection site have constant gradients with elevations higher in the northern portions of each facility site compared to the southern portions. The highest elevation at the recharge facility site is 2,713 feet mean sea level (msl) in the northeast corner of the recharge facility site, and the lowest elevation is 2,640 msl in the southwestern corner of the site. The highest elevation at the service connection site is 2,840 msl in the northeastern portion of the site and the lowest elevation is 2,810 msl in the southwestern portion of the site. Both sites are free from prominent or irregular topographical features. Both project sites would require grading to prepare the ground surface for construction activities. Grading and other earthmoving activities on these project sites would not require offsite soil export; however, although not expected, any soils that are classified as hazardous will be required to be disposed of in accordance with local and state regulations.

Source: Google Earth Pro.

Michael Brandman Associates

NORTH

130 65 0 130

Feet

Exhibit 2-5
Service Connection Facility Site

Staging Areas

During construction of the project, construction equipment, vehicles, and materials could be stored at up to four staging areas: the recharge facility site, within the Beaumont Avenue and Orchard Street right-of-ways adjacent to the portion of the pipeline undergoing installation, the service connection site, and/or the offsite triangular parcel.

Soils Sites

Excavation activities associated with construction of the proposed pipeline is anticipated to require the depositing of excess soil at one or more of the following three locations: the first is the recharge facility site; the second is an offsite triangular parcel located south of Brookside Avenue, north of Noble Creek, and east of the Mountain View Channel; and the third is the service connection site. Any soil brought to and disposed of at these locations would be eventually distributed evenly throughout the sites.

2.3.3 - Project Operation

The operation of the recharge facility, pipeline, or service connection site would not require full-time employees. Once the project is completed and in operation, the SGPWA would periodically visit the sites to inspect the operation of the facilities. Approximately once per year, the five individual basins proposed at the recharge basin site would be completely dewatered for cleaning.

2.3.4 - Existing Land Use

Onsite Uses

The recharge facility site and the offsite triangular parcel currently consist of vacant, undeveloped land. Historically, the recharge facility site was used for cattle and sheep grazing prior to 1938, although more than 74 years have passed since any onsite agricultural activities has occurred. Based upon the past agricultural character of the City of Beaumont and the surrounding area, it is likely that historical agricultural activities occurred on the offsite triangular parcel as well, although no evidence of such activity is presently found on the parcel.

The pipeline would traverse Brookside Avenue, Beaumont Avenue and Orchard Street, three existing roadways that serve the residents of the City of Beaumont and the unincorporated Cherry Valley area.

The service connection site presently consists of vacant, undeveloped land. The service connection site was historically used for agricultural activities, although all former agricultural operations likely ceased prior to development of the surrounding area several years ago.

Surrounding Offsite Uses

The recharge facility site and offsite triangular parcel are surrounded by a combination of land uses, including specific uses such as Brookside Avenue and Beaumont High School to the north; Beaumont

Avenue, Beaumont Sports Park, and residential tracts to the east; Mountain View Middle School to the south; and undeveloped land, Brookside Elementary School, and residential tracts to the west.

Land uses located adjacent to the pipeline generally consist of commercial and residential uses, although specific uses such as Beaumont High School and the Beaumont-Cherry Valley Water District's Recharge Facility also occur in the vicinity of the alignment.

Land uses occurring around the service connection site primarily consist of lower density, single-family residential uses. Mountain View Channel is also located adjacent to the service connection site.

2.3.5 - Land Use Designations

The recharge facility site and the offsite triangular parcel are located within the land use jurisdiction of the City of Beaumont. These sites are zoned by the City of Beaumont as Specific Plan Area (SPA) and occur within the boundary of the Noble Creek Vistas Specific Plan. These sites are designated by the City of Beaumont General Plan Land Use Map as Single-Family Residential.

The majority of pipeline would be located within the land use jurisdiction of the County of Riverside, although a small portion of the pipeline would occur within the jurisdiction of the City of Beaumont. The pipeline would traverse the existing roadways of Beaumont Avenue and Orchard Street. The City of Beaumont designates Beaumont Avenue south of Brookside Avenue as a Divided Collector, while the County of Riverside designates Beaumont Avenue south of Cherry Valley Boulevard as a Major Collector, and north of Cherry Valley Road as a Secondary Roadway. The County of Riverside designates Orchard Street as a Secondary Roadway. The pipeline traverses areas zoned by the County of Riverside as General Commercial (C-1/C-P), Residential Agricultural (R-A), One Family Dwellings (R-1), Multiple-Family Dwellings (R-2), General Residential (R-3), and Light Agriculture (A-1). The areas surrounding this portion of the project site is designated by the County's General Plan Land Use Map as Commercial Retail, Medium Density Residential, and Rural Community - Very Low Density Residential. The pipeline would also be located within the boundary of the County of Riverside Pass Area Plan.

The service connection site is located within the land use jurisdiction of the County of Riverside. The service connection site is zoned by the County of Riverside as Residential Agriculture, One-family Dwelling (R-A-1). The site is designated as Rural Residential on the County of Riverside's General Plan Land Use Map.

2.4 - Project Objectives and Approvals

2.4.1 - Objectives

Implementation of the project is needed to meet the following SGPWA objectives:

- To enable the Agency to deliver its entire Table A amount of water from the State Water Project.
- To enable the Agency to purchase Article 21 water or other supplemental water sources that become available over and above the Agency's Table A water.
- To provide a regional recharge facility that would be available to all retail water agencies.
- To augment regional storage capacity.
- To provide water supply for the ongoing and projected needs of the SGPWA's service area.

2.4.2 - Approvals

Table 2-1 lists the approvals required for the project.

Table 2-1: Required Project Approvals

Agency	Project Approvals
San Gorgonio Pass Water Agency	Approval of the proposed Beaumont Avenue Recharge Facility and Pipeline project Approval of the construction contracts for the project.
Riverside County Flood Control and Water Conservation District	Approval of an encroachment permit for pipeline crossing within a portion of Noble Creek and Mountain View Channel.
Riverside County Transportation Department	Approval of an encroachment permit for pipeline construction in Beaumont Avenue and Orchard Street.
City of Beaumont	Approval of an encroachment permit for pipeline construction within Brookside Avenue.

2.5 - Intended Uses of This Draft EIR

This Draft Environmental Impact Report (Draft EIR) has been prepared in accordance with CEQA (Public Resources Code, Section 21000 et seq.) and the Guidelines for Implementation of CEQA published by the Resources Agency of the State of California (Title 14, Cal. Code Regs., 15000 et seq.). Additionally, this Draft EIR has been prepared to comply with the rules, regulations, and procedures for implementation of CEQA as adopted by SGPWA. SGPWA would be responsible for project approvals and supervision, and therefore, SGPWA would serve as the Lead Agency for the project. Moreover, this Draft EIR may also be used by an outside agency for discretionary approvals and permits, which include, but are not necessarily limited to those provided in Table 2-1.

SECTION 3: ENVIRONMENTAL IMPACT ANALYSIS

Approach to Environmental Analysis

Section 3.1 through Section 3.9 of this Draft EIR contain discussions of the potential environmental impacts related to construction and operation of the proposed project.

Environmental Topics

The potential environmental effects associated with the implementation of the proposed project are analyzed in the following topical environmental issue areas:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise
- Transportation and Traffic

Organization of Issue Areas

Each environmental issue section typically contains the following components:

- **Environmental Setting** identifies and describes the existing onsite physical environmental conditions associated with each of the impact sections.
- **Regulatory Setting** provides an understanding of the regulatory environment associated with the project.
- **Thresholds of Significance** identifies thresholds from Appendix G of the CEQA Guidelines that assist in a determination the significance of an impact. Unless specifically identified within each environmental issue section of this document, the thresholds of significance used are those contained in Appendix G of the CEQA Guidelines.
- **Project Impacts** describes environmental changes to the existing physical conditions that may occur if the proposed project is implemented, and evaluates these changes with respect to the thresholds of significance.

- **Mitigation Measures** are those specific measures that may be required of the project by the Lead Agency in order to: (1) avoid an impact; (2) minimize an impact; (3) rectify an impact by restoration; (4) reduce or eliminate an impact over time by preservation and maintenance operations; or (5) compensate for the impact by replacing or providing substitute resources.
- **Level of Significance After Mitigation** describes the level of impact significance remaining after mitigation measures are implemented.

Format Used for Impact Analysis and Mitigation Measures

Table 3-1: Abbreviations Used in the Mitigation Measure Numbering

Code	Environmental Issue
AIR	Air Quality
BIO	Biological Resources
CUL	Cultural Resources
GEO	Geology, Soils, and Seismicity
GHG	Greenhouse Gas Emissions
HAZ	Hazards and Hazardous Materials
HYD	Hydrology and Water Quality
NOI	Noise
TRANS	Transportation / Traffic

The format adopted in this EIR to present the evaluation of impacts is described and illustrated below.

Summary Heading of Impact

Impact AIR-1: **An impact summary heading appears immediately preceding the impact description (Summary Heading of Impact in this example). The impact abbreviation identifies the section of the report (AIR for Air Quality in this example) and the sequential order of the impact (1 in this example) within that section. To the right of the impact number is the impact statement, which identifies the potential impact.**

Impact Analysis

A narrative analysis follows the impact statement.

Level of Significance Before Mitigation

This section identifies the level of significance of the impact before any mitigation is proposed.

Mitigation Measures

In some cases, following the impact discussion, reference is made to state and federal regulations and agency policies that would fully or partially mitigate the impact. In addition, policies and programs from applicable local land use plans that partially or fully mitigate the impact may be cited.

Project-specific mitigation measures, beyond those contained in other documents, are set off with a summary heading and described using the format presented below:

MM AIR-1 Project-specific mitigation is identified that would reduce the impact to the lowest degree feasible. The mitigation abbreviation links the particular mitigation to the impact with which it is associated (**AIR** in this example); mitigation measures are then numbered sequentially.

Level of Significance After Mitigation

This section identifies the resulting level of significance of the impact following mitigation.

3.1 - Air Quality

This section describes the potential air quality effects of project implementation on the project site and its surrounding area. Descriptions and analysis in this section are based on the result of the California Air Resources Board's (CARB's) OFFROAD2011 off-road construction equipment emissions model and the CARB's EMFAC2011 mobile source emission model. The emissions estimates are included in this Draft EIR as Appendix B, Air Quality and Greenhouse Gas Emissions.

3.1.1 - Existing Conditions

Local Climate

The project is located in the City of Beaumont and in the unincorporated area of Cherry Valley in Riverside County and is within the South Coast Air Basin (air basin). To the west of the air basin is the Pacific Ocean. To the north and east of the air basin are the San Gabriel, San Bernardino, and San Jacinto mountains, while the southern limit of the air basin is the San Diego County line. The air basin consists of Orange County, all of Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The air quality in the air basin is impacted by dominant airflows, topography, atmospheric inversions, location, season, and time of day.

Dominant airflows provide the driving mechanism for transport and dispersion of air pollution. The mountains surrounding the region form natural horizontal barriers to the dispersion of air contaminants. Air pollution created in the coastal areas and around the Los Angeles area is transported inland until it reaches the mountains where the combination of mountains and inversion layers generally prevent further dispersion. This poor ventilation results in a gradual degradation of air quality from the coastal areas to inland areas. Air stagnation may occur during the early evening and early morning periods of transition between day and nighttime flows. The region also experiences periods of hot, dry winds from the desert, known as Santa Ana winds. If the Santa Ana winds are strong, they can surpass the sea breeze, which blows from the ocean to the land, and carry the suspended dust and pollutants out to the ocean. If the winds are weak, they are opposed by the sea breeze and cause stagnation, resulting in high pollution events.

The annual average temperature varies little throughout much of the air basin, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). Average temperatures in the area are typically range from the mid-30s to in the winter to the mid-90s in the summer. The majority of the annual rainfall in the area occurs between December and April. The average annual precipitation in the City of Beaumont is 20.9 inches.

Temperature inversions limit the vertical depth through which pollution can be mixed. Among the most common temperature inversions in the air basin are radiation inversions, which form on clear winter nights when cold air off mountains sink to the valley floor while the air aloft over the valley

remains warm. These inversions, in conjunction with calm winds, trap pollutants near the source. Other types of temperature inversions that affect the air basin include marine, subsidence, and high-pressure inversions.

Summers often have periods of hazy visibility and occasionally unhealthful air, while air quality impacts in the winter tend to be localized. Higher temperatures and sunshine can contribute to air pollutant formation, particularly ozone. Impacts of ozone are discussed in the impact sections of this analysis.

Local Air Quality

The local air quality can be evaluated by reviewing relevant air pollution concentrations near the project area. For evaluation purposes, the SCAQMD has divided the air basin into 36 Source Receptor Areas (SRA) within the air basin operating monitoring stations in most of the areas. These SRAs are designated to provide a general representation of the local meteorological, terrain, and air quality conditions within the particular geographical area. The project is within Source Receptor Area 29, Banning Airport. The SCAQMD operates an air monitoring station in Source Receptor Area 29 at the Banning Airport. Ozone, PM_{10}, $PM_{2.5}$ and NO_2 are monitored at the Banning Airport. SO_2 levels in the area are negligible and are not reported.

Table 3.1-1 summarizes 2009 through 2011 published monitoring data, which is the most recent 3-year period available from the CARB. The data show that during the past few years, the project area has exceeded the ozone, PM_{10}, and $PM_{2.5}$ standards. Monitoring data for CO were taken from the nearby monitoring station in Palm Springs.

Table 3.1-1: Air Quality Monitoring Summary

Air Pollutant	Averaging Time	Item	2009	2010	2011
Ozone	1 Hour	Max 1 Hour (ppm)	0.133	0.124	0.127
		Days > State Standard (0.09 ppm)	55	31	35
	8 Hour	Max 8 Hour (ppm)	0.104	0.107	0.11
		Days > State Standard (0.07 ppm)	91	77	59
		Days > National Standard (0.075 ppm)	70	60	41
Carbon monoxide	1 Hour	Max 1 Hour (ppm)	0.96	0.80	0.81
	8 Hour	Max 8 Hour (ppm)	0.67	0.56	0.65
		Days > State Standard (9.0 ppm)	0	0	0
		Days > National Standard (9 ppm)	0	0	0

Table 3.1-1 (cont.): Air Quality Monitoring Summary

Air Pollutant	Averaging Time	Item	2009	2010	2011
Nitrogen dioxide	Annual	Annual Average (ppm)	0.011	0.012	0.010
	1 Hour	Max 1 Hour (ppm)	0.056	0.066	0.061
		Days > State Standard (0.18 ppm)	0	0	0
Inhalable coarse particles (PM_{10})	Annual	Annual Average ($\mu g/m^3$)	23.7	20.2	17.8
	24 hour	Max 24 Hour ($\mu g/m^3$)	99.0	55.0	51.0
		Days > State Standard (50 $\mu g/m^3$)	1	1	0
		Days > National Standard (150 $\mu g/m^3$)	0	0	0
Fine particulate matter ($PM_{2.5}$)	Annual	Annual Average ($\mu g/m^3$)	13.6	13.6	ID
	24 Hour	24 Hour ($\mu g/m^3$)	49.7	50.6	46.7
		Days > National Standard (35 $\mu g/m^3$)	ID	ID	ID

Notes and Abbreviations:
> = exceed
ppm = parts per million
$\mu g/m^3$ = micrograms per cubic meter
ID = insufficient data
ND = no data
max = maximum
Est = Estimated
State Standard = California Ambient Air Quality Standard
National Standard = National Ambient Air Quality Standard
Sources: California Air Resources Board 2013a.

Attainment Status

The Environmental Protection Agency (EPA) and the CARB designate air basins where ambient air quality standards are exceeded as "nonattainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified." National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Each standard has a different definition, or "form" of what constitutes attainment, based on specific air quality statistics. For example, the Federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the Federal annual $PM_{2.5}$ standard is met if the three-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard.

The current attainment designations for the air basin are shown in Table 3.1-2. These pollutants are defined as "criteria pollutants." The air basin is designated as nonattainment for the state and national ozone, PM_{10}, and $PM_{2.5}$, standards. The air basin is also in nonattainment for the state annual nitrogen dioxide standard.

Table 3.1-2: South Coast Air Basin Attainment Status

Pollutant	State Status	National Status
Ozone	Nonattainment	Nonattainment
Carbon monoxide	Attainment	Attainment
Nitrogen dioxide (annual)	Nonattainment	Attainment
Nitrogen dioxide	Attainment	Unclassified[1]
Sulfur dioxide	Attainment	Attainment
PM_{10}	Nonattainment	Nonattainment
$PM_{2.5}$	Nonattainment	Nonattainment

Notes:
[1] EPA set a new one-hour standard for nitrogen dioxide at a level of 100 parts per billion on January 25, 2010, which became effective April 12, 2010. The EPA has not yet identified or designated areas not meeting the new standard, based on the existing community-wide monitoring network.
Source: CARB, 2013b

Toxic Air Contaminants

Besides the criteria air pollutants listed above, there is another group of substances found in ambient air referred to as hazardous air pollutants (HAPs) under the Federal Clean Air Act and toxic air contaminants (TACs) under the California Clean Air Act. These contaminants tend to be localized and are found in relatively low concentrations in ambient air. However, they can result in adverse chronic health effects if exposure to low concentrations occurs for long periods. They are regulated at the local, state, and federal level. HAPs are the air contaminants identified by the EPA as known or suspected to cause cancer, serious illness, birth defects, or death. Many of these contaminants originate from human activities, such as fuel combustion and solvent use. Mobile Source Air Toxics (MSATs) are a subset of the 188 HAPs. Of the 21 HAPs identified by the EPA as MSATs, a priority list of six priority HAPs were identified that include diesel exhaust, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene. While vehicle miles traveled in the United States is expected to increase by 64 percent over the period 2000 to 2020, emissions of MSATs are anticipated to decrease substantially as a result of efforts to control mobile source emissions (by 57 percent to 67 percent depending on the contaminant).

Particulate matter from diesel exhaust is the predominant TAC in urban air and is estimated to represent about two-thirds of the cancer risk from TACs (based on the statewide average). According to ARB, diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by ARB, and are listed as carcinogens either under State Proposition 65 or under the Federal Hazardous Air Pollutants programs.

The CARB Statewide comprehensive air toxics program was established in the early 1980s. The TAC Identification and Control Act (AB 1807, Tanner 1983) created California's program to reduce exposure to air toxics. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly 1987) supplements the AB 1807 program by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks.

Under AB 1807, the ARB is required to use certain criteria in the prioritization for the identification and control of air toxics. In selecting substances for review, the CARB must consider criteria relating to "the risk of harm to public health, amount or potential amount of emissions, manner of, and exposure to, usage of the substance in California, persistence in the atmosphere, and ambient concentrations in the community." AB 1807 also requires the ARB to use available information gathered from the ARB 2588 program to include in the prioritization of compounds. In September 1992, the Hot Spots Act was amended by Senate Bill 1731, which required facilities that pose a significant health risk to reduce their risk through a risk management plan.

The SCAQMD has developed the MATES-III study (SCAQMD 2008) in order to calculate the toxic emissions levels throughout the air basin and associated cancer risks. According to the SCAQMD's MATES-III study, the western portion of the project site has an estimated cancer risk of 305 in one million persons exposed to TACs. This compares to an average risk of 1,194 basin-wide average.

Sensitive Receptors

Those individuals who are sensitive to air pollution include children, the elderly, and persons with preexisting respiratory or cardiovascular illness. The SCAQMD considers a sensitive receptor to be a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools.

The closest sensitive receptors to the project are a number of residences located 0.13 mile to the east of the proposed recharge basin, and some scattered residences located along the pipeline route on Beaumont Avenue and to the south of the service area connection site. In addition, Beaumont High School is located to the north of the proposed recharge basin and Mountain View Middle School located to the south of the proposed recharge basin.

3.1.2 - Regulatory Setting

Air pollutants are regulated at the national, state, and air basin level with each agency having a different level of regulatory responsibility. The United States Environmental Protection Agency (EPA) regulates at the national level. The CARB regulates at the state level while the SCAQMD regulates at the air basin level.

Federal and State Regulatory Agencies

The EPA handles global, international, national, and interstate air pollution issues and policies. The EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans, provides research and guidance for air pollution programs, and sets National Ambient Air Quality Standards (NAAQS), also known as federal standards. There are national standards for six common air pollutants, called criteria air pollutants, which were identified from provisions of the Clean Air Act of 1970.

The criteria pollutants are:

- Ozone
- Particulate matter (PM_{10} and $PM_{2.5}$)
- Nitrogen dioxide
- Carbon monoxide (CO)
- Lead
- Sulfur dioxide

The national standards were set to protect public health, including that of sensitive individuals; thus, the standards continue to change as more medical research is available regarding the health effects of the criteria pollutants. Primary national standards are the levels of air quality necessary, with an adequate margin of safety, to protect the public health.

A State Implementation Plan is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain National standards. The State Implementation Plan for the State of California is administered by the ARB, which has overall responsibility for statewide air quality maintenance and air pollution prevention. The CARB also administers California Ambient Air Quality Standards for the 10 air pollutants designated in the California Clean Air Act. The 10 State air pollutants are the 6 national standards listed above as well visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride.

The national and state ambient air quality standards, relevant effects, properties, and sources of the pollutants are summarized in Table 3.1-3.

Several pollutants listed in Table 3.1-3 are not addressed in this analysis. Analysis of lead is not included in this report because the project is not anticipated to emit lead. Visibility-reducing particles are not explicitly addressed in this analysis because particulate matter is addressed. The project is not expected to generate or be exposed to vinyl chloride because proposed project uses do not utilize the chemical processes that create this pollutant and there are no such uses in the project vicinity. The proposed project is not expected to cause exposure to hydrogen sulfide because it would not generate hydrogen sulfide in any substantial quantity. There is no generation of hydrogen sulfide usage in the project area.

Table 3.1-3: Air Pollutant Descriptions

Air Pollutant	Averaging Time	California Standard	National Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Ozone	1-hour	0.09 ppm	—	(a) Decrease of pulmonary function and localized lung edema in humans and animals; (b) risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) increased mortality risk; (d) altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) vegetation damage; (f) property damage.	Ozone is a photochemical pollutant as it is not emitted directly into the atmosphere, but is formed by a complex series of chemical reactions between volatile organic compounds (VOC), NO_X, and sunlight. Ozone is a regional pollutant that is generated over a large area and is transported and spread by the wind.	Ozone is a secondary pollutant; thus, it is not emitted directly into the lower level of the atmosphere. The primary sources of ozone precursors (VOC and NO_X) are mobile sources (on-road and off-road vehicle exhaust).
	8-hour	0.070 ppm	0.075 ppm			
Carbon monoxide (CO)	1-hour	20 ppm	35 ppm	(a) Aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease; (b) decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) impairment of central nervous system functions; (d) possible increased risk to fetuses.	CO is a colorless, odorless, toxic gas. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, replaces oxygen as an attachment to hemoglobin, and reduces available oxygen in the blood.	CO is produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources.
	8-hour	9.0 ppm	9 ppm			
Nitrogen dioxide [c] (NO_2)	1-hour max	0.18 ppm	—	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) contribution to atmospheric discoloration.	During combustion of fossil fuels, oxygen reacts with nitrogen to produce nitrogen oxides - NO_X (NO, NO_2, NO_3, N_2O, N_2O_3, N_2O_4, and N_2O_5). NO_X is a precursor to ozone, PM_{10}, and $PM_{2.5}$ formation. NO_X can react with compounds to form nitric acid and related particles.	NO_X is produced in motor vehicle internal combustion engines and fossil fuel-fired electric utility and industrial boilers. NO_2 concentrations near major roads can be 30 to 100 percent higher than those at monitoring stations.
	1-hour 98th	—	0.100 ppm			
	Annual	0.030 ppm	0.053 ppm			

Table 3.1-3 (cont.): Air Quality Monitoring Summary

Air Pollutant	Averaging Time	California Standard	National Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Sulfur dioxide (SO_2)	1-hour	0.25 ppm	0.075 ppm[d]	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.	Sulfur dioxide is a colorless, pungent gas. At levels greater than 0.5 ppm, the gas has a strong odor, similar to rotten eggs. Sulfur oxides (SO_X) include sulfur dioxide and sulfur trioxide. Sulfuric acid is formed from sulfur dioxide, which can lead to acid deposition and can harm natural resources and materials. Although sulfur dioxide concentrations have been reduced to levels well below state and national standards, further reductions are desirable because sulfur dioxide is a precursor to sulfate and PM_{10}.	Human caused sources include fossil-fuel combustion, mineral ore processing, and chemical manufacturing. Volcanic emissions are a natural source of sulfur dioxide. The gas can also be produced in the air by dimethylsulfide and hydrogen sulfide. Sulfur dioxide is removed from the air by dissolution in water, chemical reactions, and transfer to soils and ice caps. The sulfur dioxide levels in the State are well below the maximum standards.
	3 Hour[1]	—	0.5 ppm			
	24-hour	0.04 ppm	—			
Particulate matter (PM_{10})	24-hour	50 µg/m^3	150 µg/m^3	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) declines in pulmonary function growth in children; (c) increased risk of premature death from heart or lung diseases in the elderly. Daily fluctuations in $PM_{2.5}$ levels have been related to hospital admissions for acute respiratory conditions, school absences, and increased medication use in children and adults with asthma.	Suspended particulate matter is a mixture of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM_{10} refers to particulate matter that is between 2.5 and 10 microns in diameter, (1 micron is one-millionth of a meter). $PM_{2.5}$ refers to particulate matter that is 2.5 microns or less in diameter.	Stationary sources include fuel combustion for electrical utilities, residential space heating, and industrial processes; construction and demolition; metals, minerals, and petrochemicals; wood products processing; mills and elevators used in agriculture; erosion from tilled lands; waste disposal, and recycling. Mobile or transportation-related sources are from vehicle exhaust and road dust.
	Mean	20 µg/m^3	—			
Particulate matter ($PM_{2.5}$)	24-hour	—	35 µg/m^3			
	Annual	12 µg/m^3	15.0 µg/m^3			
Visibility Reducing Particles	8-hour	Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more (0.07 - 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent.				

Table 3.1-3 (cont.): Air Quality Monitoring Summary

Air Pollutant	Averaging Time	California Standard	National Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Sulfates	24-hour	25 µg/m^3	—	(a) Decrease in ventilatory function; (b) aggravation of asthmatic symptoms; (c) aggravation of cardio-pulmonary disease; (d) vegetation damage; (e) degradation of visibility; (f) property damage.	The sulfate ion is a polyatomic anion with the empirical formula SO_4^{2-}. Sulfates occur in combination with metal and/or hydrogen ions. Many sulfates are soluble in water.	Sulfates are particulates formed through the photochemical oxidation of sulfur dioxide. In California, the main source of sulfur compounds is combustion of gasoline and diesel fuel.
Lead[b]	30-day	1.5 µg/m^3	—	Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment of blood formation and nerve conduction. The more serious effects of lead poisoning include behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQs. Lead may also contribute to high blood pressure and heart disease.	Lead is a solid heavy metal that can exist in air pollution as an aerosol particle component. An aerosol is a collection of solid, liquid, or mixed-phase particles suspended in the air. Lead was first regulated as an air pollutant in 1976. Leaded gasoline was first marketed in 1923 and was used in motor vehicles until around 1970. Lead concentrations have not exceeded state or national air quality standards at any monitoring station since 1982.	Lead ore crushing, lead-ore smelting, and battery manufacturing are currently the largest sources of lead in the atmosphere in the United States. Other sources include dust from soils contaminated with lead-based paint, solid waste disposal, and crustal physical weathering. Lead can be removed from the atmosphere through deposition to soils, ice caps, oceans, and inhalation.
	Quarter	—	1.5 µg/m^3			
	Rolling 3-month average	—	0.15 µg/m^3			
Vinyl chloride[b]	24-hour	0.01 ppm	—	Short-term exposure to high levels of vinyl chloride in the air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Epidemiological studies of occupationally exposed workers have linked vinyl chloride exposure to development of a rare cancer, liver angiosarcoma, and have suggested a relationship between exposure and lung and brain cancers.	Vinyl chloride, or chloroethene, is a chlorinated hydrocarbon and a colorless gas with a mild, sweet odor. In 1990, ARB identified vinyl chloride as a toxic air contaminant and estimated a cancer unit risk factor.	Most vinyl chloride is used to make polyvinyl chloride plastic and vinyl products, including pipes, wire and cable coatings, and packaging materials. It can be formed when plastics containing these substances are left to decompose in solid waste landfills. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites.

Table 3.1-3 (cont.): Air Quality Monitoring Summary

Air Pollutant	Averaging Time	California Standard	National Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Hydrogen sulfide	1-hour	0.03 ppm	—	High levels of hydrogen sulfide can cause immediate respiratory arrest. It can irritate the eyes and respiratory tract and cause headache, nausea, vomiting, and cough. Long exposure can cause pulmonary edema.	Hydrogen sulfide (H_2S) is a flammable, colorless, poisonous gas that smells like rotten eggs.	Manure, storage tanks, ponds, anaerobic lagoons, and land application sites are the primary sources of hydrogen sulfide. Anthropogenic sources include the combustion of sulfur containing fuels (oil and coal).
Volatile organic compounds (VOC)		There are no state or national ambient air quality standards for VOCs because they are not classified as criteria pollutants.		Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations because of interference with oxygen uptake. In general, high concentrations of VOCs are suspected to cause eye, nose, and throat irritation; headaches; loss of coordination; nausea; and damage to the liver, the kidneys, and the central nervous system. Many VOCs have been classified as toxic air contaminants, such as benzene.	Reactive organic gases (ROGs), or VOCs, are defined as any compound of carbon—excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate—that participates in atmospheric photochemical reactions. Although there are slight differences in the definition of VOCs and VOCs, the two terms are often used interchangeably.	Indoor sources of VOCs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of VOCs are from combustion and fuel evaporation. A reduction in VOC emissions reduces certain chemical reactions that contribute to the formulation of ozone. VOCs are transformed into organic aerosols in the atmosphere, which contribute to higher PM_{10} and lower visibility.

Table 3.1-3 (cont.): Air Quality Monitoring Summary

Air Pollutant	Averaging Time	California Standard	National Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Diesel particulate matter (DPM)		There are no ambient air quality standards for DPM.		Some short-term (acute) effects of DPM exposure include eye, nose, throat, and lung irritation, coughs, headaches, light-headedness, and nausea. Studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Human studies on the carcinogenicity of DPM demonstrate an increased risk of lung cancer, although the increased risk cannot be clearly attributed to diesel exhaust exposure.	DPM is a source of $PM_{2.5}$—diesel particles are typically 2.5 microns and smaller. Diesel exhaust is a complex mixture of thousands of particles and gases that is produced when an engine burns diesel fuel. Organic compounds account for 80 percent of the total particulate matter mass, which consists of compounds such as hydrocarbons and their derivatives, and polycyclic aromatic hydrocarbons and their derivatives. Fifteen polycyclic aromatic hydrocarbons are confirmed carcinogens, a number of which are found in diesel exhaust.	Diesel exhaust is a major source of ambient particulate matter pollution in urban environments. Typically, the main source of DPM is from combustion of diesel fuel in diesel-powered engines. Such engines are in on-road vehicles such as diesel trucks, off-road construction vehicles, diesel electrical generators, and various pieces of stationary construction equipment.

Abbreviations:
ppm = parts per million (concentration) $\mu g/m^3$ = micrograms per cubic meter Annual = Annual Arithmetic Mean 30-day = 30-day average Quarter = Calendar quarter

[a] National standard refers to the primary national ambient air quality standard, or the levels of air quality necessary, with an adequate margin of safety to protect the public health. All standards listed are primary standards except for 3 Hour SO_2, which is a secondary standard. A secondary standard is the level of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[b] The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[c] Effective April 12, 2010, to attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 100 ppb, or 188 $\mu g/m^3$

[d] To attain this standard, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 75 ppb.

Source of effects: SCAQMD 2007a, CARB 2009, NTP 2005a.
Source of standards: CARB 2013b.
Source of properties and sources: EPA 2003. NTP 2005b.

State of California Regulations

ARB Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling adopts new section 2485 within Chapter 10, Article 1, Division 3, title 13 in the California Code of Regulations. The measure limits the idling of diesel vehicles to reduce emissions of toxics and criteria pollutants. The driver of any vehicle subject to this section: (1) shall not idle the vehicle's primary diesel engine for greater than five minutes at any location; and (2) shall not idle a diesel-fueled auxiliary power system for more than five minutes to power a heater, air conditioner, or any ancillary equipment on the vehicle if it has a sleeper berth and the truck is located within 100 feet of a restricted area (homes and schools).

ARB Final Regulation Order, Requirements to Reduce Idling Emissions from New and In-Use Trucks, requires that new 2008 and subsequent model-year heavy-duty diesel engines be equipped with an engine shutdown system that automatically shuts down the engine after 300 seconds of continuous idling operation once the vehicle is stopped, the transmission is set to "neutral" or "park," and the parking brake is engaged. If the parking brake is not engaged, then the engine shutdown system shall shut down the engine after 900 seconds of continuous idling operation once the vehicle is stopped and the transmission is set to "neutral" or "park." Any project trucks manufactured after 2008 would be consistent with this rule, which would ultimately reduce air emissions.

ARB Regulation for In-Use Off-Road Diesel Vehicles. On July 26, 2007, the ARB adopted a regulation to reduce diesel particulate matter and NO_X emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The regulation imposed limits on idling, buying older off-road diesel vehicles, and selling vehicles beginning in 2008; requires all vehicles to be reported to ARB and labeled in 2009; and then in 2010 begins gradual requirements for fleets to clean up their fleet by getting rid of older engines, using newer engines, and installing exhaust retrofits. The regulation requires equipment to be retrofitted or retired. The regulation takes effect in phases, requiring the largest fleets to comply by 2010, medium fleets by 2013, and smaller fleets by 2015.

Statewide Truck and Bus Rule. On December 12, 2008, the ARB approved a new regulation to significantly reduce emissions from existing on-road diesel vehicles operating in California. The regulation requires affected trucks and buses to meet performance requirements between 2011 and 2023. By January 1, 2023, all vehicles must have a 2010 model year engine or equivalent. The regulation applies to all on-road heavy-duty diesel-fueled vehicles with a gross vehicle weight rating greater than 14,000 pounds, agricultural yard trucks with off-road certified engines, and certain diesel fueled shuttle vehicles of any gross vehicle weight rating. Out-of-state trucks and buses that operate in California are also subject to the regulation.

South Coast Air Quality Management District

An AQMP is a plan prepared and implemented by an air pollution district for a county or region designated as nonattainment of the federal and/or California ambient air quality standards. The term nonattainment area is used to refer to an air basin where one or more ambient air quality standards are exceeded.

2003 AQMP

One of the purposes of the 2003 AQMP is to lead the air basin and portions of the Salton Sea Air Basin under SCAQMD jurisdiction into compliance with the 1-hour ozone and PM_{10} federal standards (South Coast Air Quality Management District 2003). One of the purposes of the 2007 AQMP is to lead the air basin into compliance of the federal 8-hour ozone and $PM_{2.5}$ standards.

The 2003 AQMP also replaced the 1997 attainment demonstration for the federal CO standard and provided a basis for a maintenance plan for CO for the future, and updated the maintenance plan for the federal nitrogen dioxide standard that the South Coast Air Basin has met since 1992 (2003 AQMP, page 1-1).

The 2003 AQMP also incorporated new scientific data in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. The 2003 AQMP utilized complex modeling to show that with the control measures, the air basin would be in compliance with the federal and state standards for all pollutants by 2010, except for the state ozone and PM_{10} standards and the state ozone and PM_{10} standard after 2010 or by the earliest practicable date, as mandated by the California Health and Safety Code Section 40462. The ARB approved the 2003 AQMP on August 1, 2003. The EPA's adequacy finding on the emissions budgets for conformity determination in the air basin was published in the Federal Register (69 FR 15325-15326).

2007 AQMP

The 2007 AQMP, which was adopted by the SCAQMD on June 1, 2007 (South Coast Air Quality Management District 2007a). On July 13, 2007, the SCAQMD Board adopted the 2007 Final AQMP Transportation Conformity Budgets and directed the Executive Officer to forward them to ARB for its approval and subsequent submittal to the EPA. On September 27, 2007, ARB adopted the State Strategy for the 2007 State Implementation Plan and the 2007 AQMP as part of the State Implementation Plan. On January 15, 2009, the EPA's regional administrator signed a final rule to approve in part and disapprove in part the SCAQMD 2003 1-hour ozone plan and the nitrogen dioxide maintenance plan. The parts of the plan that were approved strengthen the State Implementation Plan. The Clean Air Act does not require the disapproved portions of the plan, and the disapprovals do not start sanctions clocks.

The 2007 AQMP outlines a detailed strategy for meeting the federal health-based standards for $PM_{2.5}$ by 2015 and 8-hour ozone by 2024 while accounting for and accommodating future expected growth. The 2007 AQMP incorporates significant new emissions inventories, ambient measurements,

scientific data, control strategies, and air quality modeling. Most of the reductions will be from mobile sources, which are currently responsible for about 75 percent of all smog and particulate forming emissions. The 2007 AQMP includes 37 control measures proposed for adoption by the SCAQMD, including measures to reduce emissions from new commercial and residential developments, more reductions from industrial facilities, and reductions from wood burning fireplaces and restaurant charbroilers.

2012 AQMP

The 2012 AQMP was adopted December 7, 2012 (South Coast Air Quality Management District 2012b). The purpose of the 2012 AQMP for the air basin is to set forth a comprehensive and integrated program that will lead the air basin into compliance with the federal 24-hour $PM_{2.5}$ air quality standard, and to provide an update of the air basin's projections in meeting the federal 8-hour ozone standards. The AQMP will be submitted to the U.S. EPA as the State Implementation Plan (SIP) once it is approved by the SCAQMD Governing Board and the ARB. Specifically, the AQMP will serve as the official SIP submittal for the federal 2006 24-hour $PM_{2.5}$ standard, for which U.S. EPA has established a due date of December 14, 2012. In addition, the AQMP will update specific elements of the previously approved 8-hour ozone SIP: 1) an updated emissions inventory and, 2) new control measures and commitments for emissions reductions to help fulfill the Section 182(e)(5) portion of the 8-hour ozone SIP.

The 2012 AQMP proposes air basin-wide $PM_{2.5}$ measures that will be implemented by the 2014 attainment date, episodic control measures to achieve air quality improvements (would only apply during high $PM_{2.5}$ days), Section 182(e)(5) implementation measures (to maintain progress towards meeting the 2023 8-hour ozone national standard), and transportation control measures. Most of the control measures focus on incentives, outreach, and education.

Proposed $PM_{2.5}$ reduction measures in the 2012 AQMP include the following:

- Further NO_X reductions from RECLAIM
- Further reductions from residential wood burning devices
- Further reductions from open burning
- Emission reductions from under-fired charbroilers
- Further ammonia reductions from livestock waste
- Backstop measures for indirect sources of emissions from ports and port-related sources
- Further criteria pollutant reductions from education, outreach and incentives

There are multiple VOC and NO_X reductions in the 2012 AQMP to attempt to reduce ozone formation, including further VOC reductions from architectural coatings, miscellaneous coatings, adhesives, solvents, lubricants, mold release products, consumer products.

The 2012 also contains proposed mobile source implementation measures for the deployment of zero- and near-zero emission on-road heavy-duty vehicles, locomotives, and cargo handling equipment. There are measures for the deployment of cleaner commercial harbor craft, cleaner ocean-going marine vessels, cleaner off-road equipment, and cleaner aircraft engines.

The 2012 AQMP proposes the following mobile source implementation measures:

On-road mobile sources:

- Accelerated penetration of partial zero-emission and zero-emission vehicles and light-heavy and medium-heavy duty vehicles through funding assistance for purchasing the vehicles.
- Accelerated retirement of older light-, medium-, and heavy-duty vehicles through funding incentives.
- Further emission reductions from heavy-duty vehicles serving near-dock rail yards through a proposed control measure that calls for a requirement that any cargo container moved between the Ports of Los Angeles and Long Beach to the nearby rail yards with zero-emission technologies.

Off-road mobile sources:

- Extension of the SOON provision for construction/industrial equipment, which provides funding to repower or replace older Tier 0 and Tier 1 equipment.
- Further emission reductions from freight and passenger locomotives calls for an accelerated use of Tier 4 locomotives in the air basin.
- Further emission reductions from ocean-going marine vessels while at berth.
- Emission reductions from ocean-going marine vessels.

The 2012 AQMP also relies upon the Southern California Association of Governments regional transportation strategy, which is in its adopted 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and 2011 Federal Transportation Improvement Program, which contains the following sections:

- Linking regional transportation planning to air quality planning: making sure that the regional transportation plan supports the goals and objectives of the AQMP/SIP.
- Regional transportation strategy and transportation control measures: the RTP/SCS contains improvements to the regional multimodal transportation system including the following: active transportation (non-motorized transportation - biking and walking); transportation demand management; transportation system management; transit; passenger and high-speed rail; goods

movement; aviation and airport ground access; highways; arterials; and operations and maintenance.

- Reasonably available control measure analysis.

South Coast Air Quality Management District Rules

The AQMP for the air basin establishes a program of rules and regulations administered by SCAQMD to obtain attainment of the state and national air quality standards. The rules and regulations that apply to this project include, but are not limited to, the following rules.

SCAQMD Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

SCAQMD Rule 403 governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through application of standard Best Management Practices, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.

SCAQMD Rule 1108 governs the sale, use, and manufacturing of asphalt and limits the VOC content in asphalt used in the South Coast Air Basin. This rule would regulate the VOC content of asphalt used during construction. Therefore, all asphalt used during construction of the project must comply with SCAQMD Rule 1108.

SCAQMD Rule 1186 limits the presence of fugitive dust on paved and unpaved roads and sets certification protocols and requirements for street sweepers that are under contract to provide sweeping services to any federal, state, county, agency or special district such as water, air, sanitation, transit, or school district.

Local

As discussed previously in Section 1 of this Draft EIR, the SGPWA is exempt from local land use policies and ordinances in accordance with California Government Code Sections 53091(d) and 53091(e). Although exempt for the proposed project, SGPWA has chosen to provide a discussion of the local land use policies and ordinances.

City of Beaumont General Plan

The City of Beaumont General Plan contains the following goals and policies that address air quality.

Resource Management Element

Goal 3. The City of Beaumont will cooperate in regional efforts to improve air quality.

Policy 8. The City of Beaumont will encourage incorporation of energy conservation features in new developments and in the renovation of existing development.

Policy 9. The City of Beaumont will require feasible fugitive dust reduction techniques to be utilized during construction activities such as regularly watering down the construction area.

Beaumont Municipal Code

The Beaumont Municipal Code establishes the following air quality provisions that are relevant to the project.

Chapter 17.04 Performance Standards

Section 17.04.050 Air Quality

The California Air Resources Board and the South Coast Air Quality Management District (SCAQMD) are the agencies responsible for the implementation of the Clean Air Act at the local level. In order to protect the health and welfare of those persons living, working, or visiting the City of Beaumont, the following performance standards with respect to air quality are outlined in this Section.

A. Smoke and Particulates. No smoke of any type shall be emitted from a source in excess of SCAQMD standards. No elements of dust, fly ash, vapors, fumes, gases or other forms of air pollution shall be permitted in excess of the standards set by the SCAQMD or that can cause damage to human health, animals, vegetation, or that can cause excessive soiling at any location.

B. Permits. Before a building or occupancy permit is issued by the City, the applicant shall be required to show proof that he has secured the necessary permits from the SCAQMD or that the project is exempt from SCAQMD regulations as of the date of filing of the City application.

C. Enforcement and Standards. In enforcing these regulations, the City shall use the same point of measurement as utilized by the SCAQMD. (Ord. 920 Section 2, 9/2007)

17.04.060 Odors

In order to protect the well being of the community and to eliminate the blighting influences of odors, the following performance standards with respect to the generation of odors are outlined in this Section.

A. Odor Generating Activities. Any process that creates or emits any odors, gases, or other odorous matter shall comply with the standards set by the South Coast Air Quality Management District (SCAQMD).

B. Quantified Standard. No odors, gases, and odorous matter shall be emitted in quantities to be detectable when diluted in a ratio of one (1) volume diluted air to four (4) volumes clean air at the point of greatest concentration. (Ord. 920 Section 2, 9/2007)

County of Riverside General Plan

The County of Riverside General Plan contains the following goals and policies that address air quality.

Air Quality Element

Policy AQ 1.1. Promote and participate with regional and local agencies, both public and private, to protect and improve air quality.

Policy AQ 1.2. Support the Southern California Association of Government's (SCAG) Regional Growth Management Plan by developing intergovernmental agreements with appropriate governmental entities such as the Western Riverside Council of Governments (WRCOG), the Coachella Valley Association of Governments (CVAG), sanitation districts, water districts, and those subregional entities identified in the Regional Growth Management Plan.

Policy AQ 1.3. Participate in the development and update of those regional air quality management plans required under federal and state law, and meet all standards established for clean air in these plans.

Policy AQ 1.4. Coordinate with the SCAQMD and MDAQMD to ensure that all elements of air quality plans regarding reduction of air pollutant emissions are being enforced.

Policy AQ 1.5. Establish and implement air quality, land use and circulation measures that improve not only the County's environment but the entire region's.

Policy AQ 2.1. The County land use planning efforts shall assure that sensitive receptors are separated and protected from polluting point sources to the greatest extent possible.

Policy AQ 2.2. Require site plan designs to protect people and land uses sensitive to air pollution through the use of barriers and/or distance from emissions sources when possible.

Policy AQ 2.3. Encourage the use of pollution control measures such as landscaping, vegetation and other materials, which trap particulate matter or control pollution.

Policy AQ 4.1. Encourage the use of building materials / methods which reduce emissions.

Policy AQ 4.5. Require stationary pollution sources to minimize the release of toxic pollutants through:

- Design features
- Operating procedures
- Preventive maintenance
- Operator training
- Emergency response planning

Policy AQ 4.6. Require stationary air pollution sources to comply with applicable air district rules and control measures.

Policy AQ 4.7. To the greatest extent possible, require every project to mitigate any of its anticipated emissions which exceed allowable emissions as established by the SCAQMD, MDAQMD, SOCAB, the Environmental Protection Agency and the California Air Resources Board.

Policy AQ 4.9. Require compliance with SCAQMD Rules 403 and 403.1, and support appropriate future measures to reduce fugitive dust emanating from construction sites.

3.1.3 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether impacts to air quality are significant environmental effects, the following questions are analyzed and evaluated.

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan? (See Air Quality Plan Impact AIR-1.)

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? (See Air Quality Standards / Violations Impact AIR-2.)

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)? (See Criteria Pollutant Impact AIR-3.)

d) Expose sensitive receptors to substantial pollutant concentrations? (See Sensitive Receptors Impact AIR-4.)

e) Create objectionable odors affecting a substantial number of people? (See Odors Impact AIR-5.)

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations.

SCAQMD Significance Thresholds

While the final determination of whether a project is significant is within the purview of the Lead Agency pursuant to Section 15064(b) of the CEQA Guidelines, SCAQMD recommends that its quantitative air pollution thresholds be used to determine the significance of project emissions. If the Lead Agency finds that the project has the potential to exceed these air pollution thresholds, the project should be considered to have significant air quality impacts. The SCAQMD has defined two sets of air quality significance thresholds that are applicable to the project: regional significance thresholds and localized significance, each of which is discussed below.

Regional Significance Thresholds

The following regional significance thresholds have been established by SCAQMD to protect air resources within the air basin as a whole, as project emissions can potentially contribute cumulatively to the existing emission burden and possibly affect the attainment and maintenance of ambient air quality standards. Projects within the South Coast Air Basin region with regional construction or operational emissions in excess of any of the thresholds presented in Table 3.1-4 are considered to have a significant regional air quality impact. These thresholds set daily limits for construction and operational emissions and considers all project-generated emissions from both onsite and offsite activities.

Table 3.1-4: SCAQMD Regional Thresholds

Pollutant	Construction (pounds per day)	Operation (pounds per day)
Nitrogen oxides (NO_X)	100	55
Volatile organic compounds (VOC)	75	55
Particulate matter (PM_{10})	150	150
Particulate matter ($PM_{2.5}$)	55	55
Sulfur oxides (SO_X)	150	150
Carbon monoxide (CO)	550	550
Source: SCAQMD 1993.		

Local Significance Thresholds

The SCAQMD Governing Board adopted a methodology for calculating localized air quality impacts through localized significance thresholds (LSTs), which is consistent with SCAQMD's Environmental Justice Enhancement Initiative I-4. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable State or national ambient air quality standard. LSTs were developed in recognition of the fact that criteria

pollutants such as CO, NO_X, and PM_{10} and $PM_{2.5}$ in particular, can have local impacts at nearby sensitive receptors as well as regional impacts. The LSTs are developed for each source receptor area and are applicable to NO_X, CO, PM_{10}, and $PM_{2.5}$. The SCAQMD has not defined LSTs for SO_x or VOC. Separate LSTs have been defined for construction and operations. The SCAQMD LST assessment process only considers emissions generated from onsite emission sources.

To facilitate the localized assessment process, the SCAQMD LST methodology (SCAQMD 2009) provides a series of look-up tables that contain LSTs for the Source Receptor Areas established within the air basin. If onsite construction emissions exceed the LSTs for the Source Receptor Area where the project is located, then the project would be considered to have a significant local air quality impact. This methodology applies to projects that disturb areas up to 5 acres in size each day. The current look-up tables cover the years 2006 through 2008, the most current look-up tables. The LSTs for the proposed project were obtained from the look-up tables in the SCAQMD Final LST Methodology in Source Receptor Area 29, Banning Airport, the Source Receptor Area where the project is located.

Construction

As noted in Table 3.1- 9 below, the construction area disturbed on a daily basis is dependent on the construction phase ranging from a minimum of 1.5 acres during the construction of the service connection to 5 acres during construction of the recharge basins. The location to the sensitive receptors from the proposed construction activities are described in Table 3.1-8. A receptor distance of 25 meters was assumed for NOx and CO based on the average location of operational equipment where a sensitive receptor could be located for a period of 8 hours or less (i.e., the school to the south of the project). The 8-hour period is the averaging time of concentration these pollutants as depicted in Table 3.1-3. A receptor distance of 200 meters was assumed for PM_{10} and $PM_{2.5}$ based on the average location of operational equipment where a sensitive receptor could be located for a period of at least 24 hours (i.e., the residences located to the east of the project). The 24-hour period is the averaging time of concentration for these pollutants as depicted in Table 3.1-3. The localized construction significance thresholds are shown in Table 3.1-5 for the various construction phases.

Table 3.1-5: Project Localized Construction Significance Thresholds

Pollutant	Localized Significance Threshold (pounds/day)				
	Recharge Basin[1]	Well Construction[2]	Pipeline Construction[3]	Jack and Bore[4]	Service Connection[5]
Nitrogen oxides (NO_X)	236	103	193	178	126
Particulate matter (PM_{10})	180	6	16	14	8
Particulate matter ($PM_{2.5}$)	55	4	9	8	5
Carbon monoxide (CO)	2,817	1,000	2,179	1,966	1,271

Notes:
[1] Based on Source Receptor Area 29, 5 acres disturbed area and receptor distance of 25 meters for NO_2 and CO and 200 meters for PM_{10} and $PM_{2.5}$.
[2] Based on Source Receptor Area 29, 1 acre disturbed area (smallest disturbed entry in the SCAQMD LST look-up tables and a receptor distance of 25 meters
[3] Based on Source Receptor Area 29, 3.5 acres disturbed area and receptor distance of 25 meters.
[4] Based on Source Receptor Area 29, 3.0 acres disturbed area and receptor distance of 25 meters.
[5] Based on Source Receptor Area 29, 1.5 acres disturbed area and receptor distance of 25 meters.
Source: SCAQMD, 2009.

Operation

The principal onsite operational emissions used in the operational LST assessment derive from the use of a bulldozer and one water truck during the routine maintenance of the recharge basin. The emissions from the two haul truck trips for excess soils are not part of the operational LST assessment because the LST assessment is for onsite activities and not the 7-mile one-way hauling of soil. The use of a water truck will depend on the moisture of the soil at the time of maintenance. Table 3.1-6 summarizes the applicable LSTs for project operations. A receptor distance of 25 meters was assumed for NOx and CO based on the average location of operational equipment where a sensitive receptor could be located for a period of 8 hours or less (i.e., the school to the south of the project). The 8-hour period is the averaging time of concentration these pollutants as depicted in Table 3.1-3. A receptor distance of 200 meters was assumed for PM10 and PM2.5 based on the average location of operational equipment where a sensitive receptor could be located for a period of at least 24 hours (i.e., the residences located to the east of the project). The 24-hour period is the averaging time of concentration for these pollutants as depicted in Table 3.1-3.

Table 3.1-6: Project Localized Operational Significance Thresholds

Pollutant	Localized Significance Threshold (pounds/day)
Nitrogen dioxide	236[1]
Carbon monoxide	2,817[1]
PM_{10}	44[2]
$PM_{2.5}$	14[2]

Note:
[1] The LSTs were derived for Source Receptor Area 29, a 5-acre operational area, and a receptor distance of 25 meters.
[2] The LSTs were derived for Source Receptor Area 29, a 5-acre operational area, and a receptor distance of 200 meters
Source: SCAQMD 2009.

3.1.4 - Methods and Assumptions

The air emissions from the construction and operation of the project were estimated using the CARB OFFROAD2011 emission model for estimating emissions from off-road construction equipment and the CARB EMFAC2011 mobile source emission model for estimating emissions from on-road motor vehicles.

Estimation of Construction Emissions

The extent of construction emissions varies substantially from day to day based on the types of equipment in operation, construction activity, and meteorological conditions. Construction emissions result from the operation of off-road construction equipment, worker and haul truck travel, evaporative emissions from asphalt paving and from fugitive dust generated from various earth-moving activities. The project's construction consists of several phases including construction of the recharge basin, pipeline construction, jack and boring construction, and construction of the service connection. The inventory of construction equipment expected to be used in each construction phase is shown in Table 3.1-7 and Table 3.1-8.

Table 3.1-7: Inventory of Project Construction Equipment

Phase	Length (days)[1]	Onsite Workers[2]	Construction Equipment[2]	Hours/ day[2]	HP[2]	Hauling
Recharge Basin	80	12	2 Scrapers 2 rubber tired dozer 2 tracked dozer 1 Grader 3 water truck	7 7 7 6 3	232 358 358 162 381	None[1]
Well Construction	2	5	Bore/drill rig Generator Set Forklift Grout Pump Welder	24 24 6 12 12	250 40 90 125 40	None
Pipeline Construction	25	6	See Table 3.1-8 below			28,000 cubic feet export (1,100 cubic yards)[3]
Jack and Bore	4	5	1 Bore/Drill Rig 2 Excavators 2 Other Materials Handling Equipment (Side Boom)	7 7 7	120 250 250	None[3]
Service Connection	12	6	1 excavator 1 rubber tired backhoe 1 water truck	7 7 2	157 75 381	None[3]

Notes:
HP = horsepower
Peak Hours/Day = hours per day the onsite equipment's engines are running onsite.
1 Source: Albert A. Webb Associates 2013. The 1,100 cubic yards of soil from the pipeline alignment is proposed to be exported to one of three locations: the proposed recharge facility site, the service connection site, and the offsite triangular parcel north of the proposed recharge basin and south of Brookside Avenue. The offsite triangular parcel is located approximately 500 feet west of the pipeline proposed along Brookside Avenue.
2 Source: Michael Brandman Associates 2013 based on assumptions for other similar projects.
3 Source: Atkins 2013.

Table 3.1-8: Inventory of Project Construction During Pipeline Construction

Equipment Name	Number	Peak Hours/ Day	HP
Excavation and Shoring			
Haul Truck[1]	2	4	189
Backhoe	1	7	108
Loader	1	7	108
Excavator	2	7	168
Compactor	1	4	8
15-ton Crane	1	7	399
Water Truck	1	3	189
Pipe Installation and Backfilling			
Haul Truck[2]	3	6	189
Hydraulic Jack	1	6	—
Welding truck with Generator	1	4	45
40-kilowatt Generator	1	6	60
Street Restoration			
Paver	1	2	100
Roller	1	2	80

Notes:
HP = horsepower
Peak Hours/Day = hours per day the onsite equipment's engines are running onsite.
[1] There are two haul trucks assumed to export dirt from the pipeline to one of three soil sites.
[2] The two haul trucks for the pipeline installation and backfilling phase are assumed to be used to import asphalt.; one haul truck would transport pipeline segments
Source: Michael Brandman Associates 2013 based on assumptions for other similar projects.

The amount of fugitive dust emissions generated during construction was based on the number of equipment hours and the maximum daily disturbance activities possible for each piece of equipment. The SCAQMD CalEEMod model provides recommendations as to the maximum daily disturbance possible for several pieces of construction equipment as shown in Table 3.1-9.

Table 3.1-9: Areas Disturbed During Construction

Phase	Equipment	Acres/8-hr-day per Piece of Equipment[1, 2]	Total Acres/8-hr-day[3]
Recharge Basin	2 Scrapers 2 rubber tired dozer 2 tracked dozer 1 Grader 1 water truck	1.0 0.5 0.5 0.5 0.5	2 1 1 .5 .5 Total = 5 acres/day
Well Construction	Smallest disturbed area in the SCAQMD LST mass emission rate lookup tables	1.0	1 acre
Pipeline Construction	2 Haul Trucks - Soil Export 2 Haul Trucks - Asphalt Import 1 Haul Truck - Pipeline Segments 1 Backhoe 1 Loader 2 Excavator 1 Compactor 1 15-ton Crane 1 Water Truck 1 Hydraulic Jack 1 Welding truck with Generator 1 40-kilowatt Generator 1 Paver 1 Roller	0.0 0.0 0.0 0.5 0.5 1.0 0.0 0.5 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.5 0.5 2.0 0.0 0.5 0.0 0.0 0.0 0.0 0.0 Total = 3.5 acres/day
Jack and Bore	1 Bore/Drill Rig 2 Excavators 2 Other Materials Handling Equip.	0.5 1.0 0.5	0.5 2.0 0.5 Total = 3.0 acres/day
Service Connection	1 excavator 1 rubber tired backhoe 1 water truck	1.0 0.5 0.0	1.0 0.5 0.0 Total = 1.5 acres/day

Notes:
[1] The pieces of equipment showing 0.0 acres per 8-hour day include construction equipment that are on-road vehicles and would not disturb any acreage onsite.
[2] The SCAQMD's guidance indicates that tractors, graders, and dozers would impact 0.5 acre per 8-hour day (acres/8-hr-day) and scrapers would impact 1 acre/8-hour day. The equipment to be used for construction not identified in the SCAQMD's guidance (excavators, dump trucks, backhoes, and loaders) are assigned an impact area based on a worst-case scenario and the anticipated fugitive dust to be generated by each piece. As identified in the project description, the project would not impact more than 5 acres per day during construction.
[3] The total acreage is used in CalEEMod to generate fugitive dust. This acreage represents the total acres disturbed during the construction phase; the equipment may disturb the same area multiple times per day. Therefore, a backhoe and a loader could disturb the same 0.5 acre during pipeline construction; however, the total acreage disturbed for the fugitive dust evaluation is a combined one acre for both of these pieces of equipment. Although the construction area associated with pipeline construction is less than one acre, the total acreage disturbed for the fugitive dust evaluation is 3.5 acres per day.
Source: Michael Brandman Associates, 2013.

The maximum amount of area disturbed during each construction phase was used to estimate fugitive dust emissions.

SCAQMD Rule 403 requires fugitive dust generating activities follow best available control measures to reduce emissions of fugitive dust. The best available control shown in Table 3.1-10 are incorporated by reference as necessary to meet Rule 403

Table 3.1-10: Fugitive Dust Best Available Control Measures

Best Available Control Measure[1]	Associated Measure in CalEEMod[2]
Clearing and Grubbing 02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing. 02-2 Stabilize soil during clearing and grubbing activities. 02-3 Stabilize soil immediately after clearing and grubbing activities. **Earth Moving Activities** 08-1 Pre-apply water to depth of proposed cuts 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction 08-3 Stabilize soils once earth-moving activities are complete	Water exposed surfaces three times per day
Staging Areas 13-1 Stabilize staging areas during use by limiting vehicle speeds to 15 miles per hour.	Reduce speed on unpaved roads to 15 miles per hour.
Notes: [1] SCAQMD Rule 403.	

Operations

Once operational, periodic maintenance of the recharge basins would be required. If the recharge basins continue to infiltrate at an acceptable rate, the time between maintenance activities would be extended. It is anticipated that each recharge basin would likely be serviced on an annual basis. Maintenance activities would involve temporarily taking an individual basin out of commission, allowing the basin to thoroughly dry over several weeks, regrading and ripping the basin bottom with a bulldozer, and, if necessary, regrading and tracking the basin slopes, although this final step in not expected to be regularly required. In addition, a water truck is assumed to be used, when necessary. Each basin would take approximately one day to grade, rip, and track. Since SGPWA has plans to temporarily take the pipeline offline every year to perform mandatory annual maintenance activities, it is also possible that the recharge facility would be shut down during this period, with each basin being serviced during the shut down period. Each cleaning assumes that a bulldozer would remove the silt layer built up on the basin's bottom. An estimated 100 cubic yards of silt would be removed

annually by the use of two haul truck trips per day over five days to complete the five proposed basins.

3.1.5 - Project Impact Analysis and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures, where necessary.

Air Quality Plan

Impact AIR-1	The project could conflict with or obstruct implementation of the applicable air quality plan.

Impact Analysis

According to the 1993 SCAQMD Handbook, there are two key indicators of consistency with the AQMP:

- Indicator 1: Whether the project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP. Project applicability: Applicable and assessed below.
- Indicator 2: A project would conflict with the AQMP if it will exceed the assumptions in the AQMP in 2010 or increments based on the year of project build-out and phase. Project applicability: Not applicable. The Handbook indicates that key assumptions to use in this analysis are population number and location and a regional housing needs assessment. The parcel-based land use and growth assumptions and inputs used in the Regional Transportation Model run by the Southern California Association of Governments that generated the mobile inventory used by the SCAQMD for AQMP are not available. Therefore, this indicator is not applicable.

In addition to Indicator 1 above, consistency with the AQMP will also be determined based on project compliance with applicable control measures, rules, and regulations, as discussed below.

Project's Contribution to Air Quality Violations

According to the SCAQMD, the project is consistent with the AQMP if the project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP (SCAQMD 1993, page 12-3).

As discussed in Impact AIR-2, during construction or operation, the project would not exceed the localized significance thresholds for any pollutant for each individual construction phase or when more than one construction phase would overlap in time given the distances where the individual construction phases would occur. Further as discussed in Impact AIR-3, the project construction

could exceed the SCAQMD's regional emission significance threshold for NO_X during the recharge basin construction and/or if the recharge basin construction, pipeline construction or service connection construction would occur simultaneously. Therefore, the project could contribute substantially to an existing or projected air quality violation on a regional basis.

Control Measures

The next criterion is compliance with the control measures in the 2003, the 2007, and the 2012 AQMPs. The 2003 AQMP contains a number of land use and transportation control measures including the following: the District's Stationary and Mobile Source Control Measures; State Control Measures proposed by ARB; and Transportation Control Measures provided by Southern California Association of Governments. ARB's strategy for reducing mobile source emissions include the following approaches: new engine standards; reduce emissions from in-use fleet, require clean fuels, support alternative fuels and reduce petroleum dependency, work with EPA to reduce emissions from national and state sources, and pursue long-term advanced technology measures (AQMP 2003, page 4-25). Transportation control measures provided by Southern California Association of Governments include those contained in the Regional Transportation Plans, the most current version of which is the 2008 Regional Transportation Plan. The Regional Transportation Plan has control measures to reduce emissions from on-road sources by incorporating strategies such as high occupancy vehicle interventions, transit, and information-based technology interventions (AQMP 2003, page 4-19). The measures implemented by ARB and Southern California Association of Governments affect the project indirectly by regulating the vehicles that the residents may use and regulating public transportation. The project indirectly would comply with the control measures set by ARB and Southern California Association of Governments.

The focus of the 2007 AQMP is to demonstrate attainment of the national $PM_{2.5}$ ambient air quality standard by 2015 and the national 8-hour ozone standard by 2024, while making expeditious progress toward attainment of state standards. The proposed strategy, however, does not attain the previous national 1-hour ozone standard by 2010 as previously required prior to the recent change in national regulations. This is to be accomplished by building upon improvements from the previous plans and incorporating all feasible control measures while balancing costs and socioeconomic impacts. The 2007 AQMP indicates that $PM_{2.5}$ is formed mainly by secondary reactions or sources. Therefore, instead of reducing fugitive dust, the strategy for reducing $PM_{2.5}$ focuses on reducing precursor emissions of SO_X, directly emitted $PM_{2.5}$, NO_X, and VOC.

The Final 2007 AQMP control measures consist of four components. The first component is SCAQMD's Stationary and Mobile Source Control Measures. The Final 2007 AQMP includes 30 short-term and mid-term stationary and seven mobile source control measures for SCAQMD implementation. A complete listing of the measures is in the 2007 AQMP and includes measures such as VOC reductions from gasoline transfer and dispensing facilities, further NO_X reductions from space heaters, localized control program for PM emission hot spots, urban heat island, energy

efficiency and conservation, etc. Some of the measures will become new rules and some will be amendments to existing rules. When the rules pass, the owner-operator will follow the applicable rules.

The purpose of the 2012 AQMP for the air basin is to set forth a comprehensive and integrated program that will lead the air basin into compliance with the federal 24-hour $PM_{2.5}$ air quality standard, and to provide an update of the air basin's projections in meeting the federal 8-hour ozone standards. The 2012 AQMD relies on a number of stationary source and mobile source control measures on VOC and NO_X emissions to reduce ozone concentrations. Such measures would include the deployment of zero- and near-zero emission on-road heavy-duty vehicles, locomotives, and cargo handling equipment, and accelerated replacement of Tier 0 and Tier 1 off road construction equipment.

The second component is ARB's Proposed State Strategy, which includes short- and mid-term control measures aimed at reducing emissions from sources that are primarily under state jurisdiction, including on-road and off-road mobile sources, and consumer products. These measures are required in order to achieve the remaining emission reductions necessary for $PM_{2.5}$ attainment. ARB's strategy includes measures such as improvements to California's Smog Check Program, expanded passenger vehicle retirement, cleaner in-use heavy-duty trucks, reductions from port related sources, cleaner off-road equipment, evaporative and exhaust strategies, pesticide strategies, etc. When these measures are implemented by the ARB, the project would be required to follow them.

The third component is SCAQMD Staff's Proposed Policy Options to Supplement ARB's Control Strategy. SCAQMD staff believe that a combination of regulatory actions and public funding is the most effective means of achieving emission reductions. As such, the 2007 Final AQMP proposes three policy options for the decision makers to consider in achieving additional reductions. The first option is to incorporate the SCAQMD proposed additional control measures as a menu of selections further reducing emissions from sources primarily under state and national jurisdiction. The second option is to have the State fulfill its NO_X emission reduction obligations under the 2003 AQMP by 2010 for its short-term defined control measures plus additional reductions needed to meet the NO_X emission target between 2010 and 2014. The third option is based on the same rate of progress under Policy Option 1, but it relies heavily on public funding assistance to achieve the needed NO_X reductions via accelerated fleet turnover to post-2010 on-road emission standards or the cleanest off-road engine standards in effect today or after 2010. This strategy does not apply to the project.

The fourth component consists of Regional Transportation Strategy and Control Measures provided by Southern California Association of Governments. Transportation plans within the air basin are statutorily required to conform to air quality plans in the region, as established by the 1990 Federal Clean Air Act and reinforced by other Acts. The region must demonstrate that its transportation plans and programs conform to the mandate to meet the national ambient air quality standards in a timely

manner. The Regional Transportation Plan, prepared by the Southern California Association of Governments, is developed every 4 years with a 20-year planning horizon to meet the long-term transportation planning requirements for emission reductions from on-road mobile sources within the air basin. The biennial Regional Transportation Improvement Program requires that the short-term implementation requirements of the Transportation Conformity Rule be met by Southern California Association of Governments. The first 2 years of the program are fiscally constrained and demonstrate timely implementation of a special category of transportation projects called Transportation Control Measures. In general, Transportation Control Measures are those projects that provide emission reductions from on-road mobile sources, based on changes in the patterns and modes by which the regional transportation system is used. Strategies are grouped into three categories: high occupancy vehicle strategy, transit and systems management, and information-based technology (traveling during a less congested time of day). Southern California Association of Governments approved the transportation measures in the Regional Transportation Plan, which have been included in the region's air quality plans. The Transportation Control Measures will be implemented and will subsequently reduce emissions in the air basin. The project's operational personnel who will use the transportation system may experience less congestion due to the implementation of the Transportation Control Measures.

The project would comply with all of the SCAQMD's applicable rules and regulations. Therefore, the project complies with this criterion.

Level of Significance Before Mitigation

Potentially significant impact

Mitigation Measures

Mitigation Measures AIR-1 and AIR-2 are required to reduce regional impacts to less than significant levels.

MM AIR-1 During construction of the recharge basin, the construction contractor can use the construction equipment assumed in this analysis and the two scrapers shall be equipped with a Tier 3 level engine capable of achieving a NO_X emission rate of 2.7 grams per horsepower-hour for each scraper. Based on the peak hours per day of construction and horsepower as reflected in Table 3.1-8 of this Draft EIR, the emission reduction rate would reduce regional emissions of NO_X by the project to below 100 pounds per day. If the construction contractor chooses an alternative mix of construction equipment, the construction contractor shall demonstrate through modeling that potential construction emissions do not exceed the regional or local significance thresholds. If the contractor cannot demonstrate that emissions would be below 100 pounds per day, the contractor will not be allowed to use the alternative mix of construction equipment.

MM AIR-2 Under unforeseen conditions, if there is an overlap of construction phases due to delays in design or weather, the construction contractor shall demonstrate through modeling that potential construction emissions do not exceed the regional significance thresholds. If the contractor cannot demonstrate that emissions would be below the regional significance thresholds, the contractor will not be allowed to use the alternative mix of construction equipment.

Level of Significance After Mitigation

Less than significant impact.

The application of Mitigation Measures AIR-1 and AIR-2 will ensure that NO_X construction emissions will be less than 100 pounds per day. The estimated construction emissions that would occur during the construction of the recharge basin after application of mitigation measures are shown in Table 3.1-15. As shown in Table 3.1-15, the NO_X construction emissions will be less than 100 pounds per day.

Local Air Quality Standards / Violations

Impact AIR-2 **The project would not violate an air quality standard or contribute substantially to an existing or projected air quality violation.**

The localized construction analysis uses significance thresholds that represent the maximum project emissions that would not cause or contribute to an exceedance of the most stringent applicable national or state ambient air quality standard. (SCAQMD 2008). The localized significance thresholds are specific to each source receptor area. If the project results in emissions that do not exceed those thresholds, it follows that those emissions would not cause or contribute to a local exceedance of the appropriate ambient air quality standard. This impact focuses on the project's potential to cause or contribute to a local exceedance of an ambient air quality standard.

Impact Analysis - Construction

Table 3.1-11 compares the project's local air emissions resulting from onsite construction activities with the SCAQMD localized construction significance thresholds for each construction phase.

Table 3.1-11: Localized Construction Assessment

Construction Phase	Construction Emissions (pounds/day)[1]			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Recharge Basin				
Project Emissions	104.7	42.1	12.6	8.6
Significance Threshold	236	2,817	180	55
Exceeds Threshold?	No	No	No	No

Table 3.1-11 (cont.): Localized Construction Assessment

Construction Phase	Construction Emissions (pounds/day)[1]			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Well Construction				
Project Emissions	46.8	31.9	2.1	2.0
Significance Threshold	103	1,000	6	4
Exceeds Threshold?	No	No	No	No
Pipeline Construction[2]				
Project Emissions	71.4	35.3	14.6	4.6
Significance Threshold	193	2,197	16	9
Exceeds Threshold?	No	No	No	No
Service Connection				
Project Emissions	9.7	4.4	0.5	0.5
Significance Threshold	126	1,271	8	5
Exceeds Threshold?	No	No	No	No

Notes:
NO_x = Oxides , CO = Carbon Monoxide, PM_{10} = Particulate Matter less than 10 microns, and $PM_{2.5}$ = Particulate Matter less than 2.5 microns
1 The construction equipment (number, type, hours of operation, and horsepower) for each phase is provided in Tables 3.1-7 and 3.1-8.
2 Daily total emissions during the pipeline construction include excavation and shoring, jack and bore, installation, and street restoration.
Source: Appendix B, Air Quality and Greenhouse Gas Emissions.

As noted from the above table, each specific construction phase by itself would not exceed the applicable localized construction significance thresholds. However, even if two or more construction phases were to overlap, the areas where the construction would be occurring are sufficiently far apart that any potential local air quality impacts would not overlap and, therefore, the individual construction phase LSTs are appropriate even if construction phases overlapped.

Impact Analysis - Operations

The project's operational emissions would result from the maintenance activities associated with the cleanout of the recharge basins. The well pump used for irrigation was assumed to be electrically powered. The project's operational emissions compared to the SCAQMD's localized operational significance thresholds are shown in Table 3.1-12.

Table 3.1-12: Results of the Localized Operational Assessment

Operations	Operational Emissions (pounds/day)[1]			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maintenance of Recharge Basin				
Project Emissions	22.3	9.8	9.5	6
Significance Threshold	236	2,817	44	14
Exceeds Threshold?	No	No	No	No

Notes:
NO_x = Oxides , CO = Carbon Monoxide, PM_{10} = Particulate Matter less than 10 microns, and $PM_{2.5}$ = Particulate Matter less than 2.5 microns
[1] The operational emissions are based on the use of a bulldozer and one water truck during the routine maintenance of the recharge basin.
Source: Appendix B, Air Quality and Greenhouse Gas Emissions.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance Before Mitigation

Less than significant impact.

Criteria Pollutant

Impact AIR-3	**The project could 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).**

Impact Analysis

Section 15130(b) of the CEQA Guidelines states the following:

> The following elements are necessary to an adequate discussion of significant cumulative impacts: 1) Either: (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact.

In accordance with CEQA Guidelines 15130(b), this analysis of cumulative impacts is based on a summary of projections analysis. This analysis considers the current CEQA Guidelines, which

includes the recent amendments approved by the Natural Resources Agency and effective on March 18, 2010. This analysis is based on the 2003 and 2007 AQMPs. The South Coast Air Basin is in nonattainment for ozone, particulate matter (PM_{10} and $PM_{2.5}$), and nitrogen dioxide, which means that concentrations of those pollutants currently exceed the ambient air quality standards for those pollutants. When concentrations of ozone, PM_{10}, $PM_{2.5}$, and nitrogen dioxide exceed the ambient air quality standard, then those sensitive to air pollution (i.e., children, elderly, sick) could experience health effects such as decrease of pulmonary function and localized lung edema in humans and animals, increased mortality risk, and risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans.

Under the amended CEQA Guidelines, cumulative impacts may be analyzed using other plans that evaluate relevant cumulative effects. The AQMPs describe and evaluate the future projected emissions sources in the South Coast Air Basin and sets forth a strategy to meet both state and federal Clear Air Act planning requirements and federal ambient air quality standards. Therefore, the AQMPs are relevant plans for a CEQA cumulative impacts analysis as the guiding documents in bringing the basin into compliance with federal ambient air quality standards. The 2003 AQMP updates the attainment demonstration for the federal standards for ozone and PM_{10}; replaces the 1997 attainment demonstration for the federal CO standard and provides a basis for a maintenance plan for CO for the future; and updates the maintenance plan for the federal nitrogen dioxide standard that the South Coast Air Basin has met since 1992. The 2007and 2012 AQMPs focus on ozone and $PM_{2.5}$. The AQMP also incorporates significant new scientific data, emission inventories, ambient measurements, control strategies, and air quality modeling.

In accordance with CEQA Guidelines section 15064, subdivision (h)(3), a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program. As identified in Impact AIR-1, the project complies with the control measures in the 2003, 2007, and 2012 AQMPs and all of the SCAQMD's applicable rules and regulations. Under the CEQA Guidelines Amendments, the lead agency should explain how implementing the particular requirements in the plan, regulation, or program, ensure that the project's incremental contribution to the cumulative effect is not cumulatively considerable. To explain how implementing the requirements in the AQMPs ensures the project's incremental contribution to the cumulative effect is not cumulatively consideration, the following three-pronged analysis was performed. To result in a less than significant impact, the following criteria must be true:

1. Regional analysis: emissions of nonattainment pollutants below the regional significance thresholds.

2. Plan approach: project consistency with current air quality attainment plans including control measures and regulations.

3. Cumulative health impacts: less than significant cumulative health effects of the nonattainment pollutants.

Criterion 1: Regional Analysis

If an area is in nonattainment for a criteria pollutant, then the background concentration of that pollutant has historically exceeded the ambient air quality standard. It follows that if a project exceeds the regional threshold for that nonattainment pollutant, then it would result in a cumulatively considerable net increase of that pollutant and result in a significant cumulative impact.

The South Coast Air Basin is in nonattainment for PM_{10}, $PM_{2.5}$, nitrogen dioxide, and ozone. Therefore, if the project exceeds the regional thresholds for PM_{10}, or $PM_{2.5}$, then it contributes to a cumulatively considerable impact for those pollutants. If the project exceeds the regional threshold for NO_X or VOC, then it follows that the project would contribute to a cumulatively considerable impact for ozone. If the project exceeds the NO_X threshold, it could contribute cumulatively to nitrogen dioxide concentrations.

Construction

The regional assessment includes all project-generated emissions from both onsite sources such as off-road construction equipment and off-site sources including worker and haul truck emission sources. Table 3.1-13 compares the project regional construction emissions with the relevant SCAQMD regional construction emission significance threshold. As noted from this table, the project's construction emissions could exceed the SCAQMD's regional emission significance thresholds for NO_X emissions during the recharge basin construction phase. In addition, the regional significance threshold for NO_X could also be exceeded if the construction of the recharge basins, the pipeline construction, or the service connection construction occurred simultaneously. As such, the project results in a significant regional air quality impact.

Table 3.1-13: Project Regional Construction Significance Assessment

Construction Phase	Construction Emissions (pounds/day)				VOC	SOx
	NO_X	CO	PM_{10}	$PM_{2.5}$		
Recharge Basin						
Project Emissions	105.0	44.2	12.6	8.6	8.8	0.1
Significance Threshold	100	550	150	55	75	150
Exceeds Threshold?	Yes	No	No	No	No	No
Well Construction						
Project Emissions	46.9	32.7	2.1	2.0	6.1	0.1
Significance Threshold	100	550	150	55	75	150
Exceeds Threshold ?	No	No	No	No	No	No

Table 3.1-13 (cont.): Project Regional Construction Significance Assessment

Construction Phase	Construction Emissions (pounds/day)				VOC	SOx
	NO_X	CO	PM_{10}	$PM_{2.5}$		
Pipeline Construction[1]						
Project Emissions	75.9	39.5	22.7	6.3	6.8	0.2
Significance Threshold	100	550	150	55	75	150
Exceeds Threshold?	No	No	No	No	No	No
Service Connection						
Project Emissions	9.8	6.4	0.5	0.5	0.9	0.1
Significance Threshold	100	550	150	55	75	150
Exceeds Threshold?	No	No	No	No	No	No

Note:
[1] Daily total during the pipeline excavation and shoring, installation, jack and bore, and street restoration construction
Source: Source: Appendix B, Air Quality and Greenhouse Gas Emissions.

Operations

The project's regional operational emissions results from the off-road equipment used in the maintenance of the recharge basin (i.e., bulldozer, water truck, and haul truck) and worker vehicles associated with the maintenance activities. The operation of the irrigation water pump is assumed to be electrically powered. Table 3.1-14 provides the estimate of the project's operational emissions along with the relevant SCAQMD regional operational emission significance thresholds. As noted from this table, the project's operational emissions would not exceed the SCAQMD's regional operational emission significance thresholds.

Table 3.1-14: Project Regional Operational Significance Assessment

Operations	Operational Emissions (pounds/day)				VOC
	NO_X	CO	PM_{10}	$PM_{2.5}$	
Project Emissions	22.9	10.6	10.4	6	1.8
Significance Threshold	55	550	150	55	55
Exceeds Threshold?	No	No	No	No	No

Source: Appendix B, Air Quality and Greenhouse Gas Emissions.

Summary

The regional significance analysis of project impacts indicates that construction emissions would exceed the SCAQMD regional construction emission significance threshold for NO_X. Therefore, the project would have a regionally cumulative impact according to this criterion.

Criterion 2: Plan Approach

The geographic scope for cumulative criteria pollution from air quality impacts is the South Coast Air Basin, because that is the area in which the air pollutants generated by the sources within the air basin circulate and are often trapped. The SCAQMD is required to prepare and maintain an AQMP and a State Implementation Plan to document the strategies and measures to be undertaken to reach attainment of ambient air quality standards. While the SCAQMD does not have direct authority over land use decisions, it is recognized that changes in land use and circulation planning are necessary to maintain clean air. The SCAQMD evaluated the entire air basin when it developed the AQMP.

According to the analysis contained in Impact AQ-2, the project is not consistent with the most recent AQMP without mitigation. Therefore, the project presents a potentially significant impact according to this criterion.

Criterion 3: Cumulative Health Impacts

The air basin is in nonattainment for ozone, nitrogen dioxide, PM_{10}, and $PM_{2.5}$, which means that the background levels of those pollutants are at times higher than the ambient air quality standards. The air quality standards were set to protect public health, including the health of sensitive individuals (such as the elderly, children, and the sick). Therefore, when the concentration of those pollutants exceeds the standard, it is likely that some sensitive individuals in the population would experience health effects that were described in Table 3.1-3. The concentration of the pollutant in the air, the length of time exposed, and the response of the individual are factors involved in the severity and nature of health impacts. If a significant health impact results from project emissions, it does not mean that 100 percent of the population would experience health effects.

The regional analysis of construction emissions indicates that without mitigation, the project would exceed the SCAQMD regional significance thresholds for NO_X. NO_X is a precursor to ozone. Because ozone is a secondary pollutant (it is not emitted directly but formed by chemical reactions in the air), it can be formed miles downwind of the project site. Project emissions of NO_X may contribute to the background concentration of ozone and nitrogen dioxide and cumulatively cause health effects, such as those identified in Table 3.1-3.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implementation of Mitigation Measures AIR-1 and AIR-2 are required.

Level of Significance After Mitigation

Less than significant impact.

Mitigation Measures AIR-1 and AIR-2 are required to reduce project's regional construction emissions of NO_X during the construction of the recharge basin to less than significant levels. The mitigated construction emissions during the construction of the recharge basin are shown in Table 3.1-15. As shown below, the mitigated construction emissions would not exceed the NO_X threshold. Since Mitigation Measures AIR-1 and AIR-2 would reduce the proposed project's NO_X emissions to less than the SCAQMD threshold, the project's contribution to NO_X emissions as well as the contribution to background concentrations of ozone and nitrogen dioxide would be less than cumulatively considerable, and thus less than significant.

Table 3.1-15: Project Regional Construction Significance Assessment (with Mitigation)

Construction Phase	Construction Emissions (pounds/day)				VOC	SO_X
	NO_X	CO	PM_{10}	$PM_{2.5}$		
Recharge Basin						
Project Emissions	93.9	54.7	12.3	8.2	8.5	0.0
Significance Threshold	100	550	150	55	75	150
Exceeds Threshold?	No	No	No	No	No	No
Source: Appendix B, Air Quality and Greenhouse Gas Emissions.						

Sensitive Receptors

Impact AIR-4 **The project would not expose sensitive receptors to substantial pollutant concentrations.**

Impact Analysis

Localized Significance Threshold Analysis

The localized construction analysis uses thresholds that represent the maximum emissions for a project that would not cause or contribute to an exceedance of the most stringent applicable national or state ambient air quality standard (SCAQMD 2008). The thresholds are developed based on the ambient concentrations of that pollutant for each source receptor area and on the location of the sensitive receptors. The sensitive receptors locations are provided in Table 3.1-5. If the project results in emissions under those thresholds, it follows that the project would not cause or contribute to an exceedance of the standard. The standards are set to protect the health of sensitive individuals. If the standards are not exceeded at the sensitive receptor locations, it follows that the receptors would not be exposed to substantial pollutant concentrations.

The localized construction analysis (Impact AIR-2) demonstrated that without mitigation, the project would not exceed the localized significance thresholds for each individual construction phase nor

during the overlapping of any construction phase because of the different locations where the phased construction would occur. Therefore, according to this criterion, the air pollutant emissions during operation would be less than significant, would not exceed the ambient air quality standards in the immediate project vicinity, and would not result in health effects near the project site.

During operation (Impact AIR-2), the project's operational emissions would not exceed any local emission significance threshold. Therefore, according to this criterion, the air pollutant emissions during operation would be less than significant, would not exceed the ambient air quality standards in the immediate project vicinity, and would not result in health effects near the project site.

Toxic Air Pollutants

The off-road diesel equipment used during construction and operation would emit diesel particulate matter (DPM), which is identified as a carcinogen by the ARB. The State of California has determined that DPM from diesel-fueled engines poses a chronic health risk with chronic (long-term) inhalation exposure. The California Office of Environmental Health Hazard Assessment (OEHHA) recommends using a 70-year exposure duration for determining residential cancer risks.

Although construction of the project would involve the use of diesel-fueled vehicles, construction activities cause short-term exposure, and there are no methodologies to calculate short-term risks. The OEHHA methodologies establish long-term exposure variants of 9-, 30-, and 70-year exposures in "The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments." These exposures are chosen to coincide with EPA's estimates of the average (9 years), high-end estimates (30 years) of residence time, and a typical lifetime (70 years). OEHHA states their support for the use of cancer potency factors for estimating cancer risk for these exposure durations. However, as the exposure duration decreases, the uncertainties introduced by applying cancer potency factors derived from very-long-term studies increases. Short-term high exposures are not necessarily equivalent to longer-term lower exposures even when the total dose is the same. OEHHA therefore does not support the use of current cancer potency factor to evaluate cancer risk for exposures of less than 9 years (The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, page 8-4).

DPM during operation is expected to be minimal, and will only occur over one week per year. Toxic exposure from DPM during operation would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Odors

Impact AIR-5	The project would not create objectionable odors affecting a substantial number of people.

Impact Analysis

Background Information

Odors can cause a variety of responses. The impact of an odor results from interacting factors such as frequency (how often), intensity (strength), duration (in time), offensiveness (unpleasantness), location, and sensory perception.

Odor is typically a warning system that prevents animals and humans from consuming spoiled food or toxic materials. Odor-related symptoms reported in a number of studies include nervousness, headache, sleeplessness, fatigue, dizziness, nausea, loss of appetite, stomach ache, sinus congestion, eye irritation, nose irritation, runny nose, sore throat, cough, and asthma exacerbation (SCAQMD 2007a).

The SCAQMD's role is to protect the public's health from air pollution by overseeing and enforcing regulations (SCAQMD 2007a). The SCAQMD's resolution activity for odor compliance is mandated under California Health & Safety Code Section 41700, and falls under SCAQMD Rule 402. This rule on Public Nuisance Regulation states: "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals."

The SCAQMD indicates that the number of overall complaints has declined over the last five years. Over the last four years, odor complaints make up 50 to 55 percent of the total nuisance complaints. Over the past decade, odors from paint and coating operations have decreased from 27 to 7 percent and odors from refuse collection stations have increased from 9 to 34 percent (SCAQMD 2007a).

Project Analysis

The SCAQMD recommends that odor impacts be addressed in a qualitative manner. Such an analysis shall determine whether the project would result in excessive nuisance odors, as defined under the California Code of Regulations and Section 41700 of the California Health and Safety Code, and thus would constitute a public nuisance related to air quality.

Land uses typically considered associated with odors include wastewater treatment facilities, waste-disposal facilities, or agricultural operations. The project does not contain land uses typically associated with emitting objectionable odors. There should not be any odors associated with the water in the basin, since the SGPWA maintains the basins to ensure that odors do not occur.

Diesel exhaust and VOCs would be emitted during construction of the project, which are objectionable to some; however, emissions would disperse rapidly both vertically and horizontally from the project site, and therefore, would not reach an objectionable level as it travels offsite to sensitive receptors.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

3.2 - Biological Resources

This section describes the potential biological resources effects of project implementation on the project site and its surrounding area. The proposed project (i.e., the recharge facility, pipeline, service connection site, and offsite triangular parcel) is located in an area that is covered by the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The MSHCP is a comprehensive, multi-jurisdictional habitat conservation plan (HCP) focusing on conservation of species and their associated habitats in western Riverside County. The SGPWA, project applicant and lead agency, is not a signatory or a Participating Special Entity to the MSHCP, and therefore, SGPWA discretionary approvals, such as those associated with the proposed Beaumont Avenue Recharge Facility and Pipeline Project, are not covered under the MSHCP. Therefore, the SGPWA discretionary approvals are not required to be consistent with the Western Riverside County MSHCP, and a MSHCP Consistency Analysis is not required for the SGPWA discretionary approvals. Although the SGPWA discretionary approvals are not required to be consistent with the MSHCP, SGPWA has chosen to use information from the MSHCP to determine potential impacts associated with the SGPWA discretionary approvals. In addition to the SGPWA discretionary approvals, the implementation of the proposed pipeline component of the project that extends under the Noble Creek and Mountain View Channel (MVC) concrete culverts at Beaumont Avenue and Orchard Street will require an encroachment permit that is a discretionary action by the Riverside County Flood Control and Water Conservation District (RCFCWCD) who is a signatory to the MSHCP. In addition, the implementation of the proposed pipeline component of the project that extends from the recharge facility site to Brookside Avenue (approximately 10 linear feet) and then to Beaumont Avenue (approximately 180 liner feet) will require an encroachment permit that is a discretionary action by the City of Beaumont who is a signatory to the MSHCP. Therefore, these portions of the proposed pipeline will be covered under the MSHCP and will be required to be consistent with the MSHCP. A MSHCP Consistency Analysis for those portions of the pipeline extending under the Noble Creek and MVC concrete box culverts at Beaumont Avenue and Orchard Street as well as the portions from the recharge facility to Beaumont Avenue is required.

Descriptions and analysis in this section are based on information contained in the April 2013 Habitat Assessment and MSHCP Consistency Analysis; the April 2013 Jurisdictional Delineation (JD); and the January 2013 Focused Los Angeles Pocket Mouse (LAPM) Survey Report, all of which were prepared by Michael Brandman Associates. The Habitat Assessment and MSHCP Consistency Analysis, JD, and Focused LAPM Survey Report are included in this Draft EIR as Appendix C.

3.2.1 - Existing Conditions

The project survey area includes the proposed recharge basin, pipeline alignment, service connection site, and the offsite triangular parcel. The survey area has a constant gradient with elevations higher in the northern portion of the study area compared to the southern portion of the study area. Elevations range from 2,530 to 2,680 feet above mean sea level. The Beaumont, California USGS

7.5-minute topographic quadrangle depicts Noble Creek as a blue-line stream between the proposed recharge facility and the offsite triangular parcel as well as crossing under Brookside Avenue and Beaumont Avenue. The project survey area contains developed land as well as undeveloped land consisting of four major plant communities: ruderal, Riversidean sage scrub (RSS), Riversidean alluvial fan sage scrub (RAFSS), and disturbed. Existing land uses surrounding the project areas are as follows:

Recharge Basin Site - The Mountain View Middle School is to the south, Noble Creek to the north, undeveloped land to the west, and Beaumont Avenue as well as the Beaumont Sports Park to the east.

Pipeline Alignment - Land uses adjacent to the proposed pipeline generally consist of residential and commercial uses, although specific uses such as Beaumont High School and the Beaumont-Cherry Valley Water District's Recharge Facility and the City of Beaumont Recreational Park also occur in the vicinity of the alignment.

Service Connection Site - Low density single-family residential uses are located to the north, west, and south. To the east is the Mountain View Channel and further east are single-family residential uses.

Offsite Triangular Parcel - Beaumont High School is located to the north, the Mountain View Channel is located to the west and further west is undeveloped land and the Brookside Elementary School, and Noble Creek is located to the south and east.

Soils

Exhibit 3.2-1 shows soils that are mapped within the project survey area. The four soil series located within the project site include Gorgonio, Greenfield, Hanford, and Tujunga.

The Gorgonio and Hanford series are somewhat excessively-drained to excessively-drained soils on alluvial fans. These soils developed in alluvium consisting mainly of granitic materials. In a typical profile of the Gorgonio series, the surface layer is loamy fine sand about 15 inches thick followed by stratified gravelly loamy sand and gravelly loamy fine sand to a depth of more than 60 inches. Gorgonio series mapping units include Gorgonio loamy sand and Gorgonio gravelly loamy fine sand. The Hanford profile consists of coarse sandy loam in the upper 18 inches and stratified coarse sandy loam and loamy sand below. The Hanford series mapping units include Hanford coarse sandy loam.

The Greenfield series consists of deep, well-drained soils that formed in moderately coarse and coarse textured alluvium derived from granitic and mixed rock sources. Greenfield soils are on alluvial fans and terraces and have slopes of 0 to 30 percent. The Greenfield series mapping unit is Hanford coarse sandy loam.

Source: ESRI Aerial Imagery. USDA Riverside County Soil Series Data.

NORTH

1,000 500 0 1,000

Feet

Michael Brandman Associates

Exhibit 3.2-1
Soils Map

The Tujunga series consists of excessively drained soils on alluvial fans and flood plains. These soils also developed in alluvium from predominately granitic materials. In a typical profile, the surface layer is light-gray loamy sand about 10 inches thick. Below this layer are light-gray fine sand and sand. The Tujunga series mapping units include Tujunga loamy sand and Tujunga gravelly loamy sand. Based on a review of the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP), none of these soils listed above are designated as sensitive.

Plant Communities

Based on field surveys that were conducted in June and December 2012 as well as a review of aerial photographs, plant communities were mapped within the project survey area as shown on Exhibit 3.2-2. The proposed project sites collectively consist of approximately 57.2 acres, which includes the recharge facility, pipeline, service connection site, and the offsite triangular parcel. Following are the plant communities found within the project sites.

Ruderal

Ruderal vegetation consists mainly of non-native herb species often in association with annual grasses and occasional native annual forbs. These forbs and grasses begin to germinate with the fall rains, grow during the winter and spring, and wither in the early summer. The dominant plant species within the ruderal habitat consists of red-stemmed filaree (*Erodium cicutarium*), dove weed (*Eremocarpus setigerus*), bromes (*Bromus* sp.), and wild oats (*Avena fatua*). The project survey area contains approximately 49.9 acres of ruderal vegetation.

Riversidean Sage Scrub

RSS is a natural plant community that is widespread throughout Riverside County. RSS vegetation typically consists of low-growing, drought deciduous, and evergreen shrubs that occur on steep and/or gentle sloping topography. This community is often found on xeric sites with severely drained soils, or clays that release stored soil moisture slowly. Stands of RSS range from fairly open to dense, are typically dominated by California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*), and are often found intergraded with chaparral, grassland, and ruderal-type plant communities (Holland 1986).

The RSS community is dominated almost entirely by California buckwheat. A small patch of this low-growing scrub habitat occurs within the triangular parcel north of Noble Creek and south of Brookside Avenue. The project survey area contains approximately 0.4 acre of RSS.

Riversidean Alluvial Fan Sage Scrub

RAFSS is a subtype of coastal sage scrub that occurs on sandy, rocky alluvium deposited by streams that experience infrequent episodes of flooding. RAFSS is composed of an assortment of drought-deciduous sub-shrubs and large, evergreen, woody shrubs that are adapted to the periodic and intense episodes of flooding and erosion that occurs along the alluvial fans. Scalebroom (*Lepidospartum squamatum*) has a high fidelity to alluvial substrates and is found throughout RAFSS. Other species

commonly occurring in RAFSS include California buckwheat, hairy yerba santa (*Eriodictyon trichocalyx*), sugarbush (*Rhus ovata*), Whipple's yucca (*Hesperoyucca whipplei*), and mulefat (*Baccharis salicifolia*).

There is RAFSS that is located immediately north of the proposed recharge basin within Noble Creek; however, there is no RAFSS habitat that is located in the northern portion of the proposed recharge basin. The dominant plants observed in the RAFSS habitat within Noble Creek include scalebroom, California buckwheat, and California croton (*Croton californicus*).

Remnant Riversidean Alluvial Fan Sage Scrub

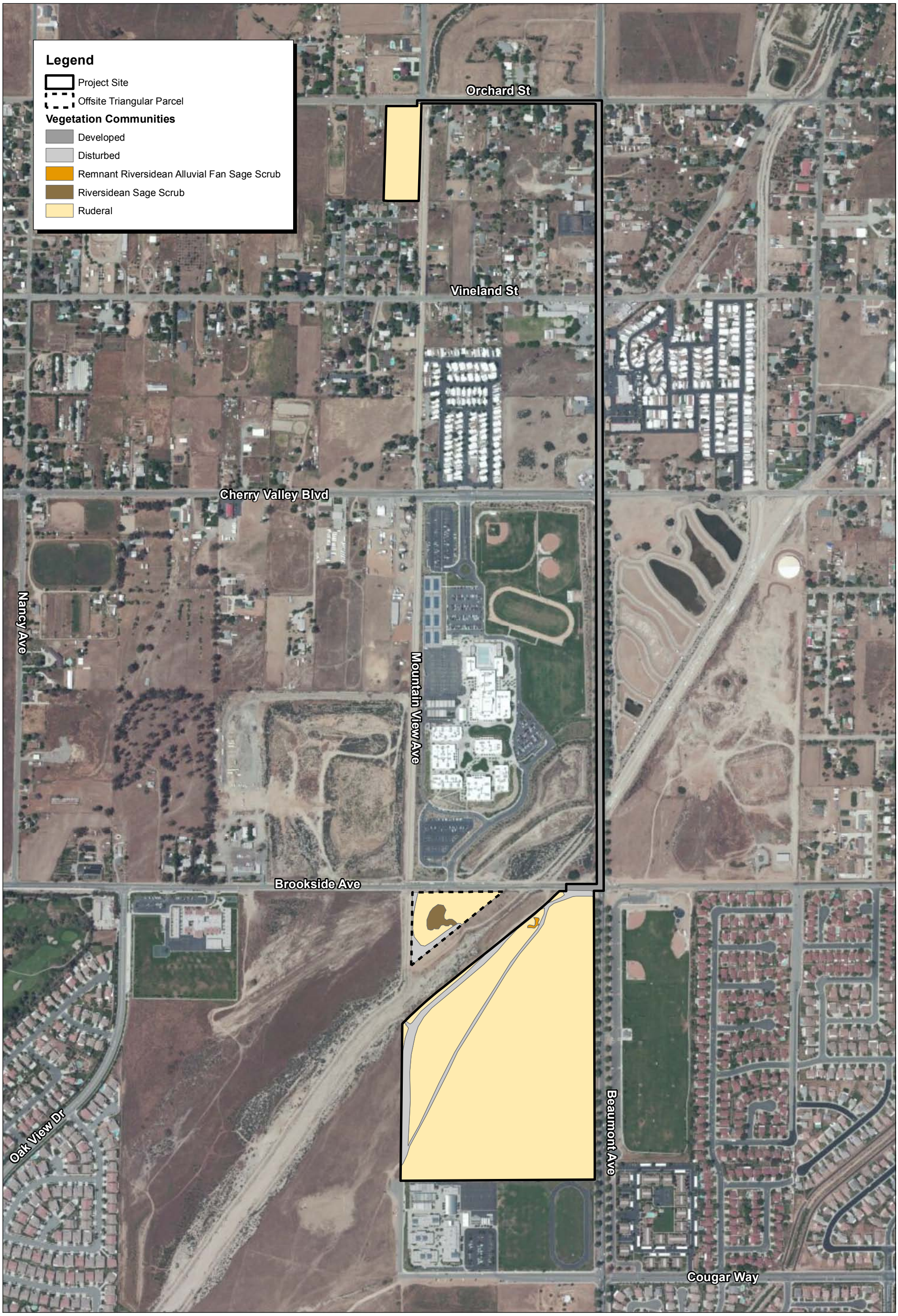
Remnant RAFSS is a subtype of RAFSS found in areas where scalebroom is found but the possibility of periodic flooding is no longer possible due to disturbance or development. There is a small area in the north portion of the proposed recharge facility (i.e., south and east of Noble Creek) that contains remnant RAFSS. The area contains some scattered scalebroom in an area surrounded by ruderal vegetation. The project survey area contains 0.05 acre (rounded to 0.1 acre) of low quality remnant RAFSS.

Developed

Developed habitat includes any form of human disturbance, especially in cases of permanent removal of natural communities. By definition, Developed areas include areas covered in pavement or asphalt, such as buildings, roads, and sidewalks. The proposed pipeline alignment is within Brookside Avenue, Beaumont Avenue, and Orchard Avenue; these areas are defined as Developed. The pipeline will be placed in a trench beneath the existing roadbed. In addition, the pipeline will extend under the Noble Creek and Mountain View Channel (MVC) concrete culverts at Beaumont Avenue and Orchard Street. The project survey area contains approximately 3.3 acres of Developed areas.

Disturbed

Disturbed habitat includes areas in which the vegetative cover comprises less than 10 percent of the surface area (disregarding natural rock outcrops). These areas often contain evidence of soil surface disturbance and compaction from previous legal human activity. Also, where the vegetative cover is greater than 10 percent, there is often soil surface compaction associated with the disturbed nature of the site. There are areas of dirt roads within the proposed basin site and areas of mostly bare soil along Brookside Avenue. There are also areas of dirt roads and disturbed ground within the offsite triangular parcel. The project survey area contains approximately 3.5 acres of disturbed area.



Source: ESRI Aerial Imagery. MBA Field Survey and GIS Data, 2013.

NORTH

600 300 0 600

Feet

Michael Brandman Associates

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Exhibit 3.2-2
Vegetation Communities

SAN GORGONIO PASS WATER AGENCY
BEAUMONT AVENUE RECHARGE FACILITY AND PIPELINE PROJECT
ENVIRONMENTAL IMPACT REPORT

Table 3.2-1: Project Survey Area Plant Communities

Plant Community	Total Survey Area (acres)				
	Recharge Basin Site	Pipeline	Service Connection Site	Offsite Triangular Parcel	Total Survey Area
Ruderal	44.0	0.0	3.5	2.4	49.9
Riversidean Sage Scrub	0.0	0.0	0.0	0.4	0.4
Riversidean Alluvial Fan Sage Scrub	0.0	0.0	0.0	0.0	0.0
Remnant Riversidean Alluvial Fan Sage Scrub	0.1	0.0	0.0	0.0	0.1
Developed	0.0	3.3	0.0	0.0	3.3
Disturbed	2.9	0.0	0.0	0.6	3.5
Total	**47.0**	**3.3**	**3.5**	**3.4**	**57.2**
Source: Michael Brandman Associates, Habitat Assessment, 2013.					

Nesting Birds

The project sites contain plant communities that provide suitable nesting habitat for a number of avian species. The Riversidean Sage Scrub and Riversidean Alluvial Fan Sage Scrub habitat provide suitable nesting habitat for a number of shrub nesting species such as wrentit (*Chamaea fasciata*) and California towhee (*Pipilo crissalis*). The Ruderal vegetation community may provide suitable habitat for ground nesting birds such as western meadowlark (*Sturnella neglecta*) or killdeer (*Charadrius vociferus*).

Jurisdictional Waters of the United States

Exhibit 3.2-3 shows United States Army Corps of Engineers (USACE) jurisdiction drainage features that are mapped within the project area. The USACE jurisdictional delineation survey area encompassed the project sites as well as within Noble Creek and portions of the Mountain View Channel (MVC). A jurisdictional delineation was completed to determine the acreage of USACE jurisdictional waters within these areas. The two drainage features that were evaluated as part of the USACE jurisdictional delineation included Noble Creek and the MVC, both of which are under USACE jurisdiction. Noble Creek is a drainage feature that conveys flows from the northeast to the southwest. MVC is a drainage that conveys flows north to south and terminates into Noble Creek.

The proposed pipeline extends under the existing Noble Creek concrete box culvert at Beaumont Avenue and extends under the existing MVC concrete box culvert at Orchard Street. There are USACE jurisdictional areas located within Noble Creek and MVC but not under the existing box culvert at these two crossings. Based on the Jurisdictional Delineation that was prepared for the project, there are no USACE jurisdictional areas on the proposed recharge facility site, the service

connection site, or the offsite triangular parcel. In addition, there are no other USACE jurisdictional areas along other portions of the pipeline alignment.

Jurisdictional Waters of the State

Exhibit 3.2-3 shows California Department of Fish and Wildlife (CDFW) jurisdiction drainage features that are mapped within the project area. The CDFG jurisdictional delineation survey area encompassed the project sites as well as within Noble Creek and portions of the MVC. A jurisdictional delineation was completed to determine the acreage of CDFW jurisdictional waters within these areas. Similar to the evaluation of USACE jurisdictional areas, the two drainage features that were evaluated as part of the CDFW jurisdictional delineation included Noble Creek and the MVC, both of which are under CDFW jurisdiction.

The proposed pipeline extends under the existing Noble Creek concrete box culvert at Beaumont Avenue and extends under the existing MVC concrete box culvert at Orchard Street, and there are CDFW jurisdictional areas located within Noble Creek and MVC but not under the existing box culvert at these two crossings. Based on the Jurisdictional Delineation that was prepared for the project, there are no CDFW jurisdictional areas on the proposed recharge facility site, the service connection site, or the offsite triangular parcel. In addition, there are no other CDFW jurisdictional areas along other portions of the pipeline alignment.

Habitat Assessment Methodology

Western Riverside County MSHCP Consistency Analysis

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) is a comprehensive, multi-jurisdictional habitat conservation plan (HCP) focusing on conservation of species and their associated habitats in western Riverside County. The goal of the MSHCP is to maintain biological and ecological diversity within a rapidly urbanizing region. The SGPWA, project applicant and lead agency, is not a signatory or a Participating Special Entity to the MSHCP, and therefore, SGPWA discretionary approvals, such as those associated with the proposed Beaumont Avenue Recharge Facility and Pipeline Project, are not covered under the MSHCP. Therefore, the SGPWA discretionary approvals are not required to be consistent with the Western Riverside County MSHCP, and a MSHCP Consistency Analysis is not required for the SGPWA discretionary approvals.

In addition to the SGPWA discretionary approvals, the implementation of the proposed pipeline component of the project that extends under the Noble Creek and Mountain View Channel (MVC) concrete culverts at Beaumont Avenue and Orchard Street will require an encroachment permit that is a discretionary action by the Riverside County Flood Control and Water Conservation District (RCFCWCD) who is a signatory to the MSHCP. Therefore, these portions of the proposed pipeline will be covered under the MSHCP and will be required to be consistent with the MSHCP.

Source: ESRI Aerial Imagery. MBA Field Survey and GIS Data, 2013.

NORTH

600 300 0 600

Feet

Michael Brandman Associates

31780004 • 06/2013 | 3.2-3_Drainage_Location_Map.mxd

Exhibit 3.2-3
CDFW Jurisdictional Map

SAN GORGONIO PASS WATER AGENCY
BEAUMONT AVENUE RECHARGE FACILITY AND PIPELINE PROJECT
ENVIRONMENTAL IMPACT REPORT

An MSHCP Consistency Analysis for those portions of the pipeline extending under the Noble Creek and MVC concrete box culverts at Beaumont Avenue and Orchard Street is required.

Although the SGPWA discretionary approvals associated with the proposed project are not required to be consistent with the MSHCP, SGPWA has chosen to use information from the MSHCP to determine potential impacts associated with the SGPWA discretionary approvals. As an example, the entire proposed project was reviewed to determine if the project site locations were within MSHCP Criteria Cells, core habitat, and wildlife movement corridors, or if areas were proposed for future conservation. Based on a review of the MSHCP, the project sites are not located in a MSHCP Criteria Cell, core habitat, wildlife corridors, or in or adjacent to MSHCP conservation areas. In addition, the Riverside County Integrated Project (RCIP) Conservation Summary Report Generator was queried to determine the need for habitat assessment and potential surveys for the project sites. Based on the query, an assessment of species associated with riparian/riverine areas and vernal pools were identified as well as an assessment of burrowing owl (BUOW), Los Angeles Pocket Mouse (LAPM), and narrow endemic plant (NEP) species. Following is an evaluation of each identified habitat/species.

Riparian/Riverine Habitat

Based on a field survey of the project sites, there are no riparian plant species present within the project survey area. Scouring by Noble Creek has created riverine habitat (i.e., RAFSS) within the creek in close proximity of and north of the proposed recharge basin; however, there is no RAFSS habitat located on the northern portion of the proposed recharge basin site.

Riparian/Riverine Species

Based on the field survey of the project sites, there were no riparian or riverine habitat located on the project sites, including the northern portion of the proposed recharge basin site.

Since the northern portion of the proposed recharge basin is located immediately adjacent to riverine habitat (RAFSS), a focused survey for the Los Angeles Pocket Mouse (LAPM) was conducted in this area. Based on the focused survey, LAPM were present within the RAFSS and a small buffer around the RAFSS within Noble Creek and the offsite triangular parcel. Therefore, there were no LAPM located within the northern portion of the proposed recharge basin.

The remnant 0.1 acre of RAFSS on the recharge facility site is not considered riverine habitat because riverine habitat needs an active drainage for the long-term conservation of riparian and riverine species. Moisture within a drainage feature provides the necessary element to support riparian and riverine habitat and species. The remnant RAFSS no longer has an active drainage associated with this 0.1-acre area. Based on a review of Section 6.1.2 of the MSHCP, which includes a list of riparian/riverine species, these species include amphibians, birds, fish, invertebrates-crustaceans and plants. The amphibian species include arroyo toad, mountain yellow-legged frog, and California red-

legged frog. The bird species include bald eagle, least Bell's vireo, peregrine falcon, southwestern willow flycatcher, and western yellow-billed cuckoo. The fish species includes Santa Ana sucker. The invertebrates - crustaceans species include Riverside fairy shrimp and vernal pool fairy shrimp. The plant species include Brand's phacelia, California Orcutt grass, California black walnut, Coulter's matilija poppy, Engelmann oak, Fish's milkwort, graceful tarplant, lemon lily, Mojave tarplant, mud nama, ocellated Humboldt lily, Orcutt's brodiaea, Parish's meadowfoam, prostrate navarretia, San Diego button-celery, San Jacinto Valley crownscale, San Miguel savory, Santa Ana River woolly-star, slender-horned spine flower, smooth tarplant, spreading navarretia, thread-leaved brodiaea, and vernal barley. The 0.1-acre area is not suitable to support the riparian/riverine species listed above because these species require a drainage feature.

Vernal Pools/Fairy Shrimp Habitat

No depressions or areas where water could pool were observed on the project sites, and no ponded areas or depressions that could support fairy shrimp habitat occur in the project survey area.

Burrowing Owl

Portions of the recharge facility site are included in the MSHCP habitat assessment area for burrowing owl (BUOW). BUOW is a state species of concern due to a decline in their population over the past 30 years. The species occurs in short-grass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), prairies, coastal dunes, and desert floors. However, BUOW is particularly adaptive and may occur in such varied uses as golf courses, road allowances, airports, vacant lots, school campuses, fairgrounds, abandoned buildings, and irrigation ditches.

The presence of recently excavated burrows is the primary habitat requirement for nesting, but the species may also use pipes, culverts, and nest boxes where burrows are scarce. One burrow is typically selected for use as the nest, although satellite burrows are usually found within the immediate vicinity of the nest burrow within the defended territory. While, open areas with short vegetation are critical for nesting, there is some evidence that BUOW prefer a vegetation mosaic with nesting habitat interspersed within taller vegetation for hunting. However, the primary requirement for suitable BUOW foraging habitat appears to be low vegetation cover that allows visibility and access to prey.

According to a California Natural Diversity Database (CNDDB) records search, there is one record of BUOW occurrence in the general project vicinity, dating back to 1921. This record is located in the Badlands area near Gilman Hot Springs Road approximately 6.5 miles southeast of the project area. During the field surveys, suitable California ground squirrel and desert cottontail burrows were observed immediately north of the proposed recharge facility site, within the terraces of Noble Creek. During the spring, the recharge facility site does not provide suitable habitat for BUOW due to the presence of tall growing mustard and fiddleneck, dense vegetative cover that does not provide suitable foraging habitat for this species.

Los Angeles Pocket Mouse

LAPM is a California Special Concern (CSC) species as designated by the CDFW. LAPM prefers fine, sandy soils for burrowing and occurs in sparsely vegetated, lower elevation grassland and coastal sage scrub. Evidence indicates that pocket mice avoid dense grass cover because of difficulty locomoting and finding seeds. This species can be found along the benches of sandy washes, as it provides the necessary habitat components.

Portions of the project survey area provides suitable LAPM habitat, particularly on the first and second terraces of Noble Creek. These benches are sparsely vegetated with RAFSS and ruderal vegetation and occur with sandy soils. The CNDDB has a record for LAPM occurrence approximately 2.3 miles northeast of the project site. Because of the presence of suitable habitat for LAPM and a nearby historical record, a focused survey was conducted and provided in Appendix C of this Draft EIR.

The trapping survey resulted in several LAPM being captured within the RAFSS and RSS on the recharge facility site and the offsite triangular parcel, respectively. A total of 33 LAPM captures were recorded on Transects 2 to 5 during this survey (Table 3.2-2). Transect 1 was not located on any portions of the project site, and there were no LAPM that were caught along Transect 1. LAPM were captured along the length of Transects 3 to 5. However, they were only trapped in Transect 2 (i.e., the remnant RAFSS south and east of Noble Creek) along the portion of the transect that intersected the isolated RAFSS plant community and not in the adjacent ruderal vegetation.

Based on the survey results, LAPM are only found within suitable habitat within the project survey area, which includes all RSS and RAFSS habitat, as well as a small buffer area surrounding these vegetation communities (i.e., in the areas of Transects 3 through 5), which is often associated with an ecotone, a transitional area between two vegetation communities that has elements of both vegetation communities. This buffer area around the RAFSS within Noble Creek is located immediately north of the northern boundary of the proposed recharge basin site.

As stated previously, the SGPWA's discretionary action to approve the proposed construction and operational activities on the proposed recharge basin and the offsite triangular parcel are not covered by the MSHCP; therefore, the provisions of CEQA are required to be followed which requires a determination of the level of impact.

Two mammal species in total were trapped and included LAPM and deer mouse (*Peromyscus maniculatus*).

Table 3.2-2: Focused Trapping Results

Night	Los Angeles Pocket Mouse	Deer Mouse
1	5	10
2	7	6
3	7	5
4	7	6
5	7	5
Totals	**33**	**32**
Source: Michael Brandman Associates, Habitat Assessment, 2013.		

Narrow Endemic Plant Species

The MSHCP was reviewed to determine the narrow endemic plant species that may be associated with the project area. Based on a review, the Marvin's onion and many-stemmed dudleya were the plant species identified in the MSHCP habitat assessment area for the project area for the narrow endemic plant species. Following is a discussion of both of these plant species.

Marvin's Onion

Marvin's onion is designated as a 1B.1 species, which means the CNPS considers it seriously endangered in California. It occurs in openings in clay soils within chaparral. Marvin's onion is a bulbiferous herb, which blooms from April to May and is threatened by loss of habitat from development. It is known only from two occurrences; one located in the San Bernardino National Forest on the east side of Water Canyon, and the other generally located east of the City of Beaumont. The occurrence east of the City of Beaumont was observed in 1921 and the specific locale was not provided. Marvin's onion was not observed during the field surveys.

Many-stemmed Dudleya

Many-stemmed dudleya is designated as a List 1B.2 species, which means the CNPS considers it fairly endangered in California. It is often associated with clay soils in barrens, rocky places, or thinly vegetated openings in chaparral, coastal sage scrub, and southern needlegrass grasslands. The majority of populations is associated with coastal sage scrub or open coastal sage scrub. Many-stemmed Dudleya is a perennial herb that blooms from April to July. It is known from less than 15 occurrences in Riverside County and is seriously threatened by development, road construction, grazing, and recreation. Many-stemmed dudleya was not observed during the field surveys.

Offsite Landscaping

Although there is no landscaping that is located within the proposed project sites, there is landscaping along Beaumont Avenue from the southern end of the proposed recharge basin site to Orchard Street

and along Orchard Street. This landscaping contains typical non-native landscaping including palms, oleanders, grass lawns, and pepper trees. The area along Beaumont Avenue from the southern end of the proposed recharge basin site to Cherry Valley Boulevard contains mature deodar or Himalayan cedar (*Cedrus deodar*).

3.2.2 - Regulatory Setting

Federal

Federal Endangered Species Act

The USFWS administers the federal Endangered Species Act (FESA), which provides a process for listing species as either threatened or endangered and methods of protecting listed species. The FESA defines an "endangered" species as any plant or animal species that is in danger of extinction throughout all or a significant portion of its range. A "threatened" species is a species that is likely to become endangered in the foreseeable future. A "proposed" species is one that has been officially proposed by USFWS for addition to the federal threatened and endangered species list.

Section 9 of the FESA prohibits "take" of threatened or endangered species. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. The presence of any federally threatened or endangered species within a project area generally imposes severe constraints on development, particularly if development would result in "take" of the species or its habitat. Under the regulations of the FESA, the USFWS may authorize "take" when it is incidental to, but not the purpose of, an otherwise lawful act.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) makes it unlawful to pursue, capture, kill, or possess or attempt to do the same to any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and the countries of the former Soviet Union.

Section 404 of the Federal Clean Water Act

Section 404 of the federal Clean Water Act (CWA), which is administered by the U.S. Army Corps of Engineers (USACE), regulates the discharge of dredge and fill material into waters of the United States. The USACE has established a series of nationwide permits that authorize certain activities in waters of the U.S., provided that a proposed activity can demonstrate compliance with standard permit conditions. Normally, USACE requires an individual permit for an activity that will affect an area equal to or in excess of 0.5 acre of waters of the U.S. Projects that result in impacts to less than 0.5 acre can normally be conducted pursuant to one of the nationwide permits, if consistent with the standard conditions. Use of any nationwide permit is contingent on the proposed activity having no impacts to endangered species.

Section 401 of the Clean Water Act

Section 401 of the CWA 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 Section 404 permit, applicants must apply for and receive a Section 401 water quality certification from the Regional Water Quality Control Board (RWQCB).

State

California Endangered Species Act

The CDFG administers the California Endangered Species Act (CESA). The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is considered as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management. A rare species is one that is considered present in such small numbers throughout its range that it may become endangered if its present environment worsens. State threatened and endangered species are fully protected against take.

Section 3503 and 3511 of the California Fish and Game Code

The CDFG administers the California Fish and Game Code. There are specific sections of the Code that are applicable to natural resource management. For example, section 3503 of the Code states it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3511 of the Code lists fully protected bird species, for which the CDFG is unable to authorize the issuance of permits or licenses to take these species. Pertinent species that are state fully protected include golden eagle (*Aquila chrysaetos*) and white-tailed kite (*Elanus leucurus*).

Section 1600 of the California Fish and Game Code

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California are subject to the regulatory authority of the CDFG pursuant to sections 1600 through 1603 of the California Fish and Game Code, requiring preparation of a Streambed Alteration Agreement. Under the Code, a stream is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Included are watercourses with surface or subsurface flows that support or have supported riparian vegetation. CDFG also has jurisdiction within altered or artificial waterways based on the value of those waterways to fish and wildlife, and has jurisdiction over dry washes that carry water ephemerally during storm events.

Porter Cologne Act

The RWQCB regulates actions that would involve “discharging waste, or proposing to discharge waste, with any region that could affect the water of the state,” pursuant to provisions of the State

Porter-Cologne Water Quality Act. "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state."

Local

Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside MSHCP is a comprehensive, multi-jurisdictional habitat conservation plan (HCP) focusing on conservation of species and their associated habitats in western Riverside County. The goal of the MSHCP is to maintain biological and ecological diversity within a rapidly urbanizing region. The approval of the MSHCP and execution of the Implementing Agreement (IA) by the wildlife agencies allows signatories of the IA to issue "take" authorizations for all species covered by the MSHCP, including state- and federal-listed species, as well as other identified sensitive species and their habitats.

As discussed previously, the SGPWA is not a signatory or a Participating Special Entity to the MSHCP, and therefore, SGPWA discretionary approvals, such as those associated with the proposed Beaumont Avenue Recharge Facility and Pipeline Project, are not covered under the MSHCP. Therefore, the SGPWA cannot issue a "take" authorization for sensitive species covered by the MSHCP. The SGPWA is required to evaluate the potential impacts on habitats and species in accordance with the California Environmental Quality Act. Therefore, as stated previously, the Western Riverside County MSHCP is not applicable to the SGPWA discretionary approvals. The SGPWA has chosen to utilize the MSHCP for guidance in evaluating potential effects of the SGPWA's discretionary approvals required for the proposed project.

As discussed previously in Section 1 of this Draft EIR, the SGPWA is exempt from local land use policies and ordinances in accordance with California Government Code Sections 53091(d) and 53091(e). Although exempt for the proposed project, SGPWA has chosen to provide a discussion of the local land use policies and ordinances.

City of Beaumont General Plan

The City of Beaumont General Plan contains the following goal and policies that address biological resources.

Resource Management Element

Goal 4. The City of Beaumont will assist in the protection of biological resources.

> **Policy 11.** The City of Beaumont will work with landowners and government agencies in promoting development concepts that are sensitive to the environment and give maximum consideration to the preservation of natural habitats.

Policy 12. The City of Beaumont will work with landowners and government agencies in identifying areas within the General Plan's Planning Area that should be preserved as open space for passive recreation, resource management, or public safety.

Policy 13. The City of Beaumont will encourage the protection of existing wildlife in the conservation areas located in the southerly portion of the General Plan's Planning Area.

Beaumont Municipal Code

The Beaumont Municipal Code establishes the following biological resources provisions that are relevant to the project.

Chapter 12.12 Excavations

Section 12.12.130 Tree Removal

No person, firm, corporation, public district, public agency or political subdivision 'shall remove or severely trim any tree planted in the right of- way of any city street without first obtaining a permit from the city engineer to do so. Such permit shall be issued without fee; if the city engineer is satisfied that such removal or trimming is in the public interest or is necessary for the improvement of the right-of-way or the construction of improvements on adjacent land. The city engineer may impose such conditions as deemed reasonable or necessary, including requirements for the work to be done only by a qualified tree surgeon or tree trimmer actually engaged in that business, and for bond, insurance or other security to protect person and property from injury or damage. The provisions limiting trimming of trees shall not apply to any public utility maintaining overhead power or communication lines pursuant to franchise, where necessary to prevent interference of a tree with such installation. A permit for removal of a tree may be conditioned upon its relocation or replacement by one or more other trees of a kind or type to be specified in the permit. (Ord. 554 §4, 1982)

County of Riverside General Plan

The County of Riverside General Plan contains the following policies that address biological resources.

Multipurpose Open Space Element

Policy OS 9.3. Maintain and conserve superior examples of native trees, natural vegetation, stands of established trees, and other features for ecosystem, aesthetic, and water conservation purposes.

Policy OS 17.1. Enforce the provisions of applicable MSHCP's, if adopted, when conducting review of development applications.

Policy OS 18.1. Preserve multi-species habitat resources in the County of Riverside through the enforcement of the provisions of applicable MSHCP's, if adopted.

Policy OS 19.8. Whenever existing information indicates that a site proposed for development may contain biological, paleontological, or other scientific resources, a report shall be filed stating the extent and potential significance of the resources that may exist within the proposed development and appropriate measures through which the impacts of development may be mitigated.

3.2.3 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether impacts to biological resources are significant environmental effects, the following questions are analyzed and evaluated. 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? (See Effect on Species Impact BIO-1.)

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (See Riparian Habitat Impact BIO-2.)

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? (See Federally Protected Wetlands Impact BIO-3.)

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 wildlife nursery sites? (See Wildlife Corridors and Nursery Sites Impact BIO-4.)

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (See Section 6.4.1, Local Policies or Ordinances Protecting Biological Resources)

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? (See Conservation Plans Impact BIO-5.)

3.2.4 - Project Impact Analysis and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Effect on Species

Impact BIO-1	**The project could 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.**

Impact Analysis

Plant Communities

The implementation of the proposed project will result in the direct removal of plant communities at each of the project site areas. As depicted in Table 3.2-3 below, ruderal, Riversidean alluvial fan sage scrub (RAFSS), developed, and disturbed plant communities would be directly impacted by removal during construction activities.

Table 3.2-3 Plant Communities Impacts Within Project Survey Area

Plant Community	Area of Impact (acres)					
	Total Survey Area[1]	Recharge Basin Site	Pipeline	Service Connection Site	Offsite Triangular Parcel	Total Area of Impact
Ruderal	49.9	44.0	0.0	1.8	2.4	48.2
Riversidean Sage Scrub	0.4	0.0	0.0	0.0	0.0	0.0
Riversidean Alluvial Fan Sage Scrub	0.0	0.0	0.0	0.0	0.0	0.0
Remnant Riversidean Alluvial Fan Sage Scrub	0.1	0.1	0.0	0.0	0.0	0.1
Developed	3.3	0.0	3.3	0.0	0.0	3.3
Disturbed	3.5	2.9	0.0	0.0	0.6	3.5
Total	**57.2**	**47.0**	**3.3**	**1.8**	**3.0**	**55.1**

Notes
[1] The total survey area includes the 47.0-acre recharge facility site, the 3.3-acre pipeline site, the 3.5-acre service connection site, and 3.4-acre office triangular parcel.
Source: Michael Brandman Associates, Habitat Assessment and MSHCP Consistency Analysis, 2013.

Wildlife Species

The RSS and RAFSS are the plant communities within the project survey area that have the potential to provide suitable habitat to sensitive wildlife species, specifically the Los Angeles Pocket Mouse (LAPM). Due to the proximity of Noble Creek to the proposed recharge basin and the offsite triangular parcel, an evaluation of potential impacts on the burrowing owl was conducted. In addition, a discussion of potential impacts on nesting birds is provided. Following are the wildlife species discussions.

Burrowing Owl - Based on a field survey, the project sites do not contain suitable habitat for BUOW. While there is suitable habitat within the Noble Creek, north of the proposed recharge facility site and south of the offsite triangular parcel, and several suitable burrows within the Creek's upper terraces, these locations are not located within the project sites. However, due to the close proximity of Noble Creek to the recharge facility site and offsite triangular parcel, burrowing owls could create new suitable burrows in areas proposed for construction. Therefore, construction activities could result in significant impacts on burrowing owls.

Los Angeles Pocket Mouse - The existing remnant RAFSS habitat south and east of Noble Creek, the RSS in the offsite triangular parcel, and the RAFSS located immediately north of the proposed recharge basin provide suitable LAPM habitat. The CNDDB has a record for LAPM occurrence approximately 2.3 miles northeast of the project site. Because of the presence of suitable habitat for LAPM and a nearby historical record, parts of the project sites adjacent to Noble Creek were determined to contain a moderate to high potential for LAPM.

The LAPM is not a federal or state listed threatened or endangered species, but is designated as a California Species of Concern. Due to the presence of LAPM during the recent trapping effort, CEQA guidelines require an assessment of project related impacts to determine if LAPM will be significantly impacted. Since the proposed pipeline portions, that are considered covered by the MSHCP due to the need for a discretionary approval of an encroachment permit by RCFCWCD, are not suitable for LAPM habitat, these MSHCP-covered portions of the proposed pipeline would not result in any impacts to the LAPM.

The Riversidean Alluvial Fan Sage Scrub that is located north of the proposed recharge facility, is associated with the active Noble Creek drainage channel. This RAFSS habitat will be avoided because it is located north of the proposed recharge basin site. In addition, 0.4 acres of Riversidean Sage Scrub habitat, located in the offsite triangular parcel, will be avoided and not be used for depositing soil from the pipeline construction or be used for construction staging. Although the high quality occupied RAFSS habitat is located immediately north of the proposed recharge basin and the 0.4 acres of high quality occupied habitat within the offsite triangular parcel will be avoided, indirect impacts to the LAPM may occur during construction and operational activities. These potential impacts are considered potentially significant.

There is occupied LAPM habitat that will be directly impacted by the proposed project. This habitat includes a small remnant patch of Riversidean Alluvial Fan Sage Scrub (0.05 acre), which is located just south of the main channel in the northern portion of the proposed recharge facility. This area is surrounded by unoccupied ruderal habitat based on the findings in the Focused LAPM Survey Report. Therefore, the proposed project will directly impact a small remnant patch of low quality habitat, while avoiding the high quality occupied habitat directly adjacent to the northern boundary of the proposed recharge basin as well as 0.4 acre located within the offsite triangular parcel. The loss

of 0.05 acres (rounded to 0.1 acre in Table 3.2-3) of low quality occupied habitat will not reduce the population of LAPM to a less than self-sustaining level, and therefore, is considered a less than significant impact. While the loss of a few individuals is considered an adverse impact, the small isolated patch of low quality remnant Riversidean Alluvial Fan Sage Scrub is not suitable for the long-term conservation of the species.

Nesting Birds - The project sites contain suitable nesting habitat for birds covered under the MBTA. As a result, project construction could potentially impact migratory and nesting avian species. Therefore, the project construction activities are considered to result in potential significant impacts on nesting birds.

Plant Species

Marvin's onion and Many-stemmed dudleya - The plant species that were evaluated were the narrow endemic plant species identified in the MSHCP that may be associated with the project area. Based on a review, the Marvin's onion and many-stemmed dudleya were the plant species identified in the MSHCP habitat assessment area for the project area for the narrow endemic plant species. These two plant species were not observed during the field survey conducted for the proposed project.

Based on only one occurrence of the Marvin's onion species in the project vicinity and that was east of Beaumont in 1921 as well as not being observed during the field surveys, this species has a low probability of occurrence, and therefore, the implementation of the proposed project would have a less than significant impact on the Marvin's onion species. The many-stemmed dudleya is associated with chaparral, coastal sage scrub, and southern needlegrass grasslands. The remnant RAFSS that is located on the proposed recharge basin and the RSS that is located on the offsite triangular parcel are a type of coastal sage scrub. However, the remnant RAFSS habitat is of low quality and the RSS is proposed to be avoided. Since the RAFSS habitat is of low quality and the RSS habitat is proposed to be avoided, the implementation of the proposed project would have a less than significant impact on the many-stemmed dudleya. Therefore, the implementation of the proposed project is expected to have less than significant impacts on sensitive plant species.

Offsite Landscaping

The implementation of the proposed project would not result in direct impacts to landscaping species on the ground surface because construction activities are not proposed at locations with these species. As shown in Table 3.2-2, the project sites do not contain landscaping.

Adjacent to the proposed pipeline route, there are landscaping species. Mature deodar trees are located along Beaumont Avenue and contain a root structure that may extend under the roadway. However, the supportive root structure for trees are generally under the tree canopy, and the primary support root structure is closer to the tree trunk with smaller roots further away from the trunk. Although, the deodar trees are non-native and not considered biologically sensitive, a review of the proposed pipeline construction activities was conducted.

The proposed pipeline would be constructed within an approximately four-foot wide trench that extends from 4 feet to 8 feet from the existing centerline of Beaumont Avenue. Based on a review of aerial photographs, there are 3 of the existing 67 deodar tree canopies from Brookside Avenue to Cherry Valley Avenue that extend approximately one foot east of the western side of the proposed trench. The remaining trees do not extend over the proposed trench. The trunks of the 3 trees are located approximately 20 to 24 feet from the proposed trench. The canopies of the 3 trees range from approximately 40 to 51 feet in diameter. Based on a site visit, the widths of the existing tree canopies, and the location of the tree trunks, the 3 deodar trees are mature and healthy. Because the three deodar trees are mature and healthy as well as based on (1) location of the trunks of the deodar trees which are approximately 20 to 24 feet from the proposed trench, (2) the width of the canopies which are approximately 40 to 51 feet, and (3) the location of the proposed trench (i.e., the canopies extending approximately one foot over the proposed trench), the health of the three existing deodar trees are not expected to be substantially affected with the implementation of the proposed project. Therefore, potential impacts to the deodar trees is considered a less than significant impact.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM BIO-1 A pre-construction survey shall be conducted in accordance with the MSHCP guidelines. The survey shall be conducted by a qualified biologist within 30-days of any vegetation removal or ground disturbing activities on the project sites to ensure that no nesting BUOW occur within the sites. If BUOW are observed on any of the project sites during the pre-construction survey, MM BIO-2 shall be implemented.

MM BIO-2 If BUOW are observed on any of the project sites during the pre-construction survey, they shall be passively relocated in accordance with the MSHCP guidelines. If BUOW are occupying a burrow between March and August, it shall be considered an active nest, unless otherwise determined by a qualified biologist, and passive relocation shall be delayed until September, or until the nestlings have fledged the nest.

MM BIO-3 Prior to any soil storage activities within the offsite triangular parcel located north of Noble Creek, east of Mountain View Channel, and south of Brookside Avenue and the construction activities within the northern portion of the proposed recharge facility, the occupied habitat of the Los Angeles Pocket Mouse on the triangular parcel and along Noble Creek (i.e., 0.4-acre area) shall be flagged by a qualified biologist at least 15 days prior to any construction activities. No construction activities including soil storage or staging of construction materials, equipment, or vehicles shall occur within the flagged areas.

MM BIO-4 In project construction areas that are within 200 feet of occupied LAPM habitat, all excavated, steep-walled holes or trenches more than two feet deep shall be either be covered at the end of each construction day with plywood or one or more escape ramps constructed of earth fill or wooden planks shall be placed to prevent entrapment of LAPM during project construction. The ramps shall be located at no greater than 100-foot intervals, contain slopes less than 45 percent, and be at least one-foot wide.

MM BIO-5 All trenches and holes shall be inspected for entrapped wildlife each morning prior to the onset of project construction. Before holes or trenches are filled, they shall be thoroughly inspected for entrapped animals. Any animals discovered during these inspections shall be removed from the trench or hole by the project biologist and released.

MM BIO-6 Any pipes, poles, culverts, or similar construction materials with a diameter of 1.5 inches or greater stored overnight at the proposed recharge facility site that are within 200 feet of occupied LAPM habitat shall be thoroughly inspected for the presence of LAPM before the materials are subsequently buried, capped, or otherwise used or moved. Unburied pipes laid in trenches overnight shall be capped. If LAPM are discovered inside a pipe, that section of pipe shall not be moved until the project biologist has been consulted. If necessary and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activities until the animal has been removed and released.

MM BIO-7 The maintenance of equipment; dispensing of fuel, oil, or coolant; and all other similar construction activities shall be restricted to designated staging areas located outside of Noble Creek to prevent the release of any hazardous substances into the drainage. Any accidental spills shall be immediately contained and properly remediated according to local, State, and federal regulations.

MM BIO-8 No pets shall be allowed on and adjacent to environmentally sensitive areas.

MM BIO-9 Rodenticides, herbicides, insecticides, or other chemicals that could potentially harm sensitive species shall only be used by a qualified applicator. Chemical application shall not be applied in areas of occupied LAPM habitat.

MM BIO-10 Trash shall be collected and stored so that it is inaccessible to scavengers (i.e., crows, raccoons, and coyotes) and shall be removed daily so as not to attract potential LAPM predators.

MM BIO-11 No nighttime construction or maintenance activities shall occur. Nighttime shall be defined as when the sun sets below the horizon.

MM BIO-12 A pre-construction survey shall be conducted by a qualified biologist within 30-days of any vegetation removal or ground disturbing activities on the project sites to ensure that no nesting birds occur within the sites. This survey shall occur each year prior to the construction of the recharge basin berms, and may coincide with the mandatory BUOW pre-construction survey outlined in MM BIO-1. If nesting birds are observed on any of the project sites during the pre-construction survey, MM BIO-13 and MM BIO-14 shall be implemented.

MM BIO-13 If nesting birds are present within the project footprint, they shall be avoided until the nesting activities are complete, as determined by a qualified biologist. In the event that nesting birds are observed during the pre-construction survey, a buffer area shall be established around the nest. The buffer area shall be no less than 200 feet around any active nest and shall be established by a qualified biologist based on the specific avian species and type of disturbance in the area. Construction activities may occur within the buffer area at the discretion of a qualified biologist. All construction activities with the potential to cause a nest failure shall be prohibited from the area until the nestlings have fledged.

MM BIO-14 A qualified biologist shall be present during all vegetation removal and ground disturbing activities. The nest monitoring will continue during construction activities until all nesting activities have ceased.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

The implementation of Mitigation Measures BIO-1 and BIO-2 will reduce the potential for impacts on the burrowing owl by ensuring that the burrowing owl is not located in the project areas proposed for construction, and if they are found then passively relocating them to reduce potential impacts. These measures will reduce impacts on burrowing owls to less than significant.

The implementation of Mitigation Measure BIO-3 includes flagging the LAPM habitat areas (i.e., the RAFSS located immediately north of the proposed recharge facility adjacent to Noble Creek and the 0.4-acre RSS area within the offsite triangular parcel) so that construction activities do not directly impact the LAPM or its habitat. The implementation of Mitigation Measures BIO-4 through Bio-11 are best management practices to be implemented during construction and operational activities so that the LAPM are not accidentally impacted. These measures will reduce potential impacts to the LAPM to less than significant.

The implementation of Mitigation Measures BIO-12 through BIO-14 will include pre-construction surveys, and if needed, an establishment of a buffer and monitoring during construction activities to reduce the potential for impacts on nesting birds. These measures will reduce impacts to nesting birds to less than significant.

Riparian Habitat

Impact BIO-2	**The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.**

Impact Analysis

The RAFSS habitat that is located along Noble Creek could be considered riverine habitat; however, this RAFSS habitat is located outside of the project sites and north of the proposed recharge facility. Therefore, the project will result in less than significant impacts on the offsite riverine habitat.

The remnant 0.1-acre RAFSS habitat that is located in the proposed recharge facility site and is south and east of Noble Creek is not considered riverine habitat because there is no longer an active drainage associated with this 0.1-acre area. Therefore, the proposed project will result in no impact on riverine habitat from the removal of the 0.1-acre of RAFSS habitat.

The proposed pipeline will extend under Noble Creek and MVC. Noble Creek has riparian and riverine habitat; however, the proposed pipeline will extend under the existing concrete box culvert that is under Beaumont Avenue. In addition, the proposed pipeline will also extend under the existing concrete box culvert that is under Orchard Street at the Mountain View Channel (MVC). If the pipeline was proposed to extend under a portion of a creek or channel that did not have a concrete box culvert, a contingency plan or "Frac-out" plan could be used to minimize impacts to benthic invertebrates, aquatic plants or fish. However, since the project includes the placement of the pipeline under the existing concrete box culverts of Noble Creek and MVC through the use of a bore and jack method, there would be no impacts to riparian or riverine habitat.

No additional riparian or riverine habitat is located on the project sites; therefore, the implementation of the proposed project will result in less than significant impacts on riparian or riverine habitat.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Federally Protected Wetlands

Impact BIO-3	**The project would not 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.**

Impact Analysis

Wetlands are federally protected by the USACE under Section 404 of the Clean Water Act. As depicted in Table 3.2-3, there are no wetland habitats on the project sites. Wetlands can also be considered Waters of the U.S. Based on the Jurisdictional Delineation that was prepared for the proposed project and included in Appendix C of this Draft EIR, there are two drainages (Noble Creek and Mountain View Channel) that are considered Waters of the U.S. under the jurisdiction of USACE and Waters of the State under the jurisdiction of CDFW.

The USACE and CDFW jurisdictional areas are located at the proposed pipeline crossings of Noble Creek at Beaumont Avenue and Mountain View Channel (MVC) at Orchard Street. The project includes the placement of the pipeline under Noble Creek and MVC through the use of a bore and jack method so that the streambed of Noble Creek and the channel of the MVC are not impacted. As a result, the implementation of the proposed pipeline will result in no impacts to USACE or CDFW jurisdictional areas.

Since no additional USACE or CDFW jurisdictional areas are located on other portions of the pipeline as well as the proposed recharge facility, service connection site, or the offsite triangular parcel, no impacts to USACE or CDFW jurisdictional areas, including wetlands, would occur with the implementation of the project.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

Wildlife Corridors and Nursery Sites

Impact BIO-4	**The project could 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 wildlife nursery sites.**

Impact Analysis

LAPM or other wildlife currently moves along the Noble Creek corridor. The implementation of the proposed project would not affect wildlife movement in the creek corridor. Since the proposed project includes a recharge facility adjacent to Noble Creek, the small- and medium-sized mammal

and other wildlife could continue to move between the recharge site and Noble Creek following construction of the recharge facility. Therefore, impacts associated with wildlife corridors would be less than significant.

As discussed previously, construction activities associated with the proposed project could impact nesting birds. This potential impact is considered significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implementation of Mitigation Measures BIO-12 through BIO-14 are required.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

The implementation of Mitigation Measures BIO-12 through BIO-14 will include pre-construction surveys, and if needed, an establishment of a buffer and monitoring during construction activities to reduce the potential for impacts on nesting birds. These measures will reduce impacts to nesting birds to less than significant.

Conservation Plans

Impact BIO-5	**The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.**

Impact Analysis

As previously discussed, the project sites are located within the boundary of the Western Riverside County MSHCP; however, the SGPWA is not a signatory or a Participating Special Entity to the MSHCP, and therefore, SGPWA discretionary approvals, such as those associated with the proposed Beaumont Avenue Recharge Facility and Pipeline Project, are not covered under the MSHCP. Therefore, the SGPWA discretionary approvals are not required to be consistent with the Western Riverside County MSHCP, and a MSHCP Consistency Analysis is not required for the SGPWA discretionary approvals. The SGPWA has chosen to utilize the MSHCP to determine if the project site locations were within MSHCP Criteria Cells, core habitat, and wildlife movement corridors, or if areas were proposed for future conservation. Based on a review of the MSHCP, the project sites are not located in a MSHCP Criteria Cell, core habitat, wildlife movement corridors, or in or adjacent to MSHCP conservation areas.

In addition to the SGPWA discretionary approvals, the implementation of the proposed pipeline component of the project that extends under the Noble Creek and Mountain View Channel (MVC) concrete culverts at Beaumont Avenue and Orchard Street will require an encroachment permit that is a discretionary action by the Riverside County Flood Control and Water Conservation District

(RCFCWCD) who is a signatory to the MSHCP. Therefore, these portions of the proposed pipeline will be covered under the MSHCP and will be required to be consistent with the MSHCP. A MSHCP Consistency Analysis for those portions of the pipeline extending under the Noble Creek and MVC concrete box culverts at Beaumont Avenue and Orchard Street is required and is provided in Appendix C. As stated in Appendix C, the portions of the proposed pipeline that are covered by the MSHCP are considered consistent with the MSHCP because the proposed bore and jack activities to extend the pipeline under the concrete box culvert of Noble Creek and MVC, would begin and end within asphalt roads which are considered Developed habitat. Therefore, these MSHCP-covered portions of the proposed pipeline would be consistent with the MSHCP. Therefore, the implementation of the proposed project would not conflict with the MSHCP.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

3.3 - Cultural Resources

This section describes the potential cultural resources effects of project implementation on the project site and its surrounding area. Descriptions and analysis in this section are based on information contained in the March 26, 2013 Cultural Resources Addendum Survey, which supplements the January 21, 2008 Phase I Cultural Resources Assessment and Paleontological Records Review and the April 21, 2008 Addendum Letter Report to the Final Phase I Cultural Resources Assessment and Paleontological Records Review, all of which were prepared by Michael Brandman Associates. The Cultural Resources Addendum Survey, along with the previous Phase I Cultural Resources Assessment and Addendum Letter Report, are included in this Draft EIR as Appendix D. The Morongo Band of Indians provided comments on the NOP prepared for the project. One comment requested clarification that the SGPWA service area includes the Morongo Tribal lands, and this was clarified in Section 1.1 of this Draft EIR. Another comment requested information on soil removal associated with the project and this information is provided in Sections 2.3.2 and 2.3.3 of this Draft EIR. A final comment requested information on local groundwater quality levels because the levels reported were over 30 miles away; however, as described in Section 6.9.1 of this Draft EIR, the water quality levels identified at the Devil Canyon Afterbay which is approximately 30 miles from the project site were levels of the SWP water. These levels were identified as higher in quality than the levels within the groundwater extracted from the project vicinity.

3.3.1 - Existing Conditions

Regional and Local History

City of Beaumont and Vicinity

In 1819, the Mission San Gabriel established an asistencia at San Bernardino, followed by a second outpost, which was given the name San Gorgonio, purportedly established near Beaumont in 1824. The purpose of this outpost was to guard the Cocomaricopa Trail, which had been used as a Native American trading route between the Colorado River tribes and lower Southern California. In 1821, José Cocomaricopa, a Cocomaricopa chief, arrived at the Mission San Gabriel on a trading mission from Tucson, Arizona. His route took him through the San Gorgonio Pass, a route not previously explored by the Spanish, but became used after José Cocomaricopa agreed to move mail for the padres between Arizona and California. The San Gorgonio outpost was never described by the padres in the official records, and was apparently little used for many years. Due to the lack of interest in this particular outpost, local Cahuilla natives were relatively unaffected by early Spanish incursions compared to the coastal tribes.

With time, the San Gorgonio Pass route became more widely accepted by Southern California merchants, serving as a wagon road between towns and mines in lower Arizona and coastal cities in Southern California, eventually becoming known as the “Bradshaw Trail.” In 1877, the Southern Pacific Railroad line out of Los Angeles crossed the Colorado River, reaching Yuma, and solidified

the role of the San Gorgonio Pass as the key transportation corridor between the greater Los Angeles area and points east.

The Southern Pacific Railroad built their railroad once lands were deeded in a checkerboard pattern to the company in the 1860s. This pattern was established by the Pacific Railroad Act of 1864, which deeded every odd-numbered section of land to a railroad company in a 20-mile wide area bisected by a railroad track. The resultant checkerboard pattern was placed along the new Southern Pacific line between the Arizona border and the easternmost edge of the Rancho San Bernardino. Once the Southern Pacific tracks were laid through the San Gorgonio Pass and Whitewater area in 1875 and 1876, various stops and sidings were established.

The Southern Pacific needed grading equipment, lumber, and men to build their tracks. To facilitate these needs, a contract was issued to Colonel Milton Sanders Hall, who built a company town, Hall City, located south of Cabazon at the foot of the San Jacinto Mountains; constructed a road, the San Jacinto Toll Road; built a sawmill; and was contracted to lay track between Spadra, now known as Pomona, and Indian Wells. Hall City was established and the mill constructed, but the community was short-lived, as Hall underestimated his costs. The railroad track was laid, but the venture was sold before failing entirely prior to 1880.

After the failure of the Hall City development, a large quantity of private land was available for sale. In late 1883, George Egan, a storeowner from Banning, purchased approximately 320 acres of land from the Southern Pacific around the Summit Station area. Egan used this land to form a new town site, which he named San Gorgonio, after the San Gorgonio Pass. In February of 1884, a "Map of San Gorgonio" was developed that subdivided Egan's property into various lots and streets. Throughout 1884 and 1885, various people moved into the area and purchased land from George Egan, from other residents, or homesteaded. In late 1885, another tract of land was developed as San Gorgonio Heights. This town site was purportedly located about four miles from San Gorgonio, though no map was ever created for this community.

By 1886, the Southern California Investment Company, headed by Dr. H.C. Sigler, came to the area in search of property. George Egan sold several hundred acres, including the San Gorgonio town site and portions of the San Gorgonio Heights area to this group. Sigler eventually renamed the area Beaumont to honor his hometown in Texas.

Shortly after the initial purchase of land, Sigler and his group formed the Beaumont Land and Water Company, and began the surveying process. The "Map of Beaumont" was filed on March 15, 1887 and included 1,665 acres. Sigler and his group then began an aggressive campaign for prospective buyers, and began a beautification program, which included street grading and planting eucalyptus, pepper, pine, oak, and elm trees. While the group worked diligently to entice buyers, very few people settled at this new town site, and the operation was in poor condition by 1889. By 1893, the real

estate market had not increased in the area, and the German Savings and Loan Society of San Francisco, the main financial entity behind Sigler's group, took over Beaumont. No further improvements were made during this time, and development in Beaumont remained stagnant until after the turn of the century.

In 1908, Water Well No. 1 was drilled at the entrance to Edgar Canyon. This was followed by the construction of a shaft, which made a large quantity of water accessible. Other wells were then drilled in Noble Canyon, and this accessible water allowed the Beaumont area to boast land for crops and attract new residents.

Beaumont was incorporated as a city on November 18, 1912, and has continued to steadily increase in population. Since incorporation, agriculture has remained a main enterprise in the area, with the city also serving travelers along SR-60 and I-10 in the San Gorgonio Pass area.

Community of Cherry Valley and Vicinity

Cherry Valley is an unincorporated community within Riverside County that has been rurally developed since the 1840s. Developments in the San Gorgonio Pass between roughly 1840 and 1880 focused on the towns of Banning and Beaumont because these areas were crossed by the first trails, the stagecoach routes, and the Southern Pacific railroad. Once these and surrounding areas began to be developed, investors from Los Angeles formed the Cherry Valley Land and Water Company, a development scheme that quickly collapsed. This group's lands were then purchased by the holdings of the Beaumont Land and Water Company.

As water resources were developed in the canyons above the project area, agricultural developments focused on tree crops, with Highland Springs Resort being developed from the original Paulino Weaver holdings from the 1840s.

Records Searches

Previous records searches were conducted in August 2007 on lands within and near the southern end of Nobel Creek, and again in October 2009 as the prior Noble Creek recharge project was expanded northward to include recharge basin alternatives. Staff archeologists performed records searches at the Eastern Information Center (EIC) at the Department of Anthropology at University of California, Riverside. The current Beaumont Avenue Recharge Facility and Pipeline project description was compared with the records search data collected during the previous visits to the EIC. This comparison concluded that while a few cultural resources are located in the general project vicinity, no recorded cultural resources are located within the project site.

Reconnaissance Survey

Staff archeologists conducted a reconnaissance-level survey of the pipeline alignment between Cherry Valley and the southeast corner of the recharge facility site on APN# 404-010-015, Vineyard Street, Ralph Road, and Orchard Street.

With the exception of Hirsch's Deodar Cedar tree alignments, which are historical landscaping resources located on both sides of Beaumont Avenue, no cultural resources were located on the project sites. No cultural resources were detected during the surveys of lands previously included as part of the prior Noble Creek project. The Deodar Cedar tree alignments are located directly adjacent to the project site, and thus the resource requires a significance evaluation.

Hirsch's Deodar Cedar Tree Alignment (P#33-020974)

Alignments of Deodar Cedar (*Cedrus deodara*) trees located along the east and west shoulders of Beaumont Avenue are considered a historical landscape resource. As such, the tree alignments have been recorded onto California Department of Recreation (DPR) DPR523 forms and submitted to the EIC.

Originally planted only between 14th Street (former City limits) and Cherry Valley Boulevard, the Deodar Cedar trees are native to Asia (Western Himalayas). Among Hindus, the tree is considered a divine tree. Planted in 1930 by Fred Hirsch, who was the owner of the Highland Springs Resort, the trees were placed northward to Cherry Valley Boulevard, which was the road that brought visitors into Highland Springs Resort from the west. Because some of the trees that were originally planted have been removed, the southernmost tree is now located on the east shoulder of Beaumont Avenue near a small ephemeral drainage approximately 560 feet north of 15th Street. Most of the trees occurring north of this point still remain, although it is possible that some have been replaced since the original planting date. The species is widely grown as an ornamental tree, and due to its drooping foliage is often planted in parks and large gardens. General cultivation is limited to areas with mild winters, as trees can be killed by temperatures below -25°C, limiting the species to warmer zones.

The Deodar Cedar tree alignments are found on historic aerial photographs (1938, 1959). In the early 1800s, the area surrounding Highland Springs Resort was known as the San Gorgonio Rancho, an outpost for the San Gabriel Mission. A large portion of the area was a Spanish land grant made to Paulino Weaver. In 1853, Dr. Isaac William Smith purchased 1,000 acres for $1,000 from Weaver and established the Smith Ranch. The original Smith residence stood near where the Highland Springs Resort swimming pool does today. In 1862, Smith's ranch was dubbed "Smith Station" and was made a stagecoach stop. The Butterfield Overland Stage line ran coaches from San Bernardino, stopped at the ranch, and then continued along the Bradshaw Trail to Yuma, Arizona.

From 1864 to 1866, the route through Highland Springs along the Bradshaw Trail was the single connecting line for passenger, mail, and express travel between Southern California and the eastern regions of the nation. Smith's Station slowly developed into a popular hotel. In 1884, the Smith property was purchased by a Los Angeles company that built a three-story hotel on the property, calling it "Highland Home." It was during this time that the first cherry trees were planted nearby.

In 1927, Fred and William Hirsch bought the old Smith Ranch, renamed it Highland Springs Resort, and developed it into a health resort. Fred Hirsch was "made healthy" following the philosophy of

Professor Arnold Ehret, who was an early proponent of juice fasting and colon cleansing. The restaurant on the new Highland Springs Resort was vegetarian and Hirsch grew much of the produce that was served at the resort's restaurant. He also grew his own grapes and operated a small vineyard. Eventually, the resort became known as "The Last Resort," as many sick people allegedly became healthy through Hirsh's health practices while staying there.

In 1930, Fred Hirsch planted parallel rows of Deodar Cedar trees along both sides of Beaumont Avenue from 14th Street (now Oak Valley Parkway) north to Cherry Valley Boulevard. Hirsch likely chose to plant the trees along Beaumont Avenue instead of Highland Springs Road to beautify an area between Beaumont and Cherry Valley that contained dryland pasture or plowed fields that were susceptible to flash flooding. During the 1930s, this area likely did not contain any orchards because of repeated flooding in Noble Creek and Little San Gorgonio Creek. Planted 70 feet apart and staggered, the trees created an aesthetically pleasing visual environment to motorists traveling along Beaumont Avenue. The 7,800 feet between the former 14th Street and Cherry Valley Boulevard would have required roughly 112 trees on each side of the roadway. Today, a total of 85 live trees occur on the east side of Beaumont Avenue, and 87 on the west side. These trees have been replanted over the years, although many original trees are found opposite the western entrance of the Beaumont Sports Park.

The idea for planting Deodar Cedars trees may have come from City of Altadena's Christmas Tree Lane, which is a parallel alignment of about 150 Deodar Cedars placed on the shoulders of Santa Rosa Avenue in 1885. The trees of Christmas Tree Lane have been lit with lights at Christmas time since 1920. Christmas Tree Lane is listed on the National Register of Historic Places (1990) and is a California Historical landmark.

This data suggest that the Hirsch's Deodar Cedar tree alignment is a significant historical resource at the local- and State-level of analysis.

Native American Sacred Lands Search

On July 11, 2012, staff archeologists sent a sacred lands search request to the Native American Heritage Commission (NAHC) for the purpose of determining potential effects to unlisted and possibly sacred Native American use areas or sites. A response was provided on July 16, 2012, which indicated that no Native American cultural resources were identified within 0.5 mile of the area of potential effect. The NAHC recommended that specific tribal authorities be contacted and given the opportunity to comment on the search request. Letters were mailed to the nine listed tribal authorities on July 17, 2012. As of the date of this report, one phone call response has been received. No letter responses to the inquiry was received.

A phone call from Michael Contreras of the Morongo Band of Mission Indians was received on July 30, 2012. Mr. Contreras was interested in the exact location of the project sites. Staff archeologists

informed Mr. Contreras that SWP water would be conveyed from existing SWP facilities west of Little San Gorgonio flood control channel by underground pipeline to a recharge basin. Mr. Contreras stated that the Morongo Band would be pleased to receive a phone call in the event that any inadvertent finds are encountered during project construction.

3.3.2 - Regulatory Setting

Federal

Under National Historic Preservation Act (NHPA) Section 106, federal agencies are required to consider the effects of their actions on historic properties and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings. The agencies are responsible for initiating the Section 106 review process and for completing the requirements of the process. Section 106 requires that any federal or federally-assisted actions, or any undertaking requiring federal licensing or permitting, consider the effect of the action on historic properties listed in or eligible for the National Register of Historic Places (NR). Under 36 CFR Part 800.8, all federal agencies are required to coordinate compliance with Section 106 and the National Environmental Policy Act (NEPA). The implementing regulations, "Protection of Historic Properties," are found in 36 CFR Part 800, while NR listing eligibility is contained in 36 CFR Part 63 and criteria for resource evaluation is located in 36 CFR Part 60.4[a-d].

Properties less than 50 years old may be considered for listing in the NR if they exhibit exemplary cultural characteristics. Listing in the NR requires integrity, and it is the integrity of the resource that must be addressed first in any analysis.

The NHPA established the NR as the official federal list for cultural resources that are considered important due to their historical significance at the local, state, or national level. To be eligible for listing in the NR, properties must meet specific criteria for historic significance and possess certain levels of integrity of form, location, and setting. The criteria for listing in the NR are nationally significant in American history, architecture, archaeology, engineering, and culture as present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

A. Is associated with events that have made a significant contribution to the broad patterns of our history;

B. Is associated with the lives of persons significant in our past;

C. Embodies the distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic values, represent a significant and distinguishable entity whose components may lack individual distinction; and

D. Yields, or may be likely to yield, information important in prehistory or history.

State

Sites, structures, and other properties may be considered an historical resource if they are significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military or cultural annals of California (PRC 5020.1[j]), or if they meets the criteria for listing in the NR or the California Register of Historical Resources (CR) (14 CFR 4850). If enacted by local legislation, CEQA allows for local historic resource guidelines to serve as CR criteria equivalent to State criteria.

If the historical resource has integrity and one or more of the following criteria are met, the resource would be considered a significant resource and any direct effect would be considered a significant impact on the environment:

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 represent the work of an important creative individual, or possesses high artistic values; and
4. Has yielded, or may be likely to yield, information important in prehistory or history.

Typically, researchers in California use a 45-year age threshold following State Historic Preservation Office (SHPO) recommendations. The five-year difference between State and federal criteria is explained by the fact that it takes approximately five years to plan and develop a property.

Local

As discussed previously in Section 1 of this Draft EIR, the SGPWA is exempt from local land use policies and ordinances in accordance with California Government Code Sections 53091(d) and 53091(e). Although exempt for the proposed project, SGPWA has chosen to provide a discussion of the local land use policies and ordinances.

City of Beaumont General Plan

The City of Beaumont General Plan contains the following goal and policy that address cultural resources.

Resource Management Element

Goal 5. The City of Beaumont will participate in cultural resources management and/or preservation efforts.

Policy 15. The City of Beaumont will identify and preserve those sites/buildings that are important to the community for the benefit of the future generations that will reside or work in the City.

County of Riverside General Plan

The County of Riverside General Plan contains the following policies that address cultural resources.

Multipurpose Open Space Element

Policy OS 19.2. Review all proposed development for the possibility of archaeological sensitivity.

Policy OS 19.3. Employ procedures to protect the confidentiality and prevent inappropriate public exposure of sensitive archaeological resources when soliciting the assistance of public and volunteer organizations.

Policy OS 19.4. Require a Native American Statement as part of the environmental review process on development projects with identified cultural resources.

Policy OS 19.5. Transmit significant development proposals to the History Division of the Riverside County Regional Park and Open-Space District for evaluation in relation to the destruction/preservation of potential historical sites. Prior to approval of any development proposal, feasible mitigation shall be incorporated into the design of the project and its conditions of approval.

Policy OS 19.8. Whenever existing information indicates that a site proposed for development may contain biological, paleontological, or other scientific resources, a report shall be filed stating the extent and potential significance of the resources that may exist within the proposed development and appropriate measures through which the impacts of development may be mitigated.

Policy OS 19.9. This policy requires that when existing information indicates that a site proposed for development may contain paleontological resources, a paleontologist shall monitor site grading activities, with the authority to halt grading to collect uncovered paleontological resources, curate any resources collected with an appropriate repository, and file a report with the Planning Department documenting any paleontological resources that are found during the course of site grading.

Policy OS 19.10. Transmit significant development applications subject to CEQA to the San Bernardino County Museum for review, comment, and/or preparation of recommended conditions of approval with regard to paleontological resources.

3.3.3 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether impacts to cultural resources are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? (See Historic Resource Impact CUL-1.)

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? (See Archaeological Resource Impact CUL-2.)

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (See Paleontological Resource or Geologic Feature Impact CUL-3.)

d) Disturb any human remains, including those interred outside of formal cemeteries? (See Impact Human Remains CUL-4.)

3.3.4 - Project Impact Analysis and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Historic Resource

Impact CUL-1	**The project could potentially cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.**

Impact Analysis

Less Than Significant With Mitigation Incorporated. A historical cultural resource, the Deodar Cedar tree alignment is located adjacent to the proposed pipeline along Beaumont Avenue between Brookside Avenue and Cherry Valley Boulevard. Based on an evaluation of the deodar trees in Section 3.2, Biological Resources, the proposed project will not impact the deodar trees above ground because the trunk of the trees are located outside of the construction area. The proposed pipeline will be located below the existing surface of the pavement along Beaumont Avenue. The proposed trenching activities may impact the root structure of some of the deodar trees; however, based on the following (1) location of the trunks of the deodar trees which are approximately 20 to 24 feet from the proposed trench, (2) the width of the canopies which are approximately 40 to 51 feet, and (3) the location of the proposed trench (i.e., the canopies extending approximately one foot over the proposed trench), the health of the three existing deodar trees are not expected to be substantially affected. Therefore, potential impacts to the deodar trees is considered a less than significant impact.

As discussed in Section 3.2, Biological Resources, the mature deodar trees that are located along Beaumont Avenue contain a root structure that may extend under the roadway. The supportive root structure for trees are generally under the tree canopy, and the primary support root structure is closer

to the tree trunk with smaller roots further away from the trunk. Construction activities, including trenching, would generally cause less than significant impacts to the health of a tree if the activities occur outside the tree canopy.

Therefore, a review of the proposed pipeline construction activities was conducted. The proposed pipeline would be constructed within an approximately 4-foot wide trench that extends from 4 feet to 8 feet from the existing centerline of Beaumont Avenue. Based on a review of aerial photographs, there are 3 of the existing 67 deodar tree canopies from Brookside Avenue to Cherry Valley Avenue that extend approximately one foot east of the western side of the proposed trench. The remaining trees do not extend over the proposed trench. The trunks of the 3 trees are located approximately 20 to 24 feet from the proposed trench. The canopies of the 3 trees range from approximately 40 to 51 feet in diameter. Based on a site visit, the widths of the existing tree canopies, and the location of the tree trunks, the 3 deodar trees are mature and healthy. Because the three deodar trees are mature and healthy as well as based on (1) location of the trunks of the deodar trees which are approximately 20 to 24 feet from the proposed trench, (2) the width of the canopies which are approximately 40 to 51 feet, and (3) the location of the proposed trench (i.e., the canopies extending approximately one foot over the proposed trench), the health of the three existing deodar trees are not expected to be substantially affected with the implementation of the proposed project. Therefore, potential impacts to the deodar trees is considered a less than significant impact.

Based on the record searches, there were no recorded historical cultural resources on the project sites. Although there were no historical cultural resources on the project sites and there were recorded sites in the project vicinity, the potential for impacts to buried unknown historical cultural resources is considered "Moderate." As with most earthmoving activities in the project region, the potential exists for encountering buried unknown historical resources during project construction. Potential impacts to buried unknown historical cultural resources is considered potentially significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM CUL-1 Prior to the issuance of grading permits, a Project Archaeologist, approved by the County of Riverside for portions of the project sites located within the jurisdiction of the County of Riverside and the City of Beaumont for the portions of the sites located within the jurisdiction of the City of Beaumont, shall initiate and supervise cultural resource mitigation monitoring during project-related earthmoving activities in the project area, subject to certain constraints found in Mitigation Measure CUL-2.

MM CUL-2 The following monitoring measures that provide a framework for monitoring shall be followed:

a) All earthmoving activities shall be monitored by the approved Project Archaeologist or his/her designated representative. Monitoring shall begin along the pipeline segments once two feet of surface fill has been removed.
b) Once 50 percent of the earth to be moved has been examined by the approved Project Archaeologist, the Project Archaeologist may, at his or her discretion, terminate monitoring if and only if no buried cultural resources have been detected.
c) If buried cultural resources are detected during monitoring, monitoring must continue until 100 percent of virgin earth within the study area has been disturbed and inspected by the Project Archaeologist or his/her designated representative.
d) Earthmoving activities shall cease in the immediate area of a potential cultural artifact find as delineated by the Project Archaeologist or his/her designated representative. Such activities shall be permitted to continue in other areas while the particular find(s) is investigated.
e) If cultural artifacts are uncovered during earthmoving activities, the resources shall be examined by a professional archaeologist subject to Mitigation Measures CUL-1 and CUL-2, then curated in a museum facility chosen by the County of Riverside. A mitigation monitoring report shall accompany the artifacts once they are donated to the museum facility.

Level of Significance After Mitigation

Less than significant impact.

The monitoring identified in Mitigation Measures CUL-1 and CUL-2 will reduce the potential impacts to buried unknown historical cultural resources because the monitoring will allow examination and curation of significant resources if they are found.

Archaeological Resource

Impact CUL-2 **The project could potentially cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.**

Impact Analysis

No known archaeological resources are located within the project area. As a result, no direct impacts to any recorded cultural resources would occur during project construction.

Based on the record searches, there were no recorded archaeological resources on the project sites. Although there were no archaeological resources on the project sites and there were recorded sites in

the project vicinity, the potential for impacts to buried unknown archaeological resources is considered "Moderate." As with most earthmoving activities in the project region, the potential exists for encountering buried unknown archaeological resources during project construction. Potential impacts to buried unknown archaeological resources is considered potentially significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implementation of Mitigation Measures CUL-1 and CUL-2 is required.

Level of Significance After Mitigation

Less than significant impact.

The monitoring identified in Mitigation Measures CUL-1 and CUL-2 will reduce the potential impacts to buried unknown archaeological resources because the monitoring will allow examination and curation of significant resources if they are found.

Paleontological Resource or Geologic Feature

Impact CUL-3	**The project could potentially directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.**

Impact Analysis

The paleontological background of the general project area was previously reviewed in 2008 (Appendix D). The paleontological review found that the project area is situated entirely upon surface exposures of Pleistocene older alluvium, which is overlain and incised by recent (Holocene) wash sediments. The Holocene or recent sediments are too geologically young to produce fossil resources, and are assigned low paleontological sensitivity. In contrast, the Pleistocene or older alluvial sediments have a high potential to contain significant, nonrenewable paleontologic resources, depending upon their lithology. Excavations into Pleistocene sediments throughout the Inland Empire have previously yielded significant fossils of animals from the Ice Age, including mammoths, mastodons, ground sloths, dire wolves, short-faced bears, saber-toothed cats, large and small horses, large and small camels, and bison. Based upon these findings and the uncertain potential for developed and fossiliferous Pleistocene deposits in the project area, a visual review of the vertical cross-sections within the Noble Creek stream channel was conducted. Based on this review, it was determined that there is a low potential for yielding fossil resources between the ground surface and 10 feet below the ground surface. Below 10 feet, construction activities associated with the proposed project could result in potential significant impacts to unknown paleontological resources.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM CUL-3 If grading and excavation plans show that a depth of 10 feet could be reached, a County of Riverside-qualified Project Paleontologist shall develop a mitigation monitoring program to reduce any potential impacts. If the paleontological monitor finds that underlying soils are conducive to the preservation of fossil resources, then Mitigation Measures CUL-4 through CUL-7 shall apply.

MM CUL-4 Excavation monitoring in areas identified as likely to contain paleontologic resources shall occur. Paleontologic monitors shall be equipped to salvage fossils, as they are unearthed, to avoid construction delays, and to remove samples of sediments likely to contain the remains of small fossil invertebrates and vertebrates. Monitors shall be empowered to temporarily halt or divert construction activities to allow for the removal of abundant or large specimens.

MM CUL-5 Preparation of recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates, shall occur. Preparation and stabilization of all recovered fossils shall be deemed necessary to fully reduce impacts to significant paleontological resources.

MM CUL-6 Identification and curation of specimens into an established, accredited museum repository with permanent retrievable paleontologic storage shall occur. These procedures shall be deemed necessary steps in effective paleontologic mitigation and CEQA compliance. Prior to the initiation of any mitigation activities, the paleontologist shall have a written repository agreement in writing. Mitigation of impacts shall not be deemed complete until such curation into a museum repository has been fully completed and documented.

MM CUL-7 The paleontologists shall prepare a report of findings with an appended itemized inventory of specimens. The report and inventory, when submitted to the appropriate lead agency along with confirmation of the curation of recovered specimens into an established, accredited museum repository, shall signify completion of the mitigation program to reduce impacts to significant paleontologic resources.

Level of Significance After Mitigation

Less than significant impact.

The monitoring identified in Mitigation Measures CUL-3 and CUL-7 will reduce the potential impacts to buried unknown paleontological resources because the monitoring will allow examination and curation of significant resources if they are found.

Human Remains

Impact CUL-4	**The project would not disturb any human remains, including those interred outside of formal cemeteries.**

Impact Analysis

There are no existing or known formal cemeteries within or adjacent to the project sites. As a result, project implementation is not anticipated to impact human remains associated with either a formal or informal cemetery. Notwithstanding, in the event that any human remains or related resources are discovered, such resources would be treated in accordance with all applicable federal, State, and local regulations and guidelines for disclosure, recovery, relocation, and preservation, including CEQA Guidelines Section 15064.5(e). Further evaluation of potential impacts related to the discovery of human remains is not necessary. Therefore, impacts associated with the discovery of human remains would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

3.4 - Geology and Soils

This section describes the potential geology and soils effects of project implementation on the project site and its surrounding area. Descriptions and analysis in this section are based on information contained in the November 9, 2012 Geotechnical Review prepared by Leighton Consultants, Inc. and the February 12, 2013 Geotechnical Investigation Report prepared by Converse Consultants. The 2012 Geotechnical Review was prepared for the recharge facility site, while the 2013 Geotechnical Investigation Report was prepared for the pipeline and service connection site. The Geotechnical Review and the Geotechnical Investigation Report are included in this Draft EIR as Appendix E.

3.4.1 - Existing Conditions

Regional Setting

The project area is located in the northwestern portion of the San Gorgonio Pass area of southern California, near the intersection of the San Bernardino Mountains of the Transverse Range Geomorphic Province and the San Jacinto Mountains of the Peninsular Ranges Geomorphic Province. The Peninsular Ranges province extends approximately 900 miles southward from the Santa Monica Mountains to the southern end of the Baja California peninsula. This province is characterized by elongate northwest-trending mountain ridges separated by intervening, sediment-floored valleys. However, the most dominant structural features of the province are the northwest-trending fault zones, most of which either merge with or terminated at the steep reverse faults at the southern margin of the Transverse Ranges province.

The dominant structural feature within the general project region is the active San Andreas transform system, which consists of several major northwest-trending, right-lateral, strike-slip faults. The San Andreas Fault Zone (SAFZ) is located approximately seven miles northeast of the project. The active Banning Fault Zone, which is considered a branch of the SAFZ, is located approximately 1.5 miles north of the project. The San Jacinto Fault Zone is located approximately six miles southwest of the project.

Project Sites Settings

Surface and Subsurface Conditions

Recharge Facility Site

The recharge facility site is underlain by alluvial soils generally consisting of sand and silty sand with gravel. Onsite soils encountered within borings and test pits excavations during a previous study generally consisted of silty sand and well-graded sand to the maximum explored depth of 51.5 feet below ground surface (bgs). Isolated sandy silt layers and poorly graded sand layers were observed, generally at depths greater than 25 feet bgs. The fines content of the soils (percent passing a No. 200 sieve) ranged from 14 to 43 percent, with the soils encountered near the southeast corner of the recharge facility site containing a higher proportion of silt than borings conducted elsewhere onsite, especially at depths greater than 30 feet bgs. Otherwise, the site's soil profile appeared relatively

consistent throughout. The soil was generally described as loose near the surface, becoming medium dense to dense with depth. The moisture content of the soil ranged from 2 to 10 percent.

Pipeline Alignment and Service Connection Site

The pipeline alignment and service connection site are located on a south-sloping Pleistocene alluvial fan composed of material derived from the San Bernardino Mountains, located to the north. The fan is formed of weakly indurated sand and gravel. Relatively thin, unconsolidated deposits of Holocene alluvium, colluvium, or other surficial soils may mantle the denser Pleistocene deposits. The fan surface has been dissected by active drainage channels, including Nobel Creek, which crosses the alignment north of Brookside Avenue.

Soils along the pipeline alignment and the bore and jack locations predominantly consist of sand and silty sand mixtures to the maximum explored depth of 26.5 feet bgs. The upper 10 to 15 feet bgs consists of relatively loose to medium dense, fine to coarse grained sand and silty sand with scattered gravel up to 2.5 inches in diameter. Below 15 feet bgs, the soils consist of dense to very dense, fine to coarse grained with gravel up to 2 inches in diameter. Auger refusal in two separate boring locations indicate that cobbles or boulders and/or high percentages of gravel may be present.

Groundwater

Recharge Facility Site

Groundwater was not encountered during borings excavated to a maximum explored depth of 51.5 feet bgs. Groundwater is expected to be deeper than 200 feet bgs in the immediate vicinity of the recharge facility site. According to the County of Riverside, the recharge facility site is located within an area with deep groundwater.

Pipeline Alignment and Service Connection Site

Groundwater was not encountered during borings drilled to a maximum depth of 26.5 feet bgs. A well (USGS 335807116582201) located approximately 0.25 miles east of the central portion of the pipeline alignment was monitored from 1991 to 2012. The depth to groundwater during that time was at least 530 feet bgs, with the most recent measurements approximately 565 feet bgs.

Several wells located 0.25 to 0.5 miles north of the pipeline alignment contained groundwater as shallow as approximately 50 feet bgs within the past several years. All wells that reported shallow groundwater are located north of the Beaumont Fault. As such, it is likely that the fault acts as a groundwater barrier, resulting in an accumulation of groundwater on the northern side.

Faulting

Recharge Facility Site

The recharge facility site is not located within a State-designated Alquist-Priolo Earthquake Fault Zone. However, a County-designated Earthquake Fault Zone for the Beaumont Plains Fault Zone is mapped through the southwest portion of the recharge facility site. The fault zone is mapped as a

series of north to northwest trending faults in the general vicinity of the site. An investigation of this fault was conducted for a previous, unrelated project on the adjacent property located west of the recharge facility site in 2007. Based on a current review of the available data gathered during this prior investigation, there is no indication that the fault extends on the recharge facility site.

The two principal seismic considerations for most sites in southern California are (1) surface rupture along active fault traces and (2) damage to structures due to seismically induced ground shaking. An active fault is one that has moved in the Holocene period (i.e., last 11,000 years). No known active faults have been mapped on the recharge site and no evidence of faulting has been observed onsite. The closest mapped, previously known, active fault that has been studied in sufficient detail to evaluate the potential for strong seismic shaking is the San Jacinto-San Jacinto Valley segment fault, located approximately 5.6 miles northeast of the recharge facility site.

The San Jacinto-San Jacinto Valley fault is capable of producing a maximum moment magnitude of 6.9 (Mw) with an average slip rate of 12.0 ±6 millimeters per year. Other known regional active faults that could affect the recharge facility site include the San Andreas, Banning, and Elsinore-Glen Ivy faults. The largest fault in southern California, the San Andreas Fault System, is located approximately 14.3 kilometers northeast of the recharge facility site.

Pipeline Alignment and Service Connection Site

The inferred surface trace of the west to northwest-trending Beaumont Fault is located immediately north of the intersection of Orchard Street and Beaumont Avenue. The Beaumont Fault is not designated as an active fault by the State of California; however, it is designated as active by the County of Riverside. The County has established a fault hazard zone that includes the service connection site, the portion of the pipeline alignment along Orchard Street, and the portion of the alignment along Beaumont Avenue to approximately 600 feet south of Orchard Street. The County has also established several northwest-trending fault hazard zones to the southwest of the pipeline alignment. The closest of these zones is approximately 0.3 miles southwest of the southern end of the pipeline alignment.

Liquefaction

Liquefaction refers to the loss of soil strength due to a buildup of pore-water pressure during severe ground shaking. Liquefaction is associated primarily with loose (low density), saturated, fine- to medium-grained, clean cohesionless soil. As the shaking action of an earthquake progresses, the soil grains are rearranged and the soil density increases within a short time period. Rapid densification of the soil results in a buildup of pore-water pressure. When the pore-water pressure approaches the total overburden pressure, the soil reduces greatly in strength and temporarily behaves similarly to a fluid.

The effects of severe liquefaction can include sand boils, settlement, and bearing capacity failures below structural foundations. There are several requirements for liquefaction to occur, including:

soils must be submerged, soils must be primarily granulars, soils must be loose to medium-dense, ground motion must be intense, and duration of shaking must be sufficient for the soils to lose shear resistance.

Recharge Facility Site

According to the County of Riverside, the recharge facility site is located within an area of deep groundwater with sediments considered to have low to very low susceptibility to liquefaction. Regional groundwater data indicates that shallow groundwater conditions do not exist locally, nor have they existed historically.

Pipeline Alignment and Service Connection Site

Similar to the project area as a whole, the pipeline alignment and service connection site are located within an area designated by the County of Riverside as being susceptible to liquefaction. Like the recharge facility site, regional groundwater data indicates that shallow groundwater conditions do not exist locally, nor have they existed historically.

Slope Stability

The slopes of the recharge basins are planned for construction at inclinations of 3:1 (horizontal to vertical) or flatter. With the proposed design, the upper portion of the slope would be constructed of compacted fill, while the lower portion will be cut into alluvial soils consisting of sand and silty sand with gravel. Onsite slopes would be designed and constructed to be stable under static, pseudo-static, and rapid drawdown conditions.

3.4.2 - Regulatory Setting

Federal

National Earthquake Hazards Reduction Program

The National Earthquake Hazards Reduction Program (NEHRP) was established by the U.S. Congress when it passed the Earthquake Hazards Reduction Act of 1977, Public Law (PL) 95–124. In establishing NEHRP, Congress recognized that losses due to earthquakes could be reduced through improved design and construction methods and practices, land use controls and redevelopment, prediction techniques and early-warning systems, coordinated emergency preparedness plans, and public education and involvement programs. The four basic NEHRP goals remain unchanged:

- Develop effective practices and policies for earthquake loss reduction and accelerate their implementation.
- Improve techniques for reducing earthquake vulnerabilities of facilities and systems.
- Improve earthquake hazards identification and risk assessment methods, and their use.
- Improve the understanding of earthquakes and their effects.

Several key federal agencies contribute to earthquake mitigation efforts. There are four primary NEHRP agencies:

- National Institute of Standards and Technology (NIST) of the Department of Commerce
- National Science Foundation (NSF)
- United States Geological Survey (USGS) of the Department of the Interior
- Federal Emergency Management Agency (FEMA) of the Department of Homeland Security

Implementation of NEHRP priorities is accomplished primarily through original research, publications, and recommendations to assist and guide state, regional, and local agencies in the development of plans and policies to promote safety and emergency planning.

State

California Building Code

The (2009) Uniform Building Code (UBC) is published by the International Conference of Building Officials (ICBO), and serves as the widely adopted model building code in the United States. The (2010) California Building Code (CBC) is another name for the body of regulations known as the California Code of Regulations (CCR), Title 24, Part 2, which is a portion of the California Building Standards Code (CBSC). The CBC incorporates by reference the UBC requirements with necessary California amendments. Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24, or they are not enforceable. Compliance with the 2010 CBC requires that, with extremely limited exceptions, structures for human occupancy be designed and constructed to resist the effects of earthquake motions. The Seismic Design Category for a structure is determined in accordance with either CBC Section 1613 - Earthquake Loads, or American Society of Civil Engineers (ASCE) Standard No. 7-05, Minimum Design Loads for Buildings and Other Structures. In brief, based on the engineering properties and soil type(s) of a site, the site is assigned a Site Class ranging from A to F. The Site Class is then combined with Spectral Response (i.e., ground acceleration induced by earthquake) information for the location to arrive at a Seismic Design Category ranging from A to D, with A being the least and D being the most severe conditions. The classification of the site and related calculations must be determined by a qualified person and are site-specific.

Alquist-Priolo Earthquake Fault Zoning Act

The 1972 Alquist-Priolo Earthquake Fault Zoning Act was passed to mitigate the hazard of surface faulting to structures for human occupancy. The Act's primary purpose aims at preventing the construction of buildings for human occupancy upon the surface trace of active faults. The Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards (e.g. strong ground shaking). The Act requires the State Geologist to establish and map regulatory zones, known as Earthquake Fault Zones, around the surface traces of active faults and to issue appropriate

maps. The maps are distributed to all affected local, regional, and State agencies for use during planning and controlling new or renewed construction.

Seismic Hazards Mapping Act (SHMA)

Following the 1989 Loma Prieta earthquake, the California Legislature enacted the 1990 Seismic Hazards Mapping Act (SHMA) to protect the public from the effects of strong ground shaking, liquefaction, landslides and other seismic hazards. The SHMA established a statewide mapping program to identify areas subject to violent shaking and ground failure. The program is intended to assist local and regional agencies in protecting public health and safety. The SHMA requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones. As a result, the California Geologic Survey is mapping SHMA Zones and has completed seismic hazard mapping for the portions of California most susceptible to liquefaction, ground shaking, and landslides; primarily the San Francisco Bay area and Los Angeles basin.

Local

As discussed previously in Section 1 of this Draft EIR, the SGPWA is exempt from local land use policies and ordinances in accordance with California Government Code Sections 53091(d) and 53091(e). Although exempt for the proposed project, SGPWA has chosen to provide a discussion of the local land use policies and ordinances.

City of Beaumont General Plan

The City of Beaumont General Plan contains the following policies that address geology and soils.

Safety Element

Goal 1. The City of Beaumont will make every effort to mitigate the seismic hazards that are present within the Planning Area.

> **Policy 1.** The City of Beaumont will continue to promote seismic safety through comprehensive land use planning.
>
> **Policy 4.** The City of Beaumont will require special soils and structural investigations for all proposed structures of large scale or involving large groups of people.

County of Riverside General Plan

The County of Riverside General Plan contains the following policies that address geology and soils.

Safety Element

> **Policy S 2.1.** Minimize fault rupture hazards through enforcement of Alquist-Priolo Earthquake Fault Zoning Act provisions and the following policies:

a. Require geologic studies or analyses for critical structures, and lifeline, high-occupancy, schools, and high-risk structures, within 0.5 miles of all Quaternary to historic faults shown on the Earthquake Fault Studies Zones map.

b. Require geologic trenching studies within all designated Earthquake Fault Studies Zones, unless adequate evidence, as determined and accepted by the County Engineering Geologist, is presented. The County may require geologic trenching of non-zoned faults for especially critical or vulnerable structures or lifelines.

c. Require that lifelines be designed to resist, without failure, their crossing of a fault, should fault rupture occur.

d. Support efforts by the California Department of Conservation, Division of Mining and Geology to develop geologic and engineering solutions in areas of disseminated ground deformation due to faulting, in those areas where a through-going fault cannot be reliably located.

e. Encourage and support efforts by the geologic research community to define better the locations and risks of County faults. Such efforts could include data sharing and database development with regional entities, other local governments, private organizations, utility agencies or companies, and local universities.

Policy S 2.2. Require geological and geotechnical investigations in areas with potential for earthquake-induced liquefaction, landsliding or settlement as part of the environmental and development review process, for any structure proposed for human occupancy, and any structure whose damage would cause harm.

Policy S 2.3. Require that a State-licensed professional investigate the potential for liquefaction in areas designated as underlain by "Susceptible Sediments" and "Shallow Ground Water" for all general construction projects.

Policy S 2.4. Require that a State-licensed professional investigate the potential for liquefaction in areas identified as underlain by "Susceptible Sediments" for all proposed critical facilities projects.

Policy S 2.5. Require that engineered slopes be designed to resist seismically-induced failure. For lower-risk projects, slope design could be based on pseudo-static stability analyses using soil engineering parameters that are established on a site-specific basis. For higher-risk projects, the stability analyses should factor in the intensity of expected ground shaking, using a Newmark-type deformation analysis.

Policy S 2.6. Require that cut and fill transition lots be over-excavated to mitigate the potential of seismically-induced differential settlement.

Policy S 2.7. Require a 100% maximum variation of fill depths beneath structures to mitigate the potential of seismically-induced differential settlement.

Policy S 2.8. Encourage research into new foundation design systems that better resist the County's climatic, geotechnical, and geological conditions.

Policy S 3.3. Before issuance of building permits, require certification regarding the stability of the site against adverse effects of rain, earthquakes, and subsidence.

Policy S 3.5. During permit review, identify and encourage mitigation of onsite and offsite slope instability, debris flow, and erosion hazards on lots undergoing substantial improvements.

Policy S 3.6. Require grading plans, environmental assessments, engineering and geologic technical reports, irrigation and landscaping plans, including ecological restoration and revegetation plans, as appropriate, in order to assure the adequate demonstration of a project's ability to mitigate the potential impacts of slope and erosion hazards and loss of native vegetation.

Policy S 3.8. Require geotechnical studies within documented subsidence zones, as well as zones that may be susceptible to subsidence, as identified in Figure S-7 and the Technical Background Report, prior to the issuance of development permits. Within the documented subsidence zones of the Coachella, San Jacinto, and Elsinore valleys, the studies must address the potential for reactivation of these zones, consider the potential impact on the project, and provide adequate and acceptable mitigation measures.

Policy S 3.10. Encourage and support efforts for long-term, permanent monitoring of topographic subsidence in all producing groundwater basins, irrespective of past subsidence.

Policy S 3.13. Require buildings to be designed to resist wind loads.

Policy S 3.14. Educate builders about the wind environment and encourage them to design projects accordingly.

3.4.3 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether impacts to geology and soils are significant environmental effects, the following questions are analyzed and evaluated. 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. (See Fault Rupture Impact GEO-1.)

ii. Strong seismic ground shaking? (See Seismic Ground Shaking Impact GEO-2.)
iii. Seismic-related ground failure, including liquefaction? (See Liquefaction Impact GEO-3)
iv. Landslides? (See Section 6.6.1, Earthquakes)

b) Result in substantial soil erosion or the loss of topsoil? (See Section 6.6.2, Soil Erosion or Topsoil Loss)

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? (See Unstable Geologic Unit or Soil Impact GEO-4)

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? (See Section 6.6.3, Expansive Soils)

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? (See Section 6.6.4, Wastewater Disposal Systems)

3.4.4 - Project Impact Analysis and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Fault Rupture

Impact GEO-1	**The project would not 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.

Impact Analysis

Recharge Facility Site

The recharge facility site is not located within a State-designated Alquist-Priolo Earthquake Fault Zone. However, a County-designated Earthquake Fault Zone for the Beaumont Plains Fault Zone is mapped through the southwest portion of the recharge facility site. The fault zone is mapped as a series of north to northwest trending faults in the general vicinity of the site. An investigation of this fault was conducted for a previous, unrelated project on the adjacent property located west of the recharge facility site in 2007. Based on a current review of the available data gathered during this prior investigation, there is no indication that the fault extends on the recharge facility site.

Due to the lack of active fault traces on or adjacent to the recharge facility site, impacts associated with earthquake fault rupture would be less than significant.

Pipeline Alignment and Service Connection Site

The inferred surface trace of the west to northwest-trending Beaumont Fault is located immediately north of the intersection of Orchard Street and Beaumont Avenue. The Beaumont Fault is not designated as an active fault by the State of California; however, it is designated as active by the County of Riverside. The County has established a fault hazard zone that includes the service connection site, the portion of the pipeline alignment along Orchard Street, and the portion of the alignment along Beaumont Avenue to approximately 600 feet south of Orchard Street. The County has also established several northwest-trending fault hazard zones to the southwest of the pipeline alignment. The closest of these zones is approximately 0.3 miles southwest of the southern end of the pipeline alignment on the recharge facility site.

Due to the lack of active fault traces on or adjacent to either the pipeline alignment or the service connection site, impacts associated with earthquake fault rupture would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Seismic Ground Shaking

Impact GEO-2	**The project could expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:**
	ii) Strong seismic ground shaking.

Impact Analysis

Recharge Facility Site

The closest mapped, previously known, active fault that has been studied in sufficient detail to evaluate the potential for strong seismic shaking is the San Jacinto-San Jacinto Valley segment fault, located approximately 5.6 miles northeast of the recharge facility site. The San Jacinto-San Jacinto Valley fault is capable of producing a maximum moment magnitude of 6.9 (Mw) with an average slip rate of 12.0 ±6 millimeters per year. Other known regional active faults that could affect the recharge facility site include the San Andreas, Banning, and Elsinore-Glen Ivy faults. The largest fault in southern California, the San Andreas Fault System, is located approximately 14.3 kilometers northeast of the recharge facility site.

Due to the proximity of these known active faults to the recharge facility site, there is potential for the site to be subjected to strong ground shaking during the life of the project. To evaluate the ground motion and a peak level of ground acceleration that the project is likely to experience, a probabilistic

analysis approach was used to estimate the expected peak ground acceleration level that has a 10 percent probability of exceedance over the approximate lifetime of the project (commonly 50 years). This approach took into account the historical seismicity of the region, the nature of nearby active faults, their distance to the recharge facility site, records of previous historical earthquakes, and the site-specific response characteristics.

The computer program FRISKSP was used for the analysis. The analysis indicated an average value for peak horizontal ground acceleration (PHGA) with a 10 percent probability of exceedance in 50 years of 0.61g.

PHGA for the recharge facility site was also estimated using California Geologic Survey (CGS) Probabilistic Seismic Hazards Mapping Ground Motion data, which uses a probabilistic seismic hazard analysis approach based on currently available earthquake and fault information. Based on information from the CGS, the PHGA with a 10 percent probability of being exceeded in 50 years is estimated to be approximately 0.62g.

Based on the findings of the outcome of the analysis, the November 2012 Geotechnical Review recommended that design and construction of the recharge facility be performed in accordance with the 2010 edition of the California Building Code (CBC). By complying with typical design requirements of the CBC, the construction and operation of the proposed recharge facility would not expose people or structures to potential substantial adverse effects, and therefore, less than significant impacts from strong seismic ground shaking would occur.

Pipeline Alignment and Service Connection Site

Buried pipelines are subject to dynamic stresses due to ground acceleration during seismic events. An earthquake event can affect buried pipelines in a number of ways, causing ground surface rupture, soil liquefaction, landslides, lateral spreading, differential settlement due to seismic shaking, and earthquake-induced flooding.

Similar to the recharge facility site, both the pipeline alignment and service connection site would be located with a seismically active region of southern California, with a number of nearby faults capable of producing significant ground shaking during a major seismic event. Earthwork associated with construction of both the pipeline and service connection site and the long-term use of the structure proposed at the service connection site could result in the exposure of people and the structure at the service connection site to potential substantial adverse effects. These effects are considered significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM GEO-1 The prefabricated service connection building shall be founded on dense, stable soils. The upper 12 inches of soils below the footing sub-grade shall be scarified and recompacted to a minimum of 90 percent of laboratory maximum dry density and within ±3 percent of optimum moisture density. Such scarification and recompaction shall extend horizontally outside the structure footprint to a distance of at least three feet.

MM GEO-2 Jack and bore pit excavations to receive backfill shall be free of trash, debris, or other unsatisfactory materials at the time of backfill placement. The bottoms of the excavations shall be scarified to a depth of at least 12 inches where possible. The scarified soils shall be brought to near-optimum moisture content and compacted to at least 90 percent of the laboratory maximum dry density to produce a firm and unyielding surface. Fill shall then be placed on the compacted soils in loose lifts of eight inches or less, moisture conditioned to within ±3 percent of optimum, and compacted to at least 90 percent of the laboratory maximum dry density determined by the ASTM D1557 test method. The project contractor shall select the equipment and processes to be used to achieve the specified density without damage to adjacent ground, facilities, utilities, and completed work.

MM GEO-3 Pipe design generally requires a granular material with a Sand Equivalent greater than 30. Bedding material for the pipes shall be free from oversized particles (greater than one inch). Migration of fines from the surrounding native and/or fill soils shall be considered in selecting the gradation of any imported bedding material. Pipe bedding material shall satisfy the following criteria:

$$D_{15} < 2.5 \text{ mm (0.098-inch) and } D_{50} < 19.0 \text{ mm (0.75-inch)}$$

Where D_{15} and D_{50} represent particle sizes of the bedding material corresponding to 15 percent and 50 percent passing by weight, respectively.

MM GEO-4 Trench excavations to receive backfill shall be free of trash, debris, or other unsatisfactory materials at the time of backfill placement.

MM GEO-5 Trench backfill shall be compacted to at least 90 percent of the laboratory maximum dry density as per ASTM D1557 test method or as required by the local agency standards. At least the upper one foot of trench backfill underlying pavement shall be compacted to at least 95 percent of the laboratory maximum dry density as per ASTM D1557 test method.

MM GEO-6 Particles larger than one inch shall not be placed within 12 inches of the pavement sub-grade. No more than 30 percent of the backfill volume shall be larger than 0.75 inch in the largest dimension. Gravel shall be well mixed with finer soil. Rocks larger than three inches in the largest dimension shall not be placed as trench backfill.

MM GEO-7 Trench backfill shall be compacted by mechanical methods, such as sheepsfoot, vibrating, or pneumatic rollers or mechanical tampers, to achieve the density specified in the 2013 Geotechnical Investigation Report. The backfill materials shall be brought to within ±3 percent of optimum moisture content then placed in horizontal layers. The thickness of uncompacted layers shall not exceed eight inches. Each layer shall be evenly spread, moistened, or dried as necessary, and then tamped or rolled until the specified density has been achieved.

MM GEO-8 Trench backfill shall not be placed, spread, or rolled during unfavorable weather conditions. When the work is interrupted by heavy rain, fill operations shall not resume until field tests by the project engineer indicate that the moisture content and density of the fill are in compliance with project specifications.

MM GEO-9 The prefabricated service connection building and pipeline shall be fitted with flexible couplings, automatic shut-off valves, or other similar measures.

MM GEO-10 Lightweight structures such as the prefabricated service connection building shall be supported on continuous (strip) and/or isolated spread footings. Continuous and isolated spread footings shall be at least 12-inches wide. The depth of embedment below lowest adjacent soil grade shall be at least 12 inches. Footings shall be founded on at least 12 inches of scarified and compacted soil. For shallow spread footings founded on scarified and compacted soil, an allowable net bearing capacity of 1,200 pounds per square foot (psf), plus 300 psf for each additional foot of depth, shall be used. The maximum allowable bearing capacity shall be limited to 2,500 psf.

MM GEO-11 Installation of the pipeline shall adhere to the required soil parameters for the pipeline as established in the California Building Code and identified in the 2013 Geotechnical Investigation Report.

Level of Significance After Mitigation

Less than significant with mitigation incorporated.

Implementation of Mitigation Measures GEO-1 through GEO-11 include specific design measures to reduce the potential for significant effects from strong seismic ground shaking during construction and operation of the pipeline and service connection site.

Ground Failure

Impact GEO-3	**The project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:**
	iii) Seismic-related ground failure, including liquefaction.

Impact Analysis

Liquefaction

Recharge Facility Site

Groundwater was not encountered during borings excavated to a maximum explored depth of 51.5 feet bgs. Groundwater is expected to be deeper than 200 feet bgs in the immediate vicinity of the recharge facility site. According to the County of Riverside, the recharge facility site is located within an area with deep groundwater.

According to the County of Riverside, the recharge facility site is located within an area of deep groundwater with sediments considered to have low to very low susceptibility to liquefaction. Regional groundwater data indicates that shallow groundwater conditions do not exist locally, nor have they existed historically. Therefore, impacts associated with liquefaction would be less than significant.

Pipeline Alignment and Service Connection Site

Groundwater was not encountered during borings drilled to a maximum depth of 26.5 feet bgs. A well (USGS 335807116582201) located approximately 0.25 miles east of the central portion of the pipeline alignment was monitored from 1991 to 2012. The depth to groundwater during that time ranged from approximately 530 to 610 feet bgs, with the most recent measurements approximately 565 feet bgs.

Several wells located 0.25 to 0.5 miles north of the pipeline alignment contained groundwater as shallow as approximately 50 feet bgs within the past several years. All wells that reported shallow groundwater are located north of the Beaumont Fault. As such, it is likely that the fault acts as a groundwater barrier, resulting in an accumulation of groundwater on the northern side.

Similar to the project area as a whole, the pipeline alignment and service connection site are not located within an area designated by the County of Riverside as being susceptible to liquefaction. Like the recharge facility site, regional groundwater data indicates that shallow groundwater conditions do not exist locally, nor have they existed historically. Therefore, impacts associated with liquefaction would be less than significant.

Slope Instability

Recharge Facility Site

The slopes of the recharge basins are planned for construction at inclinations of 3:1 (horizontal to vertical) or flatter. With the proposed design, the upper portion of the slope would be constructed of

compacted fill, while the lower portion will be cut into alluvial soils consisting of sand and silty sand with gravel. Onsite slopes would be designed and constructed to be stable under static, pseudo-static, and rapid drawdown conditions. Additionally, these slopes would be designed to withstand the effects of a seismic event and to maintain structural integrity during strong seismic ground shaking. Therefore, seismic related ground failure associated with the proposed recharge facility would be less than significant.

Pipeline Alignment and Service Connection Site

No long-term slopes would occur with the implementation of the pipeline alignment or the service connection site. Therefore, no slope instability would occur along the pipeline or at the service connection site. As a result, no impacts from seismic related ground failure associated with the proposed pipeline and service connection site would occur.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Ground Failure

Impact GEO-4	**The project would not be located on a geologic unit or soil that is unstable, or that could become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.**

Impact Analysis

Landslide

The recharge facility would include earthen berms and embankments. However, all slopes created as part of the recharge facility would be engineered to ensure structural integrity and to prevent instability, reducing the potential for landslide. The pipeline, service connection site, and offsite triangular parcel are relatively flat; any improvements related to the project would not alter this flat topography. As a result, landslide activity is not anticipated following implementation of the project. Therefore, impacts associated with landslide would be less than significant.

Lateral Spreading

Lateral spreading involves lateral movement of earthen materials due to ground shaking. It differs from slope failure in that ground failure involving a large movement does not occur due to the flatter slope of the initial ground surface. Lateral spreading is characterized by near-vertical cracks with predominantly horizontal movement of the soil mass involved over the liquefied soils. The potential

for lateral spreading on the project sites is considered low. Therefore, impacts associated with lateral spreading would be less than significant.

Subsidence

The County of Riverside has identified the entire project area as being susceptible to subsidence. Subsidence is typically caused by severe groundwater overdraft conditions similar to those currently experienced in the project region. While the primary purpose of the project is to promote groundwater recharge, replenishment of the underlying groundwater basin would be slow, but there would be steady process. As such, the project area would not be expected to be susceptible to subsidence for years to come, even after implementation of the project.

No evidence of subsidence such as substantial recorded reductions in historical elevations are present on or around the project sites. Although exposure to subsidence hazards cannot be entirely avoided, the California Building Code establishes engineering and construction criteria designed to reduce potential impacts associated with geotechnical issues, including subsidence, to acceptable levels. The design recommendations contained in the 2012 Geotechnical Review and the 2013 Geotechnical Investigation Report includes this California Building Code criteria. Therefore, potential subsidence impacts associated with the proposed project are considered less than significant.

Liquefaction

Like the project area as a whole, the project sites are not located within an area designated by the County of Riverside as being susceptible to liquefaction. Regional groundwater data indicates that shallow groundwater conditions do not exist locally, nor have they existed historically. Therefore, impacts associated with liquefaction would be less than significant.

Collapse

No natural or anthropogenic subsurface features that are known to promote surface collapse, including mines, aggregate extraction operations, or karst topography, are known to underlay or occur adjacent to the project sites. Therefore, impacts associated with collapse would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

3.5 - Greenhouse Gas Emissions

This section describes the potential greenhouse gas emissions effects of project implementation on the project site and its surrounding area. Descriptions and analysis in this section are based on the result of the California Air Resources Board's (CARB's) OFFROAD2011 off-road construction equipment emissions model and the CARB's EMFAC2011 mobile source emission model. The emissions estimations are included in this Draft EIR as Appendix B.

3.5.1 - Existing Conditions

Climate change is a change in the average weather of the earth that is measured by alterations in wind patterns, storms, precipitation, and temperature. These changes are assessed using historical records of temperature changes occurring in the past, such as during previous ice ages. Many of the concerns regarding climate change use this data to extrapolate a level of statistical significance specifically focusing on temperature records from the last 150 years (the Industrial Age) that differ from previous climate changes in rate and magnitude.

Greenhouse Gases

Gases that trap heat in the atmosphere are referred to as greenhouse gases. The effect is analogous to the way a greenhouse retains heat. Common greenhouse gases include water vapor, carbon dioxide, methane, nitrous oxides, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. Natural processes and human activities emit greenhouse gases. The presence of greenhouse gases in the atmosphere affects the earth's temperature. It is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

Climate change is driven by forcings and feedbacks. Radiative forcing is the difference between the incoming energy and outgoing energy in the climate system. Positive forcing tends to warm the surface while negative forcing tends to cool it. Radiative forcing values are typically expressed in watts per square meter. A feedback is a climate process that can strengthen or weaken a forcing. For example, when ice or snow melts, it reveals darker land underneath which absorbs more radiation and causes more warming. The global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere. The global warming potential of a gas is essentially a measurement of the radiative forcing of a greenhouse gas compared with the reference gas, carbon dioxide.

Individual greenhouse gas compounds have varying global warming potential and atmospheric lifetimes. Carbon dioxide, the reference gas for global warming potential, has a global warming potential of one. The global warming potential of a greenhouse gas is a measure of how much a given mass of a greenhouse gas is estimated to contribute to global warming. To describe how much global warming a given type and amount of greenhouse gas may cause, use is made of a metric called the carbon dioxide equivalent. The calculation of the carbon dioxide equivalent is a consistent

methodology for comparing greenhouse gas emissions since it normalizes various greenhouse gas emissions to a consistent reference gas, carbon dioxide. For example, methane's warming potential of 21 indicates that methane has a 21 times greater warming affect than carbon dioxide on a molecule per molecule basis. A carbon dioxide equivalent is the mass emissions of an individual greenhouse gas multiplied by its global warming potential.

Greenhouse gases as defined by Assembly Bill (AB) 32 include the following gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Select greenhouse gases are summarized in Table 3.5-1.

Table 3.5-1: Description of Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Nitrous oxide	Nitrous oxide is also known as laughing gas and is a colorless greenhouse gas. It has a lifetime of 114 years. Its global warming potential is 310.	Microbial processes in soil and water, fuel combustion, and industrial processes.
Methane	Methane is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years. Its global warming potential is 21.	Methane is extracted from geological deposits (natural gas fields). Other sources are landfills, fermentation of manure, decay of organic matter, and cattle.
Carbon dioxide	Carbon dioxide (CO_2) is an odorless, colorless, natural greenhouse gas. Carbon dioxide's global warming potential is 1. The concentration in 2005 was 379 parts per million (ppm), which is an increase of about 1.4 ppm per year since 1960.	Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood.
Chloro-fluorocarbons	These are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). Global warming potentials range from 3,800 to 8,100.	Chlorofluorocarbons were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987.
Hydro-fluorocarbons	Hydrofluorocarbons are a group of greenhouse gases containing carbon, chlorine, and at least one hydrogen atom. Global warming potentials range from 140 to 11,700.	Hydrofluorocarbons are synthetic manmade chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants.

Table 3.5-1 (cont.): Description of Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Perfluorocarbons	Perfluorocarbons have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Global warming potentials range from 6,500 to 9,200.	Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	Sulfur hexafluoride is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. It has a high global warming potential, 23,900.	This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas.
Sources: Compiled from a variety of sources, primarily IPCC, 2007.		

Other greenhouse gases include water vapor, ozone, and aerosols. Water vapor is an important component of our climate system and is not regulated. Ozone and aerosols are short-lived greenhouse gases; global warming potentials for short-lived greenhouse gases are not defined by the IPCC. Aerosols can remain suspended in the atmosphere for about a week and can warm the atmosphere by absorbing heat and cool the atmosphere by reflecting light. Black carbon is a type of aerosol that can also cause warming from deposition on snow.

There are no adverse health effects from the concentration of greenhouse gases in the atmosphere at the current levels, with the exception of ozone and aerosols (particulate matter). The potential health effects of ozone and particulate matter are discussed in criteria pollutant analyses. At very high concentrations, carbon dioxide, methane, sulfur hexafluoride, and some chlorofluorocarbons can cause suffocation as the gases can displace oxygen (Department of Health and Human Services 2005, Occupational Safety and Health Administration 2003).

3.5.2 - Regulatory Setting

State Regulations

Pavley Regulations. California AB 1493, enacted on July 22, 2002, required the CARB to develop and adopt regulations that reduce greenhouse gases emitted by passenger vehicles and light duty trucks. The regulation was stalled by automaker lawsuits and by the EPA's denial of an implementation waiver. On January 21, 2009, the ARB requested that the EPA reconsider its previous waiver denial. On January 26, 2009, President Obama directed that the EPA assess whether the denial of the waiver was appropriate. On June 30, 2009, the EPA granted the waiver request, which begins with motor vehicles in the 2009 model year.

The standards phase in during the 2009 through 2016 model years. When fully phased in, the near term (2009 to 2012) standards will result in about a 22 percent reduction compared with the 2002 fleet, and the mid-term (2013 to 2016) standards will result in about a 30 percent reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.

Executive Order S-3-05. California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for greenhouse gas emissions:

- By 2010, reduce greenhouse gas emissions to 2000 levels.
- By 2020, reduce greenhouse gas emissions to 1990 levels.
- By 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be an aggressive, but achievable, mid-term target. The Climate Action Team's Report to the Governor in 2006 contains recommendations and strategies to help ensure the 2020 targets in Executive Order S-3-05 are met.

Low Carbon Fuel Standard - Executive Order S-01-07. The Governor signed Executive Order S-01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the executive order established a Low-Carbon Fuel Standard and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, the CARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in the State Implementation Plan for alternative fuels (State Alternative Fuels Plan adopted by California Energy Commission on December 24, 2007) and was submitted to CARB for consideration as an "early action" item under AB 32. The ARB adopted the Low Carbon Fuel Standard on April 23, 2009.

AB 32. The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that greenhouse gases emitted in California be reduced to 1990 levels by the year 2020. "Greenhouse gases" as defined under AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. ARB is the state agency charged with monitoring and regulating sources of greenhouse gases. AB 32 states the following:

> Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

The CARB Board approved the 1990 greenhouse gas emissions level of 427 $MMTCO_2e$ on December 6, 2007 (CARB 2007). Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 $MMTCO_2e$. Emissions in 2020 in a "business as usual" scenario are estimated to be 596 $MMTCO_2e$.

Under AB 32, the ARB published its Final Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California. Discrete early action measures are currently underway or are enforceable by January 1, 2010. The ARB has 44 early action measures that apply to the transportation, commercial, forestry, agriculture, cement, oil and gas, fire suppression, fuels, education, energy efficiency, electricity, and waste sectors. Of these early action measures, nine are considered discrete early action measures, as they are regulatory and enforceable by January 1, 2010. The ARB estimates that the 44 recommendations are expected to result in reductions of at least 42 $MMTCO_2e$ by 2020, representing approximately 25 percent of the 2020 target.

The ARB approved the Climate Change Scoping Plan in December 2008 (CARB 2008). The Scoping Plan contains measures designed to reduce the State's emissions to 1990 levels by the year 2020. The Scoping Plan identifies recommended measures for multiple greenhouse gas emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. The measures in the Scoping Plan will be in place by 2012. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 greenhouse gas target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards.
- Achieving a statewide renewables energy mix of 33 percent.
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system.
- Establishing targets for transportation-related 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.
- 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.

In addition, the Scoping Plan differentiates between "capped" and "uncapped" strategies. "Capped" strategies are subject to the proposed cap-and-trade program. The Scoping Plan states that the inclusion of these emissions within the cap-and trade program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. "Uncapped" strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional greenhouse gas emission reductions.

Executive Order S-13-08. Executive Order S-13-08 indicates that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the order, in December 2009, the California Natural Resources Agency released its 2009 California Climate Adaptation Strategy (California Natural Resources Agency 2009). The Strategy is the ". . . first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

According to the Adaptation Strategy Report, one of the expected impacts of global warming is a shift in the water cycle with less winter precipitation falling as snow, and both snowmelt and rainwater runoff occurring sooner in the year creating risks of flooding and water shortages. One of the key recommendations is implementation of Senate Bill X71, that directs state agencies to employ strategies to achieve a statewide 20 percent reduction in per capita water use by 2020, expand surface and groundwater storage, implement efforts to fix the Delta water supply, quality, and ecosystem conditions, support agricultural water use efficiency, improve state-wide water quality, and improve Delta ecosystem conditions and stabilize water supplies as developed in the Bay Delta Conservation Plan. These recommendations are consistent with earlier recommendations made by the Department of Water Resources (DWR) in its October 2008 publication, "Managing an Uncertain Future." According to DWR, actions to increase the overall water supply require protection of groundwater, especially from contamination and overuse. DWR's Bulletin 118 California's Groundwater Update 2003 provides information for planning the optimal use of the groundwater resources.

CEQA Guidelines Update. As required by SB 97, the Governor's Office of Planning and Research prepared and transmitted recommended Amendments to the CEQA Guidelines for greenhouse gas emissions to the California Natural Resources Agency on April 13, 2009. After a public comment period, the Natural Resources Agency proposed revisions to the text of the Proposed Guidelines Amendments. The Natural Resources Agency provided additional public comment time on the revised text. The Natural Resources Agency adopted the CEQA Guidelines Amendments with minor, non-substantial changes.

The Natural Resources Agency transmitted the Adopted Amendments and the entire rulemaking file to the Office of Administrative Law on December 31, 2009. The Office of Administrative Law reviewed the Adopted Amendments and the Natural Resources Agency's rulemaking file. The Adopted Amendments were filed with the Secretary of State, and became effective March 18, 2010.

The CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of greenhouse gas emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing CEQA Guidelines to reference climate change.

A new section, CEQA Guidelines Section 15064.4, was added to assist agencies in determining the significance of greenhouse gas emissions. The new section allows agencies the discretion to determine whether a quantitative or qualitative analysis is best for a particular project. Importantly, however, little guidance is offered on the crucial next step in this assessment process—how to determine whether the project's estimated greenhouse gas emissions are significant or cumulatively considerable.

Also amended were CEQA Guidelines Section 15126.4 and 15130, which address mitigation measures and cumulative impacts respectively. Greenhouse gas mitigation measures are referenced in general terms, but no specific measures are championed. The revision to the cumulative impact discussion requirement (Section 15130) simply directs agencies to analyze greenhouse gas emissions in an EIR when a project's incremental contribution of emissions may be cumulatively considerable, however it does not answer the question of when emissions are cumulatively considerable.

Section 15183.5 permits programmatic greenhouse gas analysis and later project-specific tiering, as well as the preparation of Greenhouse Gas Reduction Plans. Compliance with such plans can support a determination that a project's cumulative effect is not cumulatively considerable, according to proposed Section 15183.5(b).

In addition, the amendments revised Appendix F of the CEQA Guidelines, which focuses on Energy Conservation, and Appendix G, which includes the sample Environmental Checklist Form. The Checklist was also amended to include greenhouse gas questions, as identified in the Threshold section of this document.

Local Regulations

The project is within the South Coast Air Basin, which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAQMD, the County of Riverside, and the City of Beaumont do not have any climate action plans or greenhouse gas reduction plans.

3.5.3 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether greenhouse emissions impacts are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? (See Greenhouse Gas Emissions Impact GHG-1.)

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases? (See Conflict with Plan, Policy, or Regulation that Reduces Emissions Impact GHG-2.)

3.5.4 - Project Impact Analysis and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Greenhouse Gas Emissions

Impact GHG-1	**The project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.**

Impact Analysis

The project contributes to climate change impacts through its contribution of GHG emissions. The project would generate a variety of GHGs during construction and operation such as carbon dioxide, methane, and nitrous oxide from the exhaust of equipment, and exhaust of vehicles for employees and hauling trips. The project may also emit GHGs that are not defined by AB 32. For example, the project may generate aerosols. Aerosols are short-lived GHGs, as they remain in the atmosphere for about 1 week. Black carbon is a component of aerosol. A couple of studies have indicated that black carbon has a high global warming potential; however, the United Nations Intergovernmental Panel on Climate Change (IPCC) states that it has a low level of scientific certainty (IPCC 2007). Water vapor could be emitted from evaporated water from the recharge basins as well as from water used for landscaping, but this is not a significant impact because water vapor concentrations in the upper atmosphere are primarily due to climate feedbacks rather than emissions from project-related activities. The project would emit nitrogen oxides and volatile organic compounds, which are ozone precursors. Ozone is a GHG; however, unlike the other GHGs, ozone in the troposphere is relatively short-lived and can be reduced in the troposphere on a daily basis.

Certain GHGs defined by AB 32 would not be emitted by the project. Perfluorocarbons and sulfur hexafluoride are typically used in industrial applications, none of which would be used by the project. Therefore, it is not anticipated that the project would emit perfluorocarbons or sulfur hexafluoride.

An inventory of greenhouse gas emissions generated by the project is presented below. The emissions are converted to metric tons of carbon equivalents ($MTCO_2e$) using the formula:

$$MTCO_2e = (\text{tons of gas}) \times (\text{global warming potential}) \times (0.9072 \text{ metric tons of gas})$$

Construction

Carbon dioxide emissions from construction were estimated using the emission factors from the CARB OFFROAD 2011 emission model for off-road construction equipment and the CARB EMFAC2011 mobile source emission model for estimating emissions from worker vehicles and haul trucks (see Section 3.1 Air Quality for assumptions).

Greenhouse gas emissions from project construction equipment and worker vehicles are shown in Table 3.5-2. The emissions are from all phases of construction.

Table 3.5-2: Construction Greenhouse Gases

Phase	Total Emissions ($MTCO_2e$)
Recharge Basin	338
Well Construction	6
Pipeline Construction	38
Service Connection	7
Total	**389**
Notes: $MTCO_2e$ = metric tons of carbon dioxide equivalent. Source: See Appendix B.	

Operation

Operational or long-term emissions will occur over the life of the project. These emissions will include maintenance vehicles, off-road equipment, haul truck, and operation of a well pump for irrigation. It is anticipated that the recharge facility may require servicing on an annual basis which would require the basins to be completely dewatered for cleaning. Each cleaning assumes that a bulldozer would remove the silt layer built up on the basin's bottom. An estimated 100 cubic yards of silt would be removed annually by the use of 2 haul truck trips per day over 5 days to complete the 5 proposed basins.

Motor vehicle emissions generate greenhouse gas emissions from the exhausts of employee vehicles. Estimates of mobile source greenhouse emissions were estimated using the emission factors from the EMFAC2011 mobile source emission model.

Off-road equipment would be used to break up the silt at the bottom of the basin approximately twice per year. Emissions were estimated using the emission factors from the OFFROAD2011 emission model. Maintenance was assumed to require the use of one bulldozer and one water truck. Vehicle exhaust emissions are assumed to occur from haul trucks that are used each day during the annual maintenance cleaning of the basins. As identified above, the estimates of mobile source greenhouse emissions were estimated using the emission factors from the EMFAC2011 mobile source emission model. Each day during the assumed 5-days of cleaning, four worker vehicles are assumed to visit the project site and two 10 cubic yard truckloads of silt would be exported offsite 7 miles away (14 miles round trip) to the Lamb Canyon Landfill off State Route 79 south of Interstate 10.

The total operational and construction emissions for the project are shown in Table 3.5-3. As recommended by the SCAQMD, the construction emissions are averaged over 30 years and are added to the operational emissions to obtain the total emissions.

Table 3.5-3: Project Operational Greenhouse Gases (including Construction)

Source	Emissions ($MTCO_2e$ per year)
Motor Vehicles - Maintenance workers[1]	1
Off-road equipment and haul trucks[2]	10
Electricity for Well Pump[3]	3
Subtotal Operational	14
Construction averaged over 30 years	13
Total operational and construction	27

Notes:
$MTCO_2e$ = metric tons of carbon dioxide equivalents
[1] This operational analysis assumes four worker vehicles per day over the five day period and each one-way trip is 20 miles, twice per year
[2] This operational analysis assumes one bulldozer (7 hours per day), two water truck (3 hours per day), and 2 haul trucks (7 miles each one-way trip per day) will be used over a period of five days.
[3] Assumes a 20 horsepower well pump operating 4 hours per day, 3 days per week
Source: See Appendix B.

Summary

CEQA requires that Lead Agencies inform decision makers and the public regarding potential significant environmental effects of proposed projects and feasible ways that environmental damage can be avoided or reduced, through feasible mitigation measures and/or project alternatives. The

Lead Agencies must also disclose the reasons why a project is approved if significant environmental effects are involved (CEQA Guidelines Section 15002). CEQA also requires Lead Agencies to evaluate potential environmental effects based on, to the fullest extent possible, scientific and factual data (CEQA Guidelines Section 15064[b]). Significance conclusions must be based on substantial evidence, which includes facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts (CEQA Guidelines Section 15064f [5]).

On December 5, 2008, the SCAQMD Governing Board adopted an interim greenhouse gas significance threshold for stationary sources, rules, and plans where the SCAQMD is lead agency ("SCAQMD permit threshold"). The SCAQMD permit threshold consists of five tiers, as follows:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the project is consistent with a greenhouse gas reduction plan. If a project is consistent with a qualifying local greenhouse gas reduction plan, it does not have significant greenhouse gas emissions.
- Tier 3 is a screening threshold level to determine significance using a 90 percent emission capture rate approach and is 10,000 $MTCO_2e$ per year (with construction emissions amortized over 30 years and added to operational emissions).
- Tier 4 was not approved in the interim greenhouse gas threshold.

Tier 5 would allow the project proponent to purchase offsite mitigation to reduce greenhouse gas emissions to less than the screening level (in Tier 3).

The SCAQMD is in the process of preparing recommended significance thresholds for greenhouse gases for local lead agency consideration (SCAQMD draft local agency threshold); however, the SCAQMD Board has not approved the thresholds as of the date of the NOP for local lead agencies to utilize in assessing impacts. The current draft thresholds consist of a tiered approach. Tier 1 and Tier 2 are the same as in the SCAQMD permit threshold listed above. Tier 3 consists of screening values, which the lead agency can choose but must be consistent with the approach. A project's construction emissions are averaged over 30 years and are added to a project's operational emissions. If a project's emissions are under one of the following screening thresholds, then the project is less than significant (SCAQMD 2010):

All land use types: 3,000 $MTCO_2e$ per year
Based on land use type:
Residential: 3,500 $MTCO_2e$ per year
Commercial: 1,400 $MTCO_2e$ per year
Mixed use: 3,000 $MTCO_2e$ per year

Tier 4 in the SCAQMD draft local agency threshold has three options. The first option involves reducing emissions from business as usual by a certain percentage. The second option requires early implementation of applicable AB 32 Scoping Plan measures. The third option is a SCAQMD efficiency target for service populations. Tier 5 involves mitigation offsets to achieve target significance threshold.

The County of Riverside published a document titled "Greenhouse Gas Emissions, Screening Tables, County of Riverside California in May of 2012.[1] The Screening Tables document was prepared by Akins for the County of Riverside.

The screening tables use a point-based system. If the project is able to achieve 100 points or more, then they do not need to analyze GHG emissions in the air quality study. The screening tables also allow developers to tailor their mitigation measures to the project's needs rather than have them be subject to a one-size fits all mitigation measures that may be too stringent for them.

If the project is not able to achieve 100 points, then a detailed, GHG analysis is required, where the project's emissions are compared to the SCAQMD draft threshold of 3,000 $MTCO_2e$ per year. If the project exceeds the 3,000 $MTCO_2e$ per year threshold, then project emissions would need to be reduced by 25 percent from year 2011 emissions levels.

To determine whether the project is significant, this assessment utilized the SCAQMD draft local agency threshold and County of Riverside threshold of 3,000 MTCO2e per year.

The project would emit approximately 27 $MTCO_2e$ per year, which is under the SCAQMD's draft threshold and the County of Riverside threshold of 3,000 tons per year in their greenhouse gas significance test. The project's greenhouse gas emissions are, therefore, less than the SCAQMD's and County of Riverside's significance thresholds.

Considering the above information, the project would result in a less than significant impact. Although the project would generate a small amount of greenhouse gases, the emissions would not have a significant impact on the environment.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

[1] http://rivcocob.com/agenda/2012/06_19_12/03.45f.pdf.

Conflict with Plan, Policy, or Regulation that Reduces Emissions

Impact GHG-2	**The project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.**

Impact Analysis

As discussed in Impact GHG-1, the project's emissions of greenhouse gases are below the draft SCAQMD threshold as well as the County of Riversides threshold. The SCAQMD, the County of Riverside, and the City of Beaumont do not have an applicable plan, policy or regulation adopted to reduce the emissions of greenhouse gases. The California Air Resources Board (CARB) 2008 Climate Change Scoping Plan is a document that outlines measures that the State can take to reduce its greenhouse gas emissions to 1990 levels by the year 2020. The measures in the Scoping Plan deal with statewide measures that cannot be implemented by a project applicant or lead agency. Such measures include the state cap and trade program, state light duty vehicle greenhouse gas emission standards, state building energy efficiency standards, renewable energy portfolio standards, low carbon fuel standards, setting regional transportation-related greenhouse gas targets, light duty and heavy-duty vehicle efficiency standards, goods movement, solar roofs program, high-speed rail, and green building programs. Because of the nature of this project, the Scoping Plan measures do not apply to the proposed project. Therefore, the project would not conflict with any applicable plan, policy or regulation of an agency adopted to reduce the emissions of greenhouse gases.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

3.6 - Hazards and Hazardous Materials

This section describes the potential hazards and hazardous materials effects from project implementation on the project site and its surrounding area. Descriptions and analysis in this section are based on information contained in the May 4, 2011 Phase I Environmental Site Assessment (ESA) prepared by Leighton Consulting, Inc., and the November 1, 2012 Environmental Data Resources, Inc. (EDR) Radius Map Report prepared by EDR. The 2011 Phase I ESA was prepared for the recharge facility site, while the 2012 EDR Radius Map Report was prepared for the pipeline alignment and service connection site. The Phase I ESA and EDR Radius Map Report are included in this Draft EIR as Appendix F.

3.6.1 - Existing Conditions

Hazardous Materials

Hazardous materials, as defined by the California Health and Safety Code Section 25501 (n) and (o), are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed, or otherwise managed. Hazardous materials are grouped into the following four categories, based on their properties:

- Toxic (causes human health effects)
- Ignitable (has the ability to burn)
- Corrosive (causes severed burns or damage to materials)
- Reactive (causes explosions or generates toxic gases)

A hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. When improperly handled, hazardous materials and hazardous waste can result in public health hazards if released into the environment through releases into soil or groundwater, or via airborne releases in the form of vapors, fumes, or dust. Contaminated soil and groundwater containing concentrations of hazardous constituents that exceed regulatory threshold must be handled and disposed of as hazardous waste when excavated or pumped. The California Code of Regulations, Title 22, Sections 66261.20-.24 contains technical descriptions of toxic characteristics that could cause soil or groundwater to be classified as hazardous waste.

Project Sites Settings

Since two separate hazardous materials evaluations were prepared for the project - the 2011 Phase I ESA was prepared for the recharge facility site, while the 2012 EDR Radius Map Report was prepared for the pipeline alignment and service connection site - the following existing conditions discussion first addresses the recharge facility site, followed by the pipeline alignment and service connection site.

Recharge Facility Site

Historical Use

Historically, the recharge facility site was vacant land that could have been used for cattle and sheep grazing and ranching during the late 1800s. Historical aerial photographs were reviewed for information regarding past uses that may have occurred on the recharge facility site. Aerial photographs were reviewed for the years 1938, 1953, 1967, 1976, 1980, 1996 and 2002. Each aerial photograph that was reviewed showed the site as vacant, undeveloped land. With the exception of the onsite addition of unimproved dirt roads and trees and the offsite encroachment of development, the site remained relatively unchanged from 1938 to 2002.

Historical topographic maps were also reviewed for information related to past uses on the recharge facility site. Topographic map coverage of the recharge facility site and surrounding area was provided by 1943, 1953, 1979, 1988 and 1996 Banning Quadrangle topographical maps. None of the topographical maps depicted any structures, tanks, or wells on or adjacent to the site.

Records Search

A search of selected government databases was conducted using Track Info Services, LLC's Environmental FirstSearch Report. Details of the database search, along with descriptions of each database researched, are provided in the Environmental FirstSearch Report, which is included as part of the Phase I ESA prepared for the recharge facility site (Appendix F). The report meets the government record search requirements of ASTM E1527-05 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. The database listings were reviewed within the specified radii established by ASTM E1527-05. The following is a summary of the results of the Environmental FirstSearch Report:

Onsite

The recharge facility site was not identified on the Environmental FirstSearch Report.

Offsite

One offsite facility within the specified radius established by ASTM E1527-05 was identified. Chavez Elementary School and Expansions is located approximately 0.89 miles southeast of the recharge facility site, and was identified on the "State/Tribal/Other Sites" listing. This database is maintained by the Department of Toxic Substances Control (DTSC) with information about sites that are known to be contaminated with hazardous substances, as well as with information on uncharacterized locations where further study may reveal problems.

According to the information provided on Chavez Elementary School and Expansions, the DTSC changed the status of this facility to "no further action" in 2001. Based on its "no

further action" status and its cross-gradient location from the recharge facility site, there would be low potential for this facility to adversely affect the project.

Site Reconnaissance

On April 12, 2011, Leighton Consulting, Inc. conducted a reconnaissance-level assessment of the recharge facility site. Site reconnaissance involved the observation and documentation of the existing conditions found on the site and the nature of the neighboring property development.

During the site reconnaissance, some asphalt chunks, soil stockpiles, and a boulder stockpile were observed in the northwestern portion of the site. A power line and three pole-mounted transformers were also observed in the northern and western portions of the site.

Polychlorinated Biphenyls (PCBs)

Three pole-mounted transformers were identified on the recharge facility site. However, soil staining was not observed beneath the transformers. The presence of these pole-mounted transformers does not constitute a recognized environmental concern (REC).

Dumping

Evidence of small, scattered, uncontrolled dumping was observed on the recharge facility site. Dumped materials found across the northwestern portion of the site consist of rusted metal cans, asphalt chunks, and other materials. Two soil stockpiles and a boulder stockpile were also observed on the site. According to Mr. Jeff Davis with SGPWA, these stockpiles consist of flood sediments transported by Riverside County Flood Control from Cherry Valley Creek, north of the site, and dumped on the site. The soil stockpiles would ultimately be removed by Riverside County Flood Control. Soil staining was not observed on or around the stockpiles. The presence of these stockpiles does not constitute a REC.

Other Common Recognized Environmental Concerns.

During the site reconnaissance, evidence of the following common RECs or indicators of RECs were not observed: hazardous substances, drums, or other chemical containers; aboveground or underground storage tanks; solid or hazardous waste disposal; pits, ponds, lagoons, septic systems, drains, cisterns, or sumps; pesticide use; staining, discolored oils, or corrosion; stressed vegetation; unusual odors; or onsite wells.

Pipeline Alignment and Service Connection Site

Records Search

A search of available environmental records was conducted by EDR. The EDR Radius Map Report (Appendix F) was designed to meet the search requirements of the EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site

Assessments (E 1527-05), and/or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate. Since the records search included a linear component (i.e., the pipeline alignment) without an address or assessor's parcel number (APN), the intersection of Beaumont Boulevard and Cherry Valley Boulevard, which serves as the approximate halfway point along the pipeline alignment, was used as a center-point for the search. The records search included the entire pipeline alignment, the service connection site, the offsite triangular parcel, the recharge facility site (although a previous Phase I ESA and Environmental FirstSearch Report was previously prepared specifically for the recharge facility site, as addressed above), and the surrounding area. The following is a summary of the results of the EDR Radius Map Report:

Onsite

The pipeline alignment, the roadways that would contain the pipeline (i.e., Brookside Avenue, Beaumont Avenue, and Orchard Street), and the service connection site were not identified on the EDR Radius Map Report.

Offsite

Nine offsite facilities/addresses within the specified radius established by ASTM E1527-05 were identified. However, certain facilities/addresses appeared on numerous lists (designated below with **), so a net total of four individual offsite facilities/addresses occur within the search radius.

LUST: State and Tribal Leaking Storage Tank Lists (0.5 mile search radius)

The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data comes from the State Water Resources Control Board (WRCB) Leaking Underground Storage Tank Information System.

- Texaco Nino's**: Located at 10501 Beaumont Avenue, 0.005 mile north-northwest and upgradient of the search radius center-point. The status of this facility is "Completed - Case Closed."
- Phil Messrah: Located at 38766 Cherry Valley Boulevard, 0.442 mile west and downgradient of the search radius center-point. The status of this facility is "Completed - Case Closed."

UST: State and Tribal Registered Storage Tank Lists (0.25 mile search radius)

The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data comes from the State WRCB Hazardous Substance Storage Container Database.

- Texaco Station**: Located at 10501 Beaumont Avenue, 0.005 mile north-northwest and upgradient of the search radius center-point.

HIST UST: Local Lists of Registered Storage Tanks (0.25 mile search radius)
Historical UST Registered Database.

- Cherry Valley Exxon**: Located at 10501 Beaumont Avenue, 0.005 mile north-northwest and upgradient of the search radius center-point.

SWEEPS UST: *Statewide Environmental Evaluation and Planning System Storage Tanks Lists* (0.25 mile search radius)
This underground storage tank listing was updated and maintained by a company contacted by the State WRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

- Exxon Station**: Located at 10501 Beaumont Avenue, 0.005 mile north-northwest and upgradient of the search radius center-point.
- Cherry Valley Liquor: Located at 10376 Beaumont Avenue, 0.13 mile north and upgradient of the search radius center-point.

RCRA-NonGEn: RCRA Non-Generators Lists (0.25 mile search radius)
RCRAInfo is EPA's comprehensive information system, providing access to data supporting RCRA and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites that transport, store, treat, and/or dispose of hazardous waste as defined by RCRA. Non-Generators do not presently generate hazardous waste.

- James Dawson Disposal Co: Located at 10300 Beaumont Avenue 0.203 mile north and upgradient of the search radius center-point.

HIST CORTESE: Historical Hazardous Waste and Substances Sites Lists (0.5 mile search radius)
The sites on the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (CALSITES). This listing is no longer updated.

- Texaco Nino's**: Located at 10501 Beaumont Avenue, 0.005 mile north-northwest and upgradient of the search radius center-point. The status of this facility is "Completed - Case Closed."

- Phil Messrah: Located at 38766 Cherry Valley Boulevard, 0.442 mile west and downgradient of the search radius center-point. The status of this facility is "Completed - Case Closed."

Schools

The nearest schools to the recharge facility site are Mountain View Middle School, which is located directly south of the site; Beaumont High School, which is occurs just north of the site on the northern side of Brookside Avenue; and Brookside Elementary School, which is located approximately 0.30 mile west of the site. The closest school to the pipeline alignment and service connection site are Cherry Valley Brethren Preschool, which occurs directly adjacent to the pipeline alignment at the southwest corner of the Beaumont Avenue-Vineland Street intersection.

Airports/Private Airstrips

The nearest public airport to the project facilities is Banning Municipal Airport, which is located approximately seven miles southeast in the City of Banning. There are no private airstrips located within a 20-mile radius of the project facilities.

Wildlands/Fire Hazards

Due to a combination of mountainous terrain, dry vegetation, and prevailing winds, portions of the Western Coachella Valley and San Gorgonio Pass are susceptible to wildland fire hazards. Generally, the highest wildland fire hazard is found in the most rugged mountainous terrain where development density is relatively low. Methods of addressing wildland fire hazards include avoiding development activity within higher risk areas, creating setbacks that buffer development from higher risk areas, maintaining brush clearance standards, establishing low fuel landscaping, and incorporating fire retardant building materials into the design phase.

According to Fire Hazard Severity Zones Maps published by the California Department of Forestry and Fire Protection, the project facilities are not located within an area deemed highly susceptibility to wildland fire.

3.6.2 - Regulatory Setting

Federal Regulations

Comprehensive Environmental Response, Compensation, and Liability Act

The U.S. Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) in 1980. The purpose of CERCLA is identifying and remediating chemically contaminated sites that pose a significant environmental health threat. The Hazard Ranking System is used to determine whether a site should be placed on the National Priorities List for cleanup activities.

Superfund Amendments and Reauthorization Act

The Superfund Amendments and Reauthorization Act (SARA) primarily pertains to emergency management of accidental releases. SARA requires the formation of State and local emergency planning committees, which are responsible for collecting material handling and transportation data for use as a basis for their planning. Chemical inventory data is made available to the public under the "right-to-know" provision of this Act. SARA also requires annual reporting of continuous emissions and accidental releases of specified compounds. These annual submissions are compiled into a nationwide Toxics Release Inventory.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act serves as the statutory basis for the body of regulations designed to ensure the safe transport of hazardous materials via water, rail, highways, air, or pipelines. This Act includes provisions for material classification, packaging, marking, labeling, placecarding, and shipping documentation.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) Subtitle C addresses hazardous waste generation, handling, transportation, storage, treatment, and disposal. RCRA establishes a system that uses hazardous waste manifests to track the movement of hazardous waste from generation to disposal (cradle-to-grave). The 1984 amendments to RCRA created a national priority for waste minimization. Subtitle D establishes national minimum requirements for solid waste disposal sites and practices. It requires States to develop plans for the management of wastes within their jurisdictions. Subtitle I requires monitoring and containment systems for underground storage tanks (USTs) that hold hazardous materials. Owners of USTs must demonstrate financial assurance for the cleanup of a potential leaking tank.

State Regulations

The California Hazardous Waste Control Law

The Hazardous Waste Control Law (HWCL) is the primary hazardous waste statute in the State of California. HWCL implements RCRA as a "cradle-to-grave" waste management system in the State. The Law states that generators have the primary duty to determine whether their wastes are hazardous and to ensure their proper management. HWCL also establishes criteria for the reuse and recycling of hazardous wastes. The Law exceeds federal requirements by mandating source reduction planning, and a much broader requirement for permitting facilities that treat hazardous waste. It also regulates a number of types of wastes and waste management activities that are not covered by RCRA.

California Code of Regulations

Most State and federal regulations and requirements that apply to generators of hazardous waste are spelled out in the California Code of Regulations (CCR), Title 22, Division 4.5. Title 22 contains detailed compliance requirements for hazardous waste generators and transporters, and treatment, storage, and disposal facilities. Because California is a fully authorized State according to RCRA,

most RCRA regulations (those contained in 40 Code of Federal Regulations [CFR] 260 et seq.) have been duplicated and integrated into Title 22. However, because the DTSC regulates hazardous waste more stringently than the U.S. EPA, Title 22 contains less exemptions and exclusions as 40 CFR 260. As with the California Health and Safety Code, Title 22 also regulates a wider range of waste types and waste management activities than RCRA regulations in 40 CFR 260. To make regulatory requirements more accessible and easier to follow, California compiled the hazardous materials, waste, and toxics-related regulations contained in CCR, Titles 3, 8, 13, 17, 19, 22, 23, 24, and 27 into one consolidated CCR Title 26 'Toxics.' However, California hazardous waste regulations are still commonly referred to as Title 22.

California Strategic Fire Plan

The 2010 Strategic Fire Plan is a statewide fire plan developed as a cooperative effort between the State Board of Forestry and Fire Protection and the California Department of Forestry and Fire Protection. The Fire Plan builds upon the concept first developed in the 1996 California Fire Plan, which led to collaborative efforts in fire prevention. The primary goals of the 2010 Strategic Fire Plan that are critical to reducing and preventing the impacts of fire revolve around both suppression and prevention efforts. Major components include improved availability and use of information on hazard and risk assessment; land use planning, including general plans, new development, and existing developments; shared vision among communities and the multiple fire protection jurisdictions, including county-based plans and community-based plans such as Community Wildfire Protection Plans (CWPP); establishing fire resistance in assets at risk, such as homes and neighborhoods; shared vision among multiple fire protection jurisdictions and agencies; levels of fire suppression and related services; and post fire recovery.

Local Regulations

As discussed previously in Section 1 of this Draft EIR, the SGPWA is exempt from local land use policies and ordinances in accordance with California Government Code Sections 53091(d) and 53091(e). Although exempt for the proposed project, SGPWA has chosen to provide a discussion of the local land use policies and ordinances.

City of Beaumont General Plan

The City of Beaumont General Plan contains the following goals and policies that address hazards and hazardous materials.

Safety Element

Goal 4. The City of Beaumont will continue to enhance fire and emergency response services in the community.

> **Policy 18.** The City of Beaumont will continue to implement those measures that will be effective in reducing the potential for wildfire.

Goal 5. The City of Beaumont will cooperate with ongoing efforts to reduce the health and safety hazards related to the exposure of hazardous materials.

Policy 22. The City of Beaumont will support legislation that reduces the level of risk from hazardous materials, hazardous waste, infectious waste, and radioactive materials to the public, industries, and businesses.

Policy 23. The City of Beaumont will continue to support regional efforts as needed to plan for and facilitate the establishment of regional treatment facilities to manage the hazardous wastes that are generated within the City.

County of Riverside General Plan

The County of Riverside General Plan contains the following policies that address hazards and hazardous materials.

Safety Element

Policy S 5.1. Develop and enforce construction and design standards that ensure that proposed development incorporates fire prevention features through the following:

a. All proposed construction shall meet minimum standards for fire safety as defined in the County Building or Fire Codes, or by County zoning, or as dictated by the Building Official or the Transportation Land Management Agency based on building type, design, occupancy, and use.

b. In addition to the standards and guidelines of the Uniform Building Code and Uniform Fire Code fire safety provisions, continue additional standards for high-risk, high occupancy, dependent, and essential facilities where appropriate under the Riverside County Fire Protection Ordinance. These shall include assurance that structural and nonstructural architectural elements of the building will not:
   - impede emergency egress for fire safety staffing/personnel, equipment, and apparatus; nor
   - hinder evacuation from fire, including potential blockage of stairways or fire doors.

c. Proposed development in Hazardous Fire areas shall provide secondary public access, unless determined otherwise by the County Fire Chief.

d. Proposed development in Hazardous Fire areas shall use single loaded roads to enhance fuel modification areas, unless otherwise determined by the County Fire Chief.

Policy S 6.1. Enforce the policies and siting criteria and implement the programs identified in the County of Riverside Hazardous Waste Management plan, which includes the following:

a. Comply with federal and state laws pertaining to the management of hazardous wastes and materials.

b. Ensure active public participation in hazardous waste and hazardous materials management decisions in Riverside County.

c. Coordinate hazardous waste facility responsibilities on a regional basis through the Southern California Hazardous Waste Management Authority (SCHWMA).

d. Encourage and promote the programs, practices, and recommendations contained in the County Hazardous Waste Management Plan, giving the highest waste management priority to the reduction of hazardous waste at its source.

3.6.3 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether hazards and hazardous materials impacts are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (See Section 6.8.1, Routine Use)

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the hazardous materials into the environment? (See Accident Conditions Impact HAZ-1.)

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (See Schools Impact HAZ-2.)

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? (See Hazardous Materials Site Listing Impact HAZ-3.)

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? (See Section 6.8.2, Public Airports)

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? (See Section 6.8.3, Private Airstrips)

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (See Section 6.8.4, Emergency Plans)

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? (See Section 6.8.5, Wildland Fires)

3.6.4 - Project Impact Analysis and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Accident Conditions

Impact HAZ-1	**The project would not 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.**

Impact Analysis

As addressed in Section 6, Effects Found Not To Be Significant, any handling, transporting, use, or disposal activities associated with hazardous or potentially hazardous materials would comply with all applicable federal, State, and local agencies and regulations. Both short-term construction and long-term operation of the project would adhere to the policies and programs established by agencies such as the U.S. EPA, the Riverside County Department of Environmental Health, the SGPWA, and the City of Beaumont. Adherence with the policies and programs of these agencies would ensure that any interaction with hazardous materials would occur in the safest possible manner, reducing the opportunity for the accidental release of hazardous materials into the environment.

Any handling of hazardous materials would be limited in both quantities and concentrations. Although hazardous materials such as fertilizers, herbicides, pesticides, and similar materials could be stored onsite, only the amounts needed would be stored; excessive amounts would not be stored. As mandated by the U.S. Occupational Safety and Health Administration (OSHA), all hazardous materials stored onsite would be accompanied by a Material Safety Data Sheet (MSDS), which, in the case of accidental release, would inform personnel as to the necessary remediation procedures.

As discussed above in Section 3.6.1, Environmental Setting, records searches of selected government databases and available environmental records were conducted for the recharge facility site, the pipeline, the service connection site, the offsite triangular parcel, and the surrounding area (Appendix F). The record searches determined that no hazardous materials sites occur on and no active hazardous materials sites occur adjacent to the proposed locations of the project facilities. Additionally, the records searches did not identify RECs that could potentially effect the project facilities or the surrounding area, nor any evidence of either surface or subsurface contamination on or adjacent to the planned locations of the project facilities.

While grading, excavation, trenching, and other earthmoving activities related to construction of the project would disturb surface and subsurface soils, no evidence exists that these soils are

contaminated or potentially contaminated. Thus, disturbance of these soils during the construction phase of the project is unlikely to create a significant hazard to the public or the environment through the release of hazardous materials into the environment. Therefore, impacts associated with release of hazardous materials would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Schools

Impact HAZ-2	**The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.**

Impact Analysis

The nearest schools to the recharge facility site are Mountain View Middle School, which is located directly south of the site; Beaumont High School, which occurs just north of the site on the northern side of Brookside Avenue; and Brookside Elementary School, which is located approximately 0.30 mile west of the site. The closest school to the pipeline alignment and service connection site are Cherry Valley Brethren Preschool, which occurs directly adjacent to the pipeline alignment at the southwest corner of the Beaumont Avenue-Vineland Street intersection.

As addressed in Impact Question HAZ-1, records searches of selected government databases and available environmental records were conducted for the recharge facility site, the pipeline, the service connection site, the offsite triangular parcel, and the surrounding area (Appendix F). The record searches determined that no hazardous materials sites occur on and no active hazardous materials sites occur adjacent to the proposed locations of the project facilities. Additionally, the records searches did not identify RECs that could potentially effect the project facilities or the surrounding area, nor any evidence of either surface or subsurface contamination on or adjacent to the planned locations of the project facilities.

While grading, excavation, trenching, and other earthmoving activities related to construction of the project would disturb surface and subsurface soils, no evidence exists that these soils are contaminated or potentially contaminated. Thus, the handling of these soils during the construction phase of the project is unlikely to create a hazard to schools within 0.25 mile of the proposed locations of the project facilities, including Mountain View Middle School, Beaumont High School,

Brookside Elementary, and Cherry Valley Brethren Preschool. Therefore, impacts associated with the handling of hazardous materials within 0.25 mile of a school would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Hazardous Materials Site Listing

Impact HAZ-3	**The project would not 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 not create a significant hazard to the public or the environment.**

Impact Analysis

As discussed above in Section 3.6.1, Environmental Setting, records searches of selected government databases and available environmental records were conducted for the recharge facility site, the pipeline, the service connection site, the offsite triangular parcel, and the surrounding area (Appendix F). The records searches were designed to meet the search requirements of the EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05), and/or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

No facilities/addresses corresponding with any of the proposes locations of the project facilities were identified on either of the two records searches performed for the project. A net total of five facilities/addresses were identified between the two records searches to occur within the specific search radius, as summarized below.

Chavez Elementary School and Expansions

This facility is identified on the "State/Tribal/Other Sites" database. The DTSC changed the status of this facility to "no further action" in 2001. Thus, this site does not constitute a REC.

Gas Station Located at 10501 Beaumont Avenue (referenced in the records searches as Texaco Nino's, Texaco Station, Cherry Valley Exxon, and Exxon Station)

This facility is identified on the LUST, UST, HIST UST, SWEEPS UST, and HIST CORTESE databases. The status of this facility on the LUST database is "Completed - Case Closed." Inclusion on the UST, HIST UST, SWEEPS UST, and HIST CORTESE databases likely pertains to the historical and/or present presence of an underground storage and does not necessarily assume the presence of an environmental issue. Thus, this site does not constitute a REC.

Phil Messrah

This facility is identified on the LUST and HIST CORTESE databases. The status of this facility on the LUST database is "Completed - Case Closed." Inclusion on the HIST CORTESE database likely pertains to the historical presence of an underground storage tank and does not necessarily assume the presence of an environmental issue. Thus, this site does not constitute a REC.

Cherry Valley Liquor

This facility is identified on the SWEEPS UST database. Inclusion on the SWEEPS UST database likely pertains to the historical presence of an underground storage tank and does not necessarily assume the presence of an environmental issue. This database is no longer updated or maintained, so the current presence of an underground storage tank at the address is unknown. However, the address is not listed on any other active federal, state, or local regulatory databases; thus, this site does not constitute a REC.

James Dawson Disposal Co

This facility is identified on the RCRA-NonGen database. The database includes selective information on sites that transport, store, treat, and/or dispose of hazardous waste as defined by RCRA. Inclusion on the RCRA-NonGen denotes that the facility does not generate hazardous waste. To maintain good standing on the database, a facility must comply with all applicable provisions established by RCRA, which are designed to reduce the potential impacts related to hazardous waste on the surrounding area. Thus, this site does not constitute a REC.

Despite the presence of the above facilities as identified by the two records searches, none of the five facilities constitute a REC. Thus, there would be low potential for any of these facilities to adversely affect the project or the surrounding area. None of these facilities occurs on the planned locations of the project facilities. Therefore, impacts associated with locating the project on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

3.7 - Hydrology and Water Quality

This section describes the potential hydrology and water quality effects from project implementation on the project site and its surrounding area. Descriptions and analysis in this section are based on information contained in the November 2012 Annual Report on Water Conditions prepared by the SGPWA; the June 2006 Water Quality Control Plan for the Colorado River Basin and the February 2008 Water Quality Control Plan for the Santa Ana River Basin, both prepared by the State Water Resources Control Board; and the February 27, 2004 Bulletin 118: California's Groundwater prepared by the Department of Water Resources.

3.7.1 - Existing Conditions

Regional Hydrological Setting

Basin Regions

The greater San Gorgonio Pass area is located within the easternmost boundary of the Santa Ana Regional Water Quality Control Board (RWQCB) (Region 8) and the westernmost boundary of the Colorado River RWQCB (Region 7). The Santa Ana Region encompasses approximately 2,800 square miles in southern California, generally between the Los Angeles County to the north and San Diego County to the south. The Region is comprised of a group of connected inland basins and open coastal basins drained by surface streams flowing southwesterly towards to the Pacific Ocean.

The Colorado River Region covers approximately 20,000 square miles in southeastern California. The Colorado River Region includes all of Imperial County and portions of San Bernardino, Riverside, and San Diego Counties. Geographically, the Region represents only a small portion of the total Colorado River drainage area, which includes portions of Arizona, Nevada, Utah, Wyoming, Colorado, New Mexico, and Mexico.

Upper Santa Ana Valley Groundwater Basin, San Timoteo Subbasin

The portion of the Upper Santa Ana Valley Groundwater Basin located within the San Gorgonio Pass area, including the City of Beaumont and the unincorporated Cherry Valley area, is described as the San Timoteo Subbasin. The subbasin is generally bounded by the Banning Fault, the San Bernardino Mountains, the Crafton Hills, and the Yucaipa Hills to the north and northeast; a topographic drainage divide with the Colorado River Hydrologic Region to the east; the San Jacinto Fault to the south; and the San Jacinto Mountains to the west. Aboveground, the surface of the San Timoteo Subbasin is drained by the Little San Gorgonio Creek and the San Timoteo Canyon to the Santa Ana River. Average annual precipitation ranges from 12 to 14 inches in the western part of the Subbasin and 16 to 18 inches in the eastern part.

Groundwater in the San Timoteo Subbasin is encountered in both alluvium and San Timoteo Formation. Estimated specific yields in the Subbasin range from three percent for fine materials to 35 percent for coarser materials, with an average of 11 percent. Holocene age alluvium consisting of

unconsolidated clay, silt, sand, and gravel, is the primary water-bearing unit in the Subbasin. The alluvium, which is likely thickest near the City of Beaumont, thins toward the southwest and is not present in the central part of the Subbasin.

Pliocene-Pleistocene age San Timoteo Formation consisting of alluvial deposits that have been folded and eroded are widely distributed and principally composed of gravel, silt, and clay, with comparatively small amounts of calcite-cemented conglomerate. The clasts are chiefly granitic, with lesser amounts of volcanic and metamorphic pebbles and cobbles. The total thickness of the San Timoteo Formation is estimated to be between 1,500 and 2,000 feet, but historical records of deep wells near the central part of the Subbasin indicate water-bearing gravels to depths of 700 to 1,000 feet.

Groundwater in the Subbasin is replenished by subsurface inflow and percolation of precipitation, runoff, and imported water. Runoff and imported water are delivered to streambeds and spreading grounds for percolation.

Local Hydrological Setting

The Beaumont Basin is the largest and most productive of the principle groundwater basins in the general San Gorgonio Pass region, serving a large majority of the population in the region. Until the State Water Project's (SWP's) East Branch Extension (EBX) began importing SWP water into the region in 2003, the Basin was entirely reliant on groundwater extraction for its domestic water supply.

On the State level, the Department of Water Resources uses different basin names than local municipalities because they view the statewide geology and hydrology on a larger scale, aggregating smaller basins into larger ones. What is known by the State as the San Timoteo subbasin is essentially the Beaumont Basin, and what the State refers to as the San Gorgonio subbasin is essentially the Cabazon Basin. While these boundaries are not exact, they are similar.

Groundwater Extractions (Production)

From 2010 to 2011, groundwater production in the Beaumont Basin has increased from 13,469 acre-feet (af) to 13,908 af, equating to an approximate three-percent increase. Despite this increase, 2011 production represents a 28-percent reduction from 2007. Presumably, the large decrease can be contributed to the somewhat recent economic downturn, which has curtailed new construction, residential and commercial water usage. An evaluation of groundwater production data from the Basin demonstrates that economic conditions and annual precipitation play significant roles in determining water demand in any given year.

Groundwater Overdraft

Overdraft of a groundwater basin refers to the amount of water pumped from the basin beyond the safe yield. Safe yield is the average annual replenishment of a groundwater basin through natural sources such as rainfall, runoff, snowmelt, and underflows from other basins. Safe yield is difficult to

establish from year-to-year and represents only an average, as natural replenishment of a groundwater basin could be more or less than the average safe yield, depending on whether the year is a wet or dry one.

Overdraft of the Beaumont Basin has been monitored since at least 1988, when engineering investigation of the Basin indicated that historic pumping significantly exceeded the basin's probable safe yield. Previous evaluations have determined an estimated long-term average safe yield between 5,000 and 6,100 acre-feet per year (AFY) for the Basin. As a result, current and future pumping from the Basin can exceed the long-term average safe yield of the Basin.

In 2011, total production from the Beaumont Basin was 13,908 af. Thus, the Basin experienced an overdraft of 7,808 af, assuming an average safe yield of 6,100 AFY. This overdraft was offset by importing 10,730 af of supplemental water, essentially adding to the volume of the Basin by approximately 3,000 af. This represents the second time that this has occurred since importation of SWP water began in 2003, the first time being in 2010. The 3,000 af of excess SWP water that was used for recharged in 2011 is triple the amount from 2010.

Since 1997, when significant increases in groundwater production began in the region, the cumulative overdraft in the Beaumont Basin (assuming a safe yield of 6,100 af) is 129,523 af, averaging to approximately 8,600 AFY over the past 15 years, without importation of SWP water. Through 2011, the SGPWA has imported roughly 42,000 af of SWP water, offsetting the cumulative overdraft and reducing it to under 90,000 af over the same time.

Groundwater Levels

The SGPWA monitors groundwater levels through a large network of monitoring wells located throughout the Beaumont Basin. Currently, there are over 120 monitoring wells in the network, each of which measures groundwater elevation twice annually, typically in May and November. As of 2011, the SGPWA is part of the California State Groundwater Elevation Monitoring (CASGEM) system, a new statewide groundwater monitoring system. The SGPWA is a formal monitoring entity for both the San Timoteo subbasin (Beaumont Basin) and the San Gorgonio subbasin (Cabazon Basin), which generally correspond to the SGPWA's boundary.

The monitoring of production wells in the Beaumont Basin has garnered mixed results over the years. Wells located approximately 1,000 feet east of Beaumont Avenue and 50 feet south of Cherry Valley Boulevard in Cherry Valley have shown an increase in groundwater elevation over the past three years, presumably because of the ongoing recharge efforts at Little San Gorgonio Creek, and possibly also at Noble Creek. However, wells located on Calimesa Boulevard near the western periphery of the Basin have shown continually decreasing groundwater levels over the past decade, indicating that this portion of the Basin is not yet influenced by recharge efforts and reduced production in the area.

Two production wells in the Cabazon Basin show decrease in groundwater elevation over the past several years, dropping 15 feet and 35 feet over the past five and ten years, respectively. Even though these wells are located several miles from each other, and despite the decline in extractions from the Cabazon Basin over the past three years, the groundwater levels in this basin are decreasing and have been for a number of years.

Flood Hazard Areas

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) applicable to the project are Community Panels 06065C0803G and 06065C0805G. The FIRMs indicate that the recharge facility site and the service connection site are located outside of a 100-year flood hazard area. An area designated as Zone A, which is a Special Flood Hazard Area (SFHA) subject to inundation by a 100-year flood, occurs immediately north of the recharge facility site and is generally bounded by Noble Creek's southern bank to the south and southeast and Mountain View Channel to the West. Both the pipeline alignment along Beaumont Avenue from Brookside Avenue to Vineland Street and the offsite triangular parcel are located within this 100-year flood hazard area.

3.7.2 - Regulatory Setting

Federal

Clean Water Act

The Clean Water Act (CWA) established a basic structure for regulating discharges of pollutants into Waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. The "Clean Water Act" became the Act's common name with amendments in 1977.

Under the CWA, the Environmental Protection Agency (EPA) has implemented pollution control programs and established water quality standards for all contaminants in surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a National Pollutant Discharge Elimination System (NPDES) permit was obtained. Point sources are discrete conveyances such as pipes or manmade ditches. While residential structures that are either connected to a municipal system or otherwise do not discharge into surface waters are not required to obtain a NPDES permit, industrial, municipal, and similar facilities must obtain permits to discharge directly into surface waters. In California, the NPDES program is administered through the nine Regional Water Quality Control Boards (RWQCB).

Non-point sources are similarly regulated through a General Construction Activity Stormwater NPDES permit. Construction activities subject to this permit include clearing, grading, excavating, and general disturbances to the ground. Stormwater Pollution Prevention Plans (SWPPPs) are required for the issuance of a General Construction Activity Stormwater NPDES permit and typically

include the implementation of structural and non-structural Best Management Practices (BMPs) to reduce impacts related to surface water quality.

National Pollutant Discharge Elimination System (NPDES) Permit

Section 402 of the CWA established the NPDES to control water pollution by regulating point sources that discharge pollutants into Waters of the United States. In the State of California, the EPA has authorized the State Water Resources Control Board (SWRCB) as the permitting authority to implement the NPDES program. The SWRCB issues two baseline general permits; one for industrial operations, the other for construction activities (General Construction Permit). Additionally, the NPDES program includes the regulation of stormwater discharges from cities, counties, and other municipalities under Order No. R8-2009-0030 (waste discharge requirements for stormwater).

Under the General Construction Permit, stormwater discharges from construction sites with a disturbed area of one or more acres are required to obtain either individual NPDES permits for stormwater discharges or be covered by the Construction General Permit. Coverage under the Construction General Permit is accomplished by completing and filing a Notice of Intent with the SWRCB. Each applicant under the Construction General Permit is required to prepare both a SWPPP prior to the commencement of grading activities and to ensure implementation of the SWPPP during construction activities. The primary objective of the SWPPP is to identify, construct, implement, and maintain BMPs to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the construction site during construction activities. BMPs may include programs, technologies, processes, practices, and devices that control, prevent, remove, or reduce pollution. The SWPPP would also address BMPs developed specifically to reduce pollutants in stormwater discharges following the completion of construction activities.

Safe Drinking Water Act (Federal)

The Safe Drinking Water Act (SDWA) was established to protect the quality of drinking water in the United States. This SDWA focuses on all waters either designed or potentially designed for drinking water use, whether from surface water or groundwater sources. The SDWA and subsequent amendments authorized the EPA to establish health-based standards, or maximum contaminant levels (MCLs), for drinking water to protect public health against both natural and anthropogenic contaminants. All owners or operators of public water systems are required to comply with these primary (health-related) standards. State governments, which can be approved to implement these primary standards for the EPA, also encourage attainment of secondary (nuisance-related) standards. At the federal level, the EPA administers the SDWA and establishes MCLs for bacteriological, organic, inorganic, and radiological constituents (United States Code Title 42, and Code of Federal Regulations Title 40). At the state level, California has adopted its own SDWA, which incorporates the federal SDWA standards with some other requirements specific only to California (California Health and Safety Code, Section 116350 et seq.).

The 1996 SDWA amendments established source water assessment programs pertaining to untreated water from rivers, lakes, streams, and groundwater aquifers used for drinking water supply. According to these amendments, the EPA must consider a detailed risk and cost assessment, as well as best available peer-reviewed science, when developing standards for drinking water. These programs are the foundation of protecting drinking water resources from contamination and avoiding costly treatment to remove pollutants. In California, the Drinking Water Source Assessment and Protection (DWSAP) program fulfills these federal mandates. The California Department of Public Health is the primary agency for developing and implementing the DWSAP program, and is responsible for performing the assessments of existing groundwater sources.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1969, which became Division 7 of the California Water Code, authorized the SWRCB to provide comprehensive protection for California's waters through water allocation and water quality protection. The SWRCB implements the requirement of the CWA Section 303, which states that water quality standards must be established for certain waters through the adoption of water quality control plans under the Porter-Cologne Act. The Porter-Cologne Act established the responsibilities and authorities of the nine RWQCBs, which include preparing water quality plans within the regions, identifying water quality objectives, and instituting waste discharge requirements. Water quality objectives are defined as limits or levels of water quality constituents and characteristics established for reasonable protection of beneficial uses or prevention of nuisance. Beneficial uses consist of all the various ways that water can be used for the benefit of people and wildlife. The Porter-Cologne Act was later amended to provide the authority delegated from the EPA to issue NPDES permits regulating discharges to Waters of the United States.

Local

As discussed previously in Section 1 of this Draft EIR, the SGPWA is exempt from local land use policies and ordinances in accordance with California Government Code Sections 53091(d) and 53091(e). Although exempt for the proposed project, SGPWA has chosen to provide a discussion of the local land use policies and ordinances.

City of Beaumont General Plan

The City of Beaumont General Plan contains the following goals and policies that address hydrology and water quality.

Resource Management Element

Goal 2. The City of Beaumont will promote the maintenance and management of water resources.

Policy 4. The City of Beaumont will promote the maintenance of water quality in the City.

Policy 6. The City of Beaumont will strive to promote development practices that will mitigate potential flooding.

Safety Element

Goal 2. The City of Beaumont will cooperate in those efforts that are directed towards flood control and safety.

Policy 6. The City of Beaumont will continue to promote flood safety through comprehensive land use planning.

Policy 10. The City of Beaumont will require all new developments to mitigate potential flooding that may result from the development.

County of Riverside General Plan

The County of Riverside General Plan contains the following policies that address hydrology and water quality.

Multipurpose Open Space Element

Policy OS 4.1. Support efforts to create additional water storage where needed, in cooperation with federal, state, and local water authorities. Additionally, support and/or engage in water banking in conjunction with these agencies where appropriate, as needed.

Policy OS 4.2. Participate in the development, implementation, and maintenance of a program to recharge the aquifers underlying the County. The program shall make use of flood and other waters to offset existing and future groundwater pumping, except where:

a. groundwater quality would be reduced;

b. available groundwater aquifers are full; or

c. rising water tables threaten the stability of existing structures.

Policy OS 4.3. Ensure that adequate aquifer water recharge areas are preserved and protected.

Policy OS 5.1. Substantially alter floodways or implement other channelization only as a "last resort," and limit the alteration to:

a. that necessary for the protection of public health and safety only after all other options are exhausted;

b. essential public service projects where no other feasible construction method or alternative project location exists; or

c. projects where the primary function is improvement of fish and wildlife habitat.

Policy OS 5.2. If substantial modification to a floodway is proposed, design it to reduce adverse environmental effects to the maximum extent feasible, considering the following factors:

a. stream scour;

b. erosion protection and sedimentation;

c. wildlife habitat and linkages;

d. groundwater recharge capability;

e. adjacent property; and

f. design (a natural effect, examples could include soft riparian bottoms and gentle bank slopes, wide and shallow floodways, minimization of visible use of concrete, and landscaping with native plants to the maximum extent possible).

A site specific hydrologic study may be required.

Policy OS 5.3. Based upon site, specific study, all development shall be set back from the floodway boundary a distance adequate to address the following issues:

a. public safety;

b. erosion;

c. riparian or wetland buffer;

d. wildlife movement corridor or linkage; and

e. slopes.

Policy OS 5.4. Consider designating floodway setbacks for greenways, trails, and recreation opportunities on a case-by-case basis.

3.7.3 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether hydrology and water quality impacts are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Violate any water quality standards or waste discharge requirements? (See Section 6.9.1, Water Quality Standards and 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 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? (See Section 6.9.2, Groundwater Supplies and Recharge)

c) Substantially alter the existing drainage pattern of 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? (See Section 6.9.3, Drainage Pattern: Siltation and Erosion)

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? (See Section 6.9.4, Drainage Pattern: Flooding)

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? (See Section 6.9.5, Runoff Water and Drainage Systems)

f) Otherwise substantially degrade water quality? (See Section 6.9.6, 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? (See Section 6.9.7, Housing Placement: Flood Hazard Area)

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? (See Structures: Flood Hazard Area Impact HYD-1.)

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? (See Flooding Impact HYD-2.)

j) Inundation by seiche, tsunami, or mudflow? (See Section 6.9.8, Seiche, Tsunami, or Mudflow)

3.7.4 - Project Impact Analysis and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Structures: Flood Hazard Area

Impact HYD-1	**The project would not place within a 100-year flood hazard area structures which would impede or redirect flood flows.**

Impact Analysis

As identified previously, a portion of the proposed pipeline and the offsite triangular parcel are located in Zone A as designated by the FEMA FIRM maps. According to the FIRM maps, Zone A is an area subject to inundation by a 100-year flood. The portion of the proposed pipeline that is located in the 100-year flood area is along Beaumont Avenue from Brookside Avenue to Vineland Street. The entire offsite triangular parcel is located within the 100-year flood area.

The proposed pipeline includes a structure; however, the pipeline structure would be located underground. Although the 100-year flood zone overlays the pipeline alignment along Beaumont Avenue, the subsurface location of the proposed pipeline would prevent any impacts related to impeding flood flows. Therefore, the proposed pipeline would result in no impacts to impeding or redirecting flood flows.

The offsite triangular parcel that could potentially be used for a staging area and/or for depositing excess excavated soil. The storage of construction equipment, vehicles, and materials on the offsite triangular parcel during project construction would be temporary and would cease upon the completion of construction activities. No permanent structures or other improvements would be placed on the parcel as a result of using this location as a staging area. If the parcel is used for depositing soils, the estimated maximum soil deposit is approximately 28,000 cubic feet which if distributed evenly throughout the four acres (174,240 square feet [sq ft]) that are available for soil deposit would alter the existing topography by approximately 0.16 feet (2 inches) (174, 240 sq ft/28,000 cubic feet = 0.16 feet). The alteration of the offsite triangular parcel by approximately 2 inches would not substantially impede or redirect flood flows. As a result, the activities associated with the offsite triangular parcel would result in less than significant flooding impacts from impeding or redirecting flood flows.

The proposed recharge facility includes above ground structures; however, since this facility is located outside of the 100-year flood zone, the proposed facilities would not impede or redirect flood flows. The northwestern and northern slopes of the proposed recharge facility are proposed to be located near the southern bank of Noble Creek; however, there is a buffer area between the slopes of the proposed recharge basin and the area designated as a 100-year flood zone (i.e., Noble Creek). If the southern banks of Noble Creek in the area of the proposed recharge basin erode due to scouring during high water storm events within Noble Creek, there could be a possibility, although speculative, that erosion could impact up to four of the individual basins within the recharge facility. The closest distance from the southern bank of Noble Creek to the access road proposed around the perimeter of the recharge basins is as follows: 145 feet to the access road adjacent to Basin 1, 73 feet to the access road adjacent to Basin 2, 49 feet to the access road adjacent to Basin 3, and 29 feet to the access road

adjacent to Basin 4. Based on these distances, there is a low probability that erosion from a single storm event would result in significant impacts to the proposed recharge facility. Under long-term conditions, erosion from multiple storm events could result in impacts, although speculative, to the proposed recharge facility and result in water from one or more of the basins to flow into Noble Creek. However, it would be unlikely that SGPWA would not continue maintenance of the recharge facility that would include insuring that the recharge basins are not affected due to scouring and erosion. The activities associated with the proposed recharge facility are not expected to cause significant flooding impacts from impeding or redirecting flood flows.

In addition, there was a review of the elevations of the recharge basin floors in comparison with the current elevations that are west of the recharge facility site which is an area planned, approved, but not yet constructed for future residential development. The elevations of the basin floors will be lower than the adjacent property and the potential for recharged water to travel horizontally and vertically to the adjacent site is not considered probable because there are no clay layers that were found on the recharge facility site that would allow recharge water to travel horizontally. Therefore, it is unlikely that the proposed recharge facility would cause flooding of the property to the west.

Flooding impacts associated with the proposed recharge facility are considered less than significant.

The service connection site is located outside of the 100-year flood hazard area, and as a result, the service connection facility would not impede or redirect flood flows in the event of a 100-year flood. Therefore, the structure proposed at the service connection site would not cause flooding impacts related to impeding or redirecting flood flows.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Flooding

Impact HYD-2	**The project would not 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

As addressed in Impact HYD-1, structures and others aboveground improvements are proposed for both the recharge facility site and the service connection site. The pipeline would be located underground, and although the 100-year flood zone overlays the pipeline alignment along Beaumont Avenue, the subsurface location of this improvement would prevent any flooding impacts to the

pipeline resulting from a failure or a levee or dam. The service connection site is located outside of the 100-year flood hazard area, and as a result, the service connection facility would not be exposed to flooding impacts resulting from a failure of a levee or dam upstream.

As described above in Impact HYD-1, the proposed recharge facility includes above ground structures; however, since this facility is located outside of the 100-year flood zone, the proposed facilities would not impede or redirect flood flows. Furthermore, if there was a levee or dam failure upstream, the areas identified within the 100-year flood zone would be affected prior to areas that are outside of the 100-year flood zone. As a result, it is unlikely that the proposed recharge facility would be significantly affected due to a levee or dam failure upstream.

The offsite triangular parcel that could potentially be used for a staging area and/or for depositing excess excavated soil. The storage of construction equipment, vehicles, and materials on the offsite triangular parcel during project construction would be temporary and would cease upon the completion of construction activities. No permanent structures or other improvements would be placed on the parcel as a result of using this location as a staging area. Therefore, the use of this offsite triangular parcel would not expose people or structures to long-term significant flooding impacts due to a failure of a levee or dam.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

3.8 - Noise

This section describes the potential noise effects from project implementation on the project site and its surrounding area. In part, descriptions and analysis in this section are based on the results of Federal Highway Administration's (FHWA) Roadway Construction Noise Model (RCNM) and onsite noise monitoring, both conducted by FirstCarbon Solutions. The RCNM results and the noise monitoring readings are included in this Draft EIR as Appendix G.

3.8.1 - Fundamentals of Noise and Vibration

Noise Fundamentals

Noise is defined as unwanted sound. Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Sound is produced by the vibration of sound pressure waves in the air. Sound pressure levels are used to measure the intensity of sound and are described in terms of decibels. The decibel (dB) is a logarithmic unit, which expresses the ratio of the sound pressure level being measured to a standard reference level. A-weighted decibels (dBA) approximate the subjective response of the human ear to a broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies that are audible to the human ear.

Noise Descriptors

Noise equivalent sound levels are not measured directly, but are calculated from sound pressure levels typically measured in dBA. The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. The peak traffic hour L_{eq} is the noise metric used by California Department of Transportation (Caltrans) for all traffic noise impact analyses.

The Day-Night Average Sound Level (L_{dn}) is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time-of-day corrections require the addition of ten decibels to sound levels at night between 10 p.m. and 7 a.m. While the Community Noise Equivalent Level (CNEL) is similar to the L_{dn}, except that it has another addition of 4.77 dB to sound levels during the evening hours between 7 p.m. and 10 p.m. These additions are made to the sound levels at these times because during the evening and nighttime hours, when compared to daytime hours, there is a decrease in the ambient noise levels, which creates an increased sensitivity to sounds. For this reason the sound is perceived to be louder in the evening and nighttime hours and is weighted accordingly. Many cities rely on the CNEL noise standard to assess transportation-related impacts on noise sensitive land uses.

Another noise descriptor that is used primarily for the assessment of aircraft noise impacts is the Sound Exposure Level, which is also called the Single Event Level (SEL). The SEL descriptor

represents the acoustic energy of a single event (i.e., an aircraft overflight) normalized to one-second event duration. This is useful for comparing the acoustical energy of different events involving different durations of the noise sources. The SEL is based on an integration of the noise during the period when the noise first rises within 10 dBA of its maximum value and last falls below 10 dBA of its maximum value. The SEL is often 10 dBA greater, or more, than the LMAX since the SEL logarithmetically adds the L_{eq} for each second of the duration of the noise. Noise levels of typical noise sources and environments are provided in Table 3.8-1.

Table 3.8-1: Noise Levels of Typical Noise Sources and Environments

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	—110—	Rock Band
Jet Fly-over at 1000 feet		
	—100—	
Gas Lawnmower at 3 feet		
	—90—	
		Food Blender at 3 feet
Diesel Truck going 50 mph at 50 feet	—80—	Garbage Disposal at 3 feet
Noisy Urban Area during Daytime		
Gas Lawnmower at 100 feet	—70—	Vacuum Cleaner at 10 feet
Commercial Area		Normal Speech at 3 feet
Heavy Traffic at 300 feet	—60—	
		Large Business Office
Quiet Urban Area during Daytime	—50—	Dishwasher in Next Room
Quiet Urban Area during Nighttime	—40—	Theater, Large Conference Room (background)
Quiet Suburban Area during Nighttime		
	—30—	Library
Quiet Rural Area during Nighttime		Bedroom at Night, Concert Hall (background)
	—20—	
		Broadcast/Recording Studio
	—10—	
Lowest Threshold of Human Hearing	—0—	Lowest Threshold of Human Hearing
Source: California Department of Transportation, 1998.		

Tone Noise

A pure tone noise is a noise produced at a single frequency and laboratory tests have shown the humans are more perceptible to changes in noise levels of a pure tone. For a noise source to contain a "pure tone," there must be a significantly higher A-weighted sound energy in a given frequency band than in the neighboring bands, thereby causing the noise source to "stand out" against other noise sources. A pure tone occurs if the sound pressure level in the one-third octave band with the tone exceeds the average of the sound pressure levels of the two contagious one-third octave bands by: 5 dB for center frequencies of 500 Hertz (Hz) and above; by 8 dB for center frequencies between 160 and 400 Hz; and by 15 dB for center frequencies of 125 Hz or less.

Noise Propagation

From the noise source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in noise as the distance from the source increases. The manner in which noise reduces with distance depends on whether the source is a point or line source as well as ground absorption, atmospheric effects and refraction, and shielding by natural and manmade features. Sound from point sources, such as air conditioning condensers, radiate uniformly outward as it travels away from the source in a spherical pattern. The noise drop-off rate associated with this geometric spreading is 6 dBA per each doubling of the distance (dBA/DD). Transportation noise sources—such as roadways—are typically analyzed as "line sources," since at any given moment the receiver may be impacted by noise from multiple vehicles at various locations along the roadway. Because of the geometry of a line source, the noise drop-off rate associated with the geometric spreading of a line source is 3 dBA/DD.

Ground Absorption

The sound drop-off rate is highly dependent on the conditions of the land between the noise source and receiver. To account for this ground-effect attenuation (absorption), two types of site conditions are commonly used in traffic noise models: soft-site and hard-site conditions. Soft-site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. For point sources, a drop-off rate of 7.5 dBA/DD is typically observed over soft ground with landscaping, as compared with a 6.0 dBA/DD drop-off rate over hard ground such as asphalt, concrete, stone and very hard packed earth. For line sources a 4.5 dBA/DD is typically observed for soft-site conditions compared to the 3.0 dBA/DD drop-off rate for hard-site conditions. To be conservative, hard-site conditions were used in this analysis.

Traffic Noise Prediction

The level of traffic noise depends on the three primary factors: (1) the volume of the traffic, (2) the speed of the traffic, and (3) the number of trucks in the flow of traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and greater number of trucks. Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires. Because of the logarithmic nature of traffic noise levels, a doubling of the traffic volume—assuming that the

speed and truck mix do not change—results in a noise level increase of 3 dBA. Based on the FHWA community noise assessment criteria, this change is "barely perceptible," for reference a doubling of perceived noise levels would require an increase of approximately 10 dBA. However, the 1992 findings of Federal Interagency Committee on Noise (FICON), which assessed changes in ambient noise levels resulting from aircraft operations, found that noise increases as low as 1.5 dB can cause annoyance, when the existing noise levels are already greater than 65 dB. The truck mix on a given roadway also has an effect on community noise levels. As the number of heavy trucks increases and becomes a larger percentage of the vehicle mix, adjacent noise levels increase.

Noise Barrier Attenuation

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. For a noise barrier to work, it must be high enough and long enough to block the view of a road. A noise barrier is most effective when placed close to the noise source or receiver. A noise barrier can achieve a 5-dBA noise level reduction when it is tall enough to break the line-of-sight. When the noise barrier is a berm instead of a wall, the noise attenuation can be increased by another 3 dBA.

Vibration Fundamentals

Groundborne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of groundborne vibrations typically only cause a nuisance to people, but at extreme vibration levels, damage to buildings may occur. Although groundborne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Groundborne noise is an effect of groundborne vibration and only exists indoors, since it is produced from noise radiated from the motion of the walls and floors of a room and may consist of the rattling of windows or dishes on shelves.

Vibration Descriptors

Several different methods are used to quantify vibration amplitude such as the maximum instantaneous peak in the vibrations velocity, which is known as the peak particle velocity (PPV) or the root mean square (RMS) amplitude of the vibration velocity. Because of the typically small amplitudes of vibrations, vibration velocity is often expressed in decibels; it is denoted as LV. LV is based on the RMS velocity amplitude. A commonly used abbreviation is VdB, which in this text, is when LV is based on the reference quantity of 1 microinch per second.

Vibration Perception

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Offsite sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce

perceptible groundborne noise or vibration. Acceptable vibration levels for an office environment would be 84 VdB and 78 VdB for residential uses during the day.

Vibration Propagation

The propagation of groundborne vibration is not as simple to model as airborne noise. This is because noise in the air travels through a relatively uniform median, while groundborne vibrations travel through the earth, which may contain significant geological differences. There are three main types of vibration propagation: surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse, or side-to-side and perpendicular to the direction of propagation.

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil; but has been shown to be effective enough for screening purposes, in order to identify potential vibration impacts that may need to be studied through actual field tests.

Construction-Related Vibration Level Prediction

There are no federal, State, or local regulatory standards for groundborne vibration. However, various accepted criteria have been established to assist in the evaluation of vibration impacts. For instance, Caltrans has developed vibration criteria based on potential structural damage risks and human annoyance. Caltrans criteria for the evaluation of groundborne vibration levels, with regard to structural damage and human annoyance, are provided in Table 3.8-2 and Table 3.8-3, respectively. The criteria differentiate between transient and continuous/frequent sources. Transient sources of groundborne vibration include intermittent events, such as blasting. Continuous and frequent events include the operations of equipment, including construction equipment, and vehicle traffic on roadways.

Table 3.8-2: Damage Potential to Buildings at Various Groundborne Vibration Levels

Structure and Condition	Vibration Level (in/sec ppv)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely Fragile Historic Buildings, Ruins, Ancient Monuments	0.12	0.08
Fragile Buildings	0.2	0.1
Historic and Some Old Buildings	0.5	0.25
Older Residential Structures	0.5	0.3
New Residential Structures	1.0	0.5
Modern Industrial/Commercial Buildings	2.0	0.5

Note:
Transient sources create a single isolated vibration event, such as blasting. Intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, and vibratory compaction equipment.
Source: California Department of Transportation, 2004.

Table 3.8-3: Annoyance Potential to People at Various Groundborne Vibration Levels

Human Response	Vibration Level (in/sec ppv)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely Perceptible	0.04	0.01
Distinctly Perceptible	0.25	0.04
Strongly Perceptible	0.9	0.10
Severe	2.0	0.4

Notes:
Transient sources create a single isolated vibration event, such as blasting or drop balls. Intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, and vibratory compaction equipment.
Source: California Department of Transportation, 2004.

The groundborne vibration criteria recommended by Caltrans for evaluation of potential structural damage is based on building classifications, which take into account the age and condition of the building. For residential structures and newer buildings, Caltrans considers a minimum peak-particle velocity (ppv) threshold of 0.25 inches per second (in/sec) for transient sources and 0.04 in/sec for continuous/frequent sources to be sufficient to protect against building damage. Continuous ground-borne vibration levels below approximately 0.02 in/sec ppv are unlikely to cause damage to any structure.

ground vibration. Short periods of ground vibration in excess of 2.0 in/sec ppv can be expected to result in severe annoyance to people. Short periods of ground vibration in excess of 0.1 in/sec ppv (0.2 in/sec ppv within buildings) are considered barely perceptible and the minimum level at which annoyance would be anticipated to occur.

3.8.2 - Existing Conditions

According to the City of Beaumont General Plan, noise sources in the City fall into five basic categories, including: (1) freeways, (2) local roads, (3) airports and heliports, (4) railroads, and (5) stationary sources. The City's General Plan identifies noise-sensitive receptors as including residences and schools, while the City's Municipal Code extends this list to include public parks and public facility such as any church, court, library, hospital, or health care facility.

The County of Riverside General Plan found that noise within the County is generated by numerous sources found near places where people live and work. These sources are of particular concern when the noise they generate reaches levels above the prevailing background noise. There are many different types of noise, including mobile, stationary, and construction-related, that affect noise-sensitive receptors such as residences, schools, and hospitals.

Noise Monitoring

Noise monitoring was performed using an Extech Model 407780 Type 2 integrating sound level meter. The Extech meter was programmed in "fast" mode to record the sound pressure level at one-second intervals for an A-weighted form at 15-minute intervals. The sound level meter and microphone were mounted approximately five feet above the ground and equipped with a windscreen during all measurements. The sound level meter was calibrated before monitoring using an Extech calibrator, Model 407766. The noise level measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA).

The noise monitoring locations were specifically selected to obtain noise measurements of the current noise sources that presently impact the project site and the surrounding area, and to provide a baseline for any potential noise impacts that may be created by the proposed project.

The noise monitoring was conducted between 9:35 a.m. and 12:13 p.m. on Wednesday, March 13, 2013. At the start of the noise monitoring, the temperature was 72°F, the sky was clear, and winds were low (3 to 5 mph). The noise measurements were taken at six locations throughout the project area, including on and adjacent to the project sites and nearby noise-sensitive receptors (Exhibit 3.8-1). The results of the noise measurements are provided below in Table 3.8-4.

Table 3.8-4: Existing Noise Level Measurements

Location	Description	L_{eq}	L_{MAX}	L_{MIN}
Location 1	On the southeastern portion of the recharge facility site, approximately 20 feet from the southern project boundary.	51.3	60.0	44.6
Location 2	On the cul-de-sac south of Beaumont Sports Park parking lot, northwest of the Orchard Park Apartments multi-family residential complex, and east of Beaumont Avenue.	61.5	70.3	48.5
Location 3	On the undeveloped parcel, south of Brookside Avenue and west of Mountain View Channel, approximately 80 feet from the eastern boundary of the Brookside Elementary campus.	48.5	61.6	41.0
Location 4	On the northern portion of the offsite triangular parcel, adjacent to Beaumont High School's southern driveway.	59.1	76.5	44.1
Location 5	On the northeastern corner of Beaumont Avenue and Orchard Street.	62.2	76.5	43.5
Location 6	On the Riverside County Flood Control District and Water Conservation's right-of-way along Orchard Street at the Mountain View Channel crossing.	59.6	76.2	41.0

Notes: Noise monitoring readouts are included in Appendix G of this Draft EIR.
Source: FirstCarbon Solutions, 2013.

Sensitive Receptors

Land uses with higher sensitivity to noise include residences, schools, hospitals, retirement homes, and places of worship. The nearest noise-sensitive receptors to the project sites include:

Recharge Facility Site

- The Beaumont High School campus located north of both Noble Creek and Brookside Avenue is approximately 350 feet from the recharge facility site.
- The Orchard Park Apartments property located on the northeastern corner of Beaumont Avenue and Cougar Way is approximately 140 feet from the recharge facility site.
- The Mountain View Middle School campus located directly south of the recharge facility site abuts the site. An approximately 250-foot buffer area would separate the southernmost portion of the recharge facility/maintenance road from the middle school's northern property line.
- Planning Area 1 of the Noble Creek Specific Plan located north of Noble Creek, east of the Brookside Elementary School campus, and south of Brookside Avenue is approximately 300 feet from the site. Future single-family residences are planned for this area.

Source: Google Earth Pro. MBA Field Survey and GIS Data, 2013.

Michael Brandman Associates

NORTH

900 450 0 900

Feet

Exhibit 3.8-1
Noise Monitoring Locations

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SAN GORGONIO PASS WATER AGENCY
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ENVIRONMENTAL IMPACT REPORT

- The Brookside Elementary School campus located on the southeast corner of Brookside Avenue and Oak View Drive is approximately 1,200 feet from the recharge facility site.
- Planning Area 7 of the Noble Creek Vistas Specific Plan located directly adjacent and west of the recharge facility site, southeast of Noble Creek, and north of the existing terminus of Mountain View Avenue abuts the site. Future single-family residences are planned for this area.

Pipeline Alignment

- The Beaumont High School campus is located approximately 60 feet from the pipeline alignment along both Brookside Avenue between the Noble Creek Bridge and Beaumont Avenue and Beaumont Avenue between Brookside Avenue and Cherry Valley Boulevard.
- The Cherry Valley Brethren Church and Preschool campus on the southwestern corner of Beaumont Avenue and Vineland Street is located approximately 33 feet from the pipeline alignment.
- Several single-family residential properties fronting both Beaumont Avenue and Orchard Street is located approximately 30 feet from the pipeline alignment.

Jack and Bore Locations

- The Beaumont High School campus is located approximately 60 feet from the Beaumont Avenue jack and bore location.
- The single-family residential property located on the southeastern corner of Orchard Street and Mountain View Channel is approximately 20 feet from the Orchard Street jack and bore location.

Service Connection Site

- The single-family residential property located across Orchard Street and north of the service connection site is approximately 85 feet from the site.
- The single-family residential property located directly across Mountain View Channel and east of the service connection site is approximately 65 feet from the site.
- The single-family residential property located directly adjacent and west of the service connection site abuts the site.

Offsite Triangular Parcel

- The Beaumont High School campus is located approximately 60 feet from the offsite triangular parcel.

- Planning Area 1 of the Noble Creek Specific Plan is located approximately 45 feet from the offsite triangular parcel.
- The Brookside Elementary School campus is located approximately 1,150 feet from the offsite triangular parcel.

3.8.3 - Regulatory Setting

Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Promulgating noise emission standards for interstate commerce.
- Assisting state and local abatement efforts.
- Promoting noise education and research.

The Federal Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, the ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees. For example, the Occupational Safety and Health Administration (OSHA) agency limits noise exposure of workers to 90 dB L_{eq} or less for 8 continuous hours or 105 dB L_{eq} or less for 1 continuous hour. The Department of Transportation (DOT) assumed a significant role in noise control through its various operating agencies. The Federal Aviation Administration (FAA) regulates noise of aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the Federal Transit Administration (FTA). Transit noise is regulated by the federal Urban Mass Transit Administration (UMTA), while freeways that are part of the interstate highway system are regulated by the Federal Highway Administration (FHWA). Finally, the federal government actively advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that "noise sensitive" uses are either prohibited from being sited adjacent to a highway or, alternately that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by the transportation sources, the City is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

State Regulations

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model, which is shown in Table 3.8-6, is the "Land Use Compatibility for

Community Noise Environments Matrix," which allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise.

Title 24, Chapter 1, Article 4 of the California Administrative Code (California Noise Insulation Standards) requires noise insulation in new hotels, motels, apartment houses, and dwellings (other than single-family detached housing) that provides an annual average noise level of no more than 45 dBA CNEL. When such structures are located within a 60-dBA CNEL (or greater) noise contour, an acoustical analysis is required to ensure that interior levels do not exceed the 45-dBA CNEL annual threshold. In addition, Title 21, Chapter 6, Article 1 of the California Administrative Code requires that all habitable rooms, hospitals, convalescent homes, and places of worship shall have an interior CNEL of 45 dB or less due to aircraft noise.

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable.

Local Regulations

As discussed previously in Section 1, Introduction, of this Draft EIR, the SGPWA is exempt from local land use policies and ordinances in accordance with California Government Code Sections 53091(d) and 53091(e). Although exempt for the proposed project, SGPWA has chosen to provide a discussion of the local land use policies and ordinances.

City of Beaumont General Plan

The City of Beaumont General Plan contains the following goals and policies that address noise.

Safety Element

Goal 6. The City of Beaumont will strive to control the adverse effects of noise in the environment.

> **Policy 24.** The City of Beaumont will protect public health and welfare by eliminating existing noise problems and by preventing significant degradation of the future acoustic environment.
>
> **Policy 25.** The City of Beaumont will incorporate noise considerations into land use planning decisions.
>
> **Policy 26.** The City of Beaumont shall require the inclusion of noise mitigation measures, as may be necessary to meet standards, in the design of new roadway projects in Beaumont.
>
> **Policy 27.** The City of Beaumont shall promote the effective enforcement of City, State and Federal noise standards by all appropriate City divisions.

The Safety Element also includes the following compatibility standards, as provided in Table 3.8-5, which indicates the range of acceptable noise levels for various land uses in the City. The noise level ranges shown serve as guidelines with respect to the placement of land uses in the City.

Table 3.8-5: Noise and Land Use Compatibility Standards

Noise and Land Use Compatibility Standards (Ambient Exterior Noise Exposure)		
Land Use	Desired Maximum	Maximum Acceptable
Single-family Residential	55 dBA	65 dBA
Multiple-Family Residential	60 dBA	65 dBA
6th Street Corridor Overlay	65 dBA	70 dBA
Public Facilities (including Schools)	60 dBA	70 dBA
All Commercial and Mixed-Use	65 dBA	75 dBA
Industrial	70 dBA	75 dBA
Source: City of Beaumont, City of Beaumont General Plan, Safety Element, 2007.		

Beaumont Municipal Code

The Beaumont Municipal Code establishes the following noise provisions that are relevant to the project.

Chapter 9.02 Noise Control

Section 9.02.030 Prohibited Noise in Residential Zones

Notwithstanding any other provision of this Code, and in addition thereto, it shall be unlawful, and it is hereby declared a public nuisance, for any person to make, suffer, permit, continue, or cause to be made or continued, any loud noise, commotion, gathering or event, which disturbs the peace or quiet of the neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitivity. Further, it shall be unlawful for any person to make, or permit the making of, noise related to landscape maintenance or construction, including the erection, excavation, demolition, alteration or repair of any structure or improvement, which disturbs the peace or quiet of the neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitivity, between the hours of 8:00 p.m. in the evening and 6:00 a.m.

Section 9.02.040 Prohibited Noise in Public Places

Notwithstanding any other provision of this Code, and in addition thereto, it shall be unlawful, and it is hereby declared a public nuisance, for any person to make, suffer, permit, continue, or cause to be made or continued, any loud noise, commotion, gathering or event, which disturbs the peace or quiet of a public park or other public facility, including any school, church, court, library, hospital or health

care facility, or which causes discomfort or annoyance to any reasonable person of normal sensitivity within such park or facility. (Ord. No. 914, § 1, 7-3-07)

9.02.060 Prohibited Noise-Exemptions

The following activities and noise sources shall be exempt from the provisions of this Chapter:

A. Activities conducted on the grounds of any public or private school during regular hours of operation;
B. Outdoor gatherings, public dances, shows, sporting and entertainment events authorized by permit issued by the City;
C. Warning devices necessary for public safety including, but not limited to, police, fire and ambulance sirens, train horns and other sounds used for the purpose of alerting persons to the existence of a danger or emergency;
D. The following construction, repair or excavation activities:
    i. Such activities necessary for the immediate preservation of life or property;
    ii. Such activities performed in connection with public works projects, public service projects and public utilities services;
    iii. Such activities performed on private property pursuant to a permit issued by the City;
    iv. Any activity to the extent regulated by state or federal law or by permit issued by the City;
    v. Noise generated in retail, commercial and industrial zones that are necessary and incidental to the uses permitted therein, provided that such noise does not disturb the peace and quiet of adjacent residential zones. (Ord. No. 914, § 1,7-3-07)

County of Riverside General Plan

The County of Riverside General Plan contains the following policies that address noise.

Noise Element

According to the Noise Element, for the County's Land Use Plan to be successful, land uses producing noise must be compatible with adjacent land uses. If existing land uses generate noise above a certain level, they are not compatible with one another, and therefore noise attenuation devices must be used to mitigate the noise to acceptable levels. For new development, the placement of noise-sensitive land uses is integral to a successful community. Table 3.8-6, Land Use Compatibility for Community Noise Exposure, provides the noise acceptability levels for different land uses.

> **Policy N 1.1.** Protect noise-sensitive land uses from high levels of noise by restricting noise-producing land uses from these areas. If the noise-producing land use cannot be relocated, then noise buffers such as setbacks, landscaping, or blockwalls shall be used.

Policy N 1.2. Guide noise-tolerant land uses into areas irrevocably committed to land uses that are noise-producing, such as transportation corridors or within the projected noise contours of any adjacent airports.

Policy N 1.3. Consider the following uses noise-sensitive and discourage these uses in areas in excess of 65 CNEL:

- Schools;
- Hospitals;
- Rest Homes;
- Long Term Care Facilities;
- Mental Care Facilities;
- Residential Uses;
- Libraries;
- Passive Recreation Uses; and
- Places of worship

According to the State of California Office of Planning and Research General Plan Guidelines, an acoustical study may be required in cases where these noise-sensitive land uses are located in an area of 60 CNEL or greater. Any land use that is exposed to levels higher than 65 CNEL will require noise attenuation measures.

Areas around airports may have different noise standards than those cited above. Each Area Plan affected by a public-use airport includes one or more Airport Influence Areas, one for each airport. The applicable noise compatibility criteria are fully set forth in Appendix L and summarized in the Policy Area section of the affected Area Plan.

Policy N 1.4. Determine if existing land uses will present noise compatibility issues with proposed projects by undertaking site surveys.

Policy N 1.5. Prevent and mitigate the adverse impacts of excessive noise exposure on the residents, employees, visitors, and noise-sensitive uses of Riverside County.

Policy N 1.6. Minimize noise spillover or encroachment from commercial and industrial land uses into adjoining residential neighborhoods or noise-sensitive uses.

Policy N 1.7. Require proposed land uses, affected by unacceptably high noise levels, to have an acoustical specialist prepare a study of the noise problems and recommend structural and site design features that will adequately mitigate the noise problem.

Policy N 1.8. Limit the maximum permitted noise levels that cross property lines and impact adjacent land uses, except when dealing with noise emissions from wind turbines. Please see the Wind Energy Conversion Systems section for more information.

Table 3.8-6: Land Use Compatibility Chart for Community Noise Exposure

Land Use Category	Community Noise Exposure L_{dn} or CNEL, dB[1]			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential - Low Density, Single Family, Duplex, Mobile Homes	50 to 60	55 to 70	70 to 75	75 to 85
Residential - Multiple Family	50 to 65	60 to 70	70 to 75	75 to 85
Transient Lodging - Motel, Hotels	50 to 65	60 to 70	70 to 80	80 to 85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 to 70	60 to 70	70 to 80	80 to 85
Auditoriums, Concert Halls, Amphitheaters	N/A	50 to 70	N/A	65 to 85
Sports Arenas, Outdoor Spectator Sports	N/A	50 to 75	N/A	70 to 85
Playgrounds, Neighborhood Parks	50 to 70	N/A	67.5 to 75	72.5 to 85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 to 75	N/A	70 to 80	80 to 85
Office Buildings, Business Commercial and Professional	50 to 70	67.5 to 77.5	75 to 85	N/A
Industrial, Manufacturing, Utilities, Agriculture	50 to 75	70 to 80	75 to 85	N/A

Notes:
N/A = not applicable.
Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
Normally Unacceptable: New Construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Clearly Unacceptable: New construction or development should generally not be undertaken.
[1] Source: County of Riverside Noise Element, 2008.
Source: FirstCarbon Solutions, 2013.

According to the Noise Element, the noise emitted from a land use must be mitigated to acceptable levels indoors and outdoors in order for other, more noise-sensitive land uses to locate in proximity to these noise producers. There are a number of ways to mitigate noise and the following policies suggest some possible solutions to noise problems.

Policy N 2.1. Create a County Noise Inventory to identify major noise generators and noise-sensitive land uses, and to establish appropriate noise mitigation strategies.

Policy N 2.2. Require a qualified acoustical specialist to prepare acoustical studies for proposed noise-sensitive projects within noise impacted areas to mitigate existing noise.

Policy N 2.3. Mitigate exterior and interior noises to the levels listed in the table below to the extent feasible, for stationary sources:

Table 3.8-7: Stationary Source Land Use Noise Standards

Land Use	Interior Standards	Exterior Standards
Residential 10:00 p.m. to 7:00 a.m. 7:00 a.m. to 10:00 p.m.	 40 L_{eq} (10 minute) 55 L_{eq} (10 minute)	 45 L_{eq} (10 minute) 65 L_{eq} (10 minute)
Source: County of Riverside Noise Element, 2008.		

Riverside County Code of Ordinances

The Riverside County Code of Ordinances establishes the following noise provisions that are relevant to the project.

Chapter 9.52 Noise Regulation

Section 9.52.020 Exemptions

Sound emanating from the following sources is exempt from the provisions of this chapter:

A. Facilities owned or operated by or for a governmental agency;
B. Capital improvement projects of a governmental agency;
C. The maintenance or repair of public properties;
D. Public safety personnel in the course of executing their official duties, including, but not limited to, sworn peace officers, emergency personnel and public utility personnel. This exemption includes, without limitation, sound emanating from all equipment used by such personnel, whether stationary or mobile. (Ord. 847 § 2, 2006)

Section 9.52.040 General Sound Level Standards

No person shall create any sound, or allow the creation of any sound, on any property that causes the exterior sound level on any other occupied property to exceed the sound level standards set forth in Table 3.8-8.

Table 3.8-8: Sound Level Standards (Db L_{max})

General Plan Foundation Component	General Plan Land Use Designation	General Plan Land Use Designation Name	Density[1]	Maximum Decibel Level	
				7 AM - 10 PM	10 PM - 7 AM
Community Development	EDR	Estate Density Residential	2 AC	55	45
	VLDR	Very Low Density Residential	1 AC	55	45
	LDR	Low Density Residential	1/2 AC	55	45
	MDR	Medium Density Residential	2—5	55	45
	MHDR	Medium High Density Residential	5—8	55	45
	HDR	High Density Residential	8—14	55	45
	VHDR	Very High Density Residential	14—20	55	45
	H'TDR	Highest Density Residential	20+	55	45
	CR	Retail Commercial		65	55
	CO	Office Commercial		65	55
	CT	Tourist Commercial		65	55
	CC	Community Center		65	55
	LI	Light Industrial		75	55
	HI	Heavy Industrial		75	75
	BP	Business Park		65	45
	PF	Public Facility		65	45
	SP	Specific Plan-Residential		55	45
		Specific Plan-Commercial		65	55
		Specific Plan-Light Industrial		75	55
		Specific Plan-Heavy Industrial		75	75
Rural Community	EDR	Estate Density Residential	2 AC	55	45
	VLDR	Very Low Density Residential	1 AC	55	45
	LDR	Low Density Residential	1/2 AC	55	45
Rural	RR	Rural Residential	5 AC	45	45
	RM	Rural Mountainous	10 AC	45	45
	RD	Rural Desert	10 AC	45	45

Table 3.8-8 (cont.): Sound Level Standards (Db L_{max})

General Plan Foundation Component	General Plan Land Use Designation	General Plan Land Use Designation Name	Density[1]	Maximum Decibel Level	
				7 AM - 10 PM	10 PM - 7 AM
Agriculture	AG	Agriculture	10 AC	45	45
Open Space	C	Conservation		45	45
	CH	Conservation Habitat		45	45
	REC	Recreation		45	45
	RUR	Rural	20 AC	45	45
	W	Watershed		45	45
	MR	Mineral Resources		75	45

[1] Density for residential uses are units per acre or units per number of acres identified.
Source: Riverside County Code of Ordinances, Chapter 9.52, Noise Regulation, Section 9.52.040

3.8.4 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether noise impacts are significant environmental effects, the following questions are analyzed and evaluated. 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? (See Noise Levels in Excess of Standards Impact NOI-1.)

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? (See Excessive Groundborne Vibration Impact NOI-2.)

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? (See Permanent Increase in Ambient Noise Levels Impact NOI-3.)

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? (See Temporary or Periodic Increase in Ambient Noise Levels Impact NOI-4.)

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? (See Section 6.12.1, Public Airport 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? (See Section 6.12.2, Private Airstrip Noise Levels)

3.8.5 - Project Impact Analysis and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Noise Levels in Excess of Standards

Impact NOI-1	**The project would not result in 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.**

Impact Analysis

Per Sections 53091(d) and 53091(e) of the California Government Code, SGWPA is not bound by the provisions contained in either Chapter 9.02, Noise Control, of the Beaumont Municipal Code, or Chapter 9.52, Noise Regulation, of the Riverside County Code of Ordinances (refer to Section 6.10.2 of this Draft EIR). However, while not bound to the aforementioned noise ordinances, because of the close proximity of various noise-sensitive receptors to the project sites, project construction and operations would still comply with both the noise standards established by the City of Beaumont and County of Riverside.

For project construction occurring within the jurisdiction of the City of Beaumont, it is assumed that project construction would occur between 6:00 a.m. and 8:00 p.m., which is the permitted time period as determined by Chapter 9.02, Noise Control, of the City of Beaumont Municipal Code. For project construction occurring within the jurisdiction of the County of Riverside, it is assumed that project construction would occur between 7:00 a.m. and 10:00 p.m. Based on information provided by the project engineer, project construction can be divided into six primary scenarios, as described below. For each scenario, an analysis has been conducted based on a "worst-case" combination of construction equipment operating simultaneously at the same located on the project site. The assumed equipment combination for each scenario is also described below:

Scenario 1: This scenario involves site preparation and grading activities within the recharge facility's footprint, along with construction of the recharge basins and installation of the associated above and below ground infrastructure. It is anticipated that construction equipment required for this scenario would include a dozer, grader, scraper, and water truck.

Scenario 2: This scenario involves earthwork activities within the approximately 250-foot buffer area between the southernmost portion of the recharge basin/maintenance road and Mountain View Middle School's northern property line. Construction activities within the buffer area would be limited to the movement of soil from the northern portion of the

recharge facility site towards the southern half of the site to gradually increase elevation on this portion of the site. It is anticipated that construction equipment required for this scenario would include a dozer and scraper.

Scenario 3: This scenario involves the drilling of the proposed irrigation well on the recharge facility site. The specific location for the proposed irrigation well is not known at this time, and thus, as a worst-case evaluation. the construction and operation of the well could occur anywhere within the recharge facility site where there is adequate room to construct a well and subsequently operate an irrigation pump. As such, the worst-case scenario is to assume that drilling of the irrigation well could occur along the project site's southern boundary (directly adjacent to the Mountain View Middle School campus), along the western site boundary (immediately adjacent to Noble Creek Vistas Specific Plan's Planning Area 7), along the site's eastern boundary (140 feet from the Orchard Park Apartments property), or on the northeastern site corner (550 feet from the Beaumont High School campus). Construction activities associated with the drilling of the irrigation well include a continuous 24-hour operation over approximately two days. It is anticipated that construction equipment required for this scenario would include a drill rig.

Scenario 4: This scenario involves excavation and shoring activities along the pipeline alignment, followed by pipeline installation, trench backfilling, and street restoration. It is anticipated that construction equipment required for this scenario would include an auger machine, backhoe, compactor, crane, dump truck, excavator, generator, hydraulic jack, loader, paver, water truck, and welding truck.

Scenario 5: This scenario involves jack and bore activities under Noble Creek at Beaumont Avenue and under Mountain View Channel at Orchard Street. It is anticipated that construction equipment required for this scenario would include a bore/drill rig, excavator, handling equipment/side boom, and hydraulic jack.

Scenario 6: This scenario involves site preparation and grading activities on the service connection site, along with construction of the service connection facility and installation of the associated above- and belowground infrastructure. It is anticipated that construction equipment required for this scenario would include a backhoe, excavator, and water truck.

Scenario 7: This scenario involves the ingress and egress of construction equipment and vehicles to and from the service connection site, the movement of equipment and vehicles on the northern half of the connection site, and the deposit and movement of exported soils (via excavation of the pipeline alignment) on the northern portion of the site. It is anticipated that construction equipment required for this scenario would include a backhoe and a haul truck.

Scenario 8: This scenario involves the ingress and egress of construction equipment and vehicles to and from the offsite triangular parcel, should portions of this area be used for the deposit and movement of exported soils (via excavation of the pipeline alignment). It is anticipated that construction equipment required for this scenario would include a backhoe and a haul truck.

Based on the assumptions described above, analyses were conducted to estimate the noise levels for each scenario at the noise-sensitive receptors nearest to the recharge facility site, the pipeline alignment, and the service connection site. Modeling for project construction noise was performed using the Federal Highway Administration's (FHWA) Roadway Construction Noise Model (RCNM). The RCNM is the FHWA model used to predict construction-related noise for a variety of types of construction projects of varying complexity. The RCNM includes an extensive compilation of built-in reference noise levels for dozens of types of construction-related equipment based on manufacturer and actual monitored sources. Table 3.8-9 shows the noise level analyses for each construction scenario.

Table 3.8-9: Estimated Construction Equipment Noise Levels

Scenario	Nearest Noise-Sensitive Receptor	Distance from Construction Activities to Receptor[1] (feet)	Local Noise Threshold[2] (dBA L_{eq})	Individual Construction Equipment Noise Levels at Receptor[3] (dBA L_{eq})	"Worst-Case" Scenario Noise Levels at Receptor[4] (dBA L_{eq})
1	Mountain View Middle School	250	Exempt	56.3 to 67.0	70.6
2	Mountain View Middle School	<10	Exempt	91.7 to 93.6	95.7
3	Mountain View Middle School	<10	Exempt (Daytime)/Prohibited (Nighttime)	91.3	91.3
	Noble Creek Specific Plan's Planning Area 7 (Future)	<10	Exempt (Daytime)/Prohibited (Nighttime)	91.3	91.3
	Orchard Park Apartments	140	Exempt (Daytime)/Prohibited (Nighttime)	68.4	68.4
	Beaumont High School	550	Exempt (Daytime)/Prohibited (Nighttime)	56.5	56.5

Table 3.8-9 (cont.): Estimated Construction Equipment Noise Levels

Scenario	Nearest Noise-Sensitive Receptor	Distance from Construction Activities to Receptor[1] (feet)	Local Noise Threshold[2] (dBA L_{eq})	Individual Construction Equipment Noise Levels at Receptor[3] (dBA L_{eq})	"Worst-Case" Scenario Noise Levels at Receptor[4] (dBA L_{eq})
4	Residence at southeastern corner of Beaumont Avenue and Orchard Street	30	Exempt	74.5 to 82.1	90.2
5	Residence at southeastern corner of Orchard Street and Mountain View Channel	20	Exempt	77.0 to 81.8	86.5
6	Residence at southeastern corner of Orchard Street and Mountain View Channel	65	Exempt	68.0 to 74.5	76.8
7	Residence west of the Service Connection Site	<10	Exempt	84.3 to 87.6	89.2
8	Beaumont High School	60	Exempt	68.7 to 72.0	73.7

Notes:
1 The distance from the project site boundary to the receptor's nearest property line.
2 The City of Beaumont Municipal Code, Noise Control, Section 9.02.060 and the Noise Regulations of the County of Riverside Code of Ordinances, Section 9.52.020 exempt construction noise for the proposed project; however, the City of Beaumont also prohibits construction noise between the hours of 8 p.m. and 6 a.m.
3 Noise levels were estimated using the FHWA's RCNM. RCNM readouts are included in Appendix G.
4 "Worst-case" event assumes that all construction equipment would be operated simultaneously in the same location on the project site, and does not take into account the attenuation effects from sound walls, berms, and landscaping.
Source: FirstCarbon Solutions, 2013.

As shown in Table 3.8-9, short-term, intermittent construction noise levels are expected to range from 56.3 dBA L_{eq} to 95.7 dBA L_{eq} at the nearest noise-sensitive receptors to the various construction scenarios. RCNM modeling represents a "worst-case" event, as modeling assumes that all construction equipment would be operated simultaneously in the same location on the project site, and did not take into account the attenuation effects from sound walls, berms, and landscaping. In addition, these estimated noise levels represent levels that would be expected when construction equipment is operated along the edges of the project sites nearest to the noise-sensitive receptors. A more realistic assumption has the construction equipment operating within a 5-acre area each day,

which would result in substantial fluctuations in noise levels as the equipment moves throughout the sites.

Based on a review of the noise standards established by both the City of Beaumont and the County of Riverside, construction noise levels associated with the proposed project are exempt during the daytime hours (between 6 a.m. and 8 p.m.) in the City of Beaumont and all times within the County of Riverside. As such, the construction activities associated with the project that will occur during the daytime hours will not exceed either the City of Beaumont or County of Riverside noise standards. In addition, the City of Beaumont prohibits construction noise between the hours of 8 p.m. and 6 a.m. Although the City of Beaumont prohibits construction noise during the evening and nighttime hours (i.e., between 8 pm and 6 am), the SGPWA has chosen not to use the City's evening and nightitme construction noise level standard as a threshold for determining the project's noise impact during construction of the irrigation well, which will be required to occur during a continuous 24-hour period over approximately two days. As discussed in Section 1, Introduction, of this Draft EIR, the proposed project is exempt from building and zoning ordinances of a county or city in accordance with Sections 53091(d) and 53091(e) of the California Government Code.

Regardless, the estimated construction noise levels shown in Table 3.8-9 exceed the applicable noise standards as established by both the City of Beaumont or the County of Riverside for nonexempt activities. However, both the City and County include provisions in their respective noise ordinances that exempt the project from complying with these noise requirements. Section 9.02.060, Prohibited Noise-Exemptions, of the Beaumont Municipal Code exempts activities performed in connection with public works projects, public service projects, and public utilities services from the provisions of the City's noise ordinance. Section 9.52.020, Exemptions, of the Riverside County Code of Ordinances exempts sound emanating from capital improvement projects of a governmental agency, such as SGPWA, from the provisions of the County's noise standards.

Based on exemptions contained within both the Beaumont Municipal Code and the Riverside County Code of Ordinances and the exemption contained in Sections 53091(d) and 53091(e) of the California Government Code, the construction activities associated with the proposed project will not exceed applicable noise standards, and therefore, the proposed project would result in a less than significant construction noise impact.

Refer to Impact NOI-4 for a discussion regarding the project's potential to temporarily exceed existing ambient noise levels in the project area. This discussion provides an evaluation of whether the project's temporary activities (i.e., construction) will expose humans to harmful noise levels.

Long-Term Operational Impacts

Recharge Facility Site

Once operational, periodic maintenance activities of the recharge facility would be required. Each recharge basin may require servicing on an annual basis. Maintenance activities would involve temporarily taking an individual basin out of commission, allowing the basin to thoroughly dry over several weeks, re-grading and ripping the basin bottom with a dozer, and, if necessary, re-grading and tracking the basin slopes, although this final step is not expected to be regularly required. Each basin would take approximately one day to grade, rip, and track.

Use of a dozer during basin maintenance activities and operation of an irrigation groundwater pump would be the primary sources of operational noise on the recharge facility. As shown in Table 3.8-10, noise levels expected at the Mountain View Middle School campus as a result of these temporary annual maintenance activities would be 63.7 dBA. These noise levels would be experienced along the northernmost portion of the middle school campus and only when basin maintenance activities are occurring within the southernmost basin. Regardless, the basin maintenance noise levels would not exceed the 70 dBA "maximum acceptable" threshold for school uses as established by the City of Beaumont General Plan.

In addition to basin maintenance activities, an irrigation pump, which would provide irrigation water for landscaping on the project site, would operate on the project site. The specific location for the proposed irrigation well is not known at this time, and thus, it is assumed that construction and operation of the well could occur anywhere within the recharge facility site where there is adequate room to construct a well and subsequently operate a groundwater pump. As such, as a worst-case situation, the drilling of the irrigation well could occur along the project site's southern boundary (directly adjacent to the Mountain View Middle School campus), along the western site boundary (immediately adjacent to Noble Creek Vistas Specific Plan's Planning Area 7), along the site's eastern boundary (140 feet from the Orchard Park Apartments property), or on the northeastern site corner (550 feet from the Beaumont High School campus). As shown in Table 3.8-10, if the irrigation well pump is constructed and operated along the recharge facility site's boundary, noise levels experienced at the nearest receptor properties would be between 57.1 dBA L_{eq} and 91.9 dBA L_{eq}. Accordingly, noise levels as a result of groundwater pumping and experienced at the Mountain View Middle School campus, Planning Area 7 of the Noble Creek Specific Plan, and the Orchard Park Apartments property would exceed the 70 and 65 dBA "maximum acceptable" threshold for school and residential uses, respectively, as established by the City of Beaumont General Plan. Thus, Mitigation Measures NOI-1 would be required to reduce potential noise impacts associated with operation of the groundwater pump to less than significant.

Table 3.8-10: Estimated Operational Noise Levels

Operational Activity	Nearest Noise-Sensitive Receptor	Distance from Operational Activities to Receptor[1] (feet)	Local Noise Threshold[2] (dBA L_{eq})	Operational Equipment Noise Levels at Receptor[3] (dBA L_{eq})
Annual Maintenance of the Recharge Basins	Mountain View Middle School	250	70	63.7
Irrigation Pump	Beaumont High School	550	70	57.1
	Mountain View Middle School	<10	70	91.9
	Noble Creek Specific Plan's Planning Area 7 (Future)	<10	65	91.9
	Orchard Park Apartments	140	65	69.0

Notes:
1 The distance from the project site boundary to the receptor's nearest property line.
2 Although the proposed project is exempt from building and zoning ordinances of a county or city in accordance with Sections 53091(d) and 53091(e) of the California Government Code as discussed in Section 1 of this Draft EIR, the SGPWA has chosen to use the local operational noise thresholds as thresholds for determining the project's potential noise impacts. Thresholds are taken from Beaumont General Plan Table 5-1.
3 Noise levels were estimated using the FHWA's RCNM. RCNM readouts are included in Appendix G.
Source: FirstCarbon Solutions, 2013.

Ongoing project operations would generate a nominal quantity of additional maintenance truck trips to the project sites. However, these trips would not occur on a daily basis and would not increase the noise levels on the nearby roadways. In addition, the annual maintenance operations associated with the recharge basins may require up to two haul trucks per day for five days.

Pipeline and Service Connection Site

Operation of both the pipeline and the service connection facility would not generate substantial noise levels in excess of noise standards established by the County of Riverside or the City of Beaumont. The pipeline would be located underground and, similar to other water pipelines in the project area, would not produce detectable noise levels above grade. Likewise, the service connection facility would contain mainly pipes, connections, meters, controls, and other associated infrastructure. No pumps are proposed at the service connection site. Some of the improvements at the service connection site would be located underground and within underground vaults, while others will be contained within a precast concrete structure. The service connection site is located within a residential area. As such, noise levels generated by the service connection facility are expected to comply with the 60 dBA "normally acceptable" threshold for residential uses as established by the City of Beaumont General Plan. In addition, the noise level attenuation afforded by the underground and enclosed locations of these improvements would further attenuate operational noise levels

produced by the service connection facility. Therefore, long-term operational impacts associated with the exceedance of standards established in the local general plan or noise ordinance would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM NOI-1 The pump associated with the proposed irrigation well shall be located a minimum of 150 feet from the southern property line, 250 feet from the western property line, and 110 feet from the eastern property line if the pump has no attenuation. If the irrigation pump is located closer to the existing property lines than identified above, the irrigation pump shall be housed in a structure that adequately attenuates noise levels so that the noise levels do not exceed the City of Beaumont noise regulations.

Level of Significance After Mitigation

Less than significant impact.

The implementation of Mitigation Measure NOI-1 will provide adequate attenuation of the noise levels from the irrigation pump through either the provision of an adequate setback or a structure to enclose the pump. The resultant noise levels will not exceed the City of Beaumont noise regulations.

Excessive Groundborne Vibration

Impact NOI-2	**The project would not result in expose persons to or generation of excessive groundborne vibration or groundborne noise levels.**

Impact Analysis

Short-Term Construction Impacts

Construction of the recharge facility, the pipeline alignment, and the service connection facility would generate lower levels of groundborne vibration. In particular, earthmoving activities on the recharge facility site and excavation activities along the pipeline alignment would generate perceivable levels of groundborne vibration at close range. However, project construction would not require the use of equipment known to generate substantial levels of groundborne vibration such as jackhammers, impact hammers, and pile drivers. The significance of groundborne vibration impacts is primarily dependent on the type and location of construction equipment and activities occurring on a particular project site. Table 3.8-11 provides vibration velocity levels for common types of construction equipment similar to those that would be used during project construction.

Table 3.8-11: Representative Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 Feet (in/sec)[1]	PPV at 50 Feet (in/sec)[1]	PPV at 75 Feet (in/sec)[1]
Large Bulldozer	0.089	0.031	0.017
Caisson Drilling	0.089	0.031	0.017
Loaded Trucks	0.076	0.027	0.015
Small Bulldozer	0.003	0.001	0.000

Notes:
[1] Source: Federal Transit Administration, 2006
Source: FirstCarbon Solutions, 2013.

Groundborne vibration impacts are mainly the result of the proximity of construction equipment to sensitive receptors and structures. Project construction would occur 50 feet or more from any adjacent existing structure and any potentially sensitive receptor contained within. At these distances, expected groundborne vibration levels would fall well below Caltrans's 0.5 PPV damage potential threshold for continuous/frequently intermittent sources (2.0 PPV for transient sources). In terms of human annoyance, groundborne vibration levels would fall below the "distinctly perceptible" perception level identified by Caltrans. In addition, use of construction equipment would occur intermittently throughout the workday, with equipment being operated at different power levels over the course of the day. As a result, no one in the project vicinity would be exposed to continuous vibration impacts. Therefore, short-term construction impacts associated with groundborne vibration would be less than significant.

Long-Term Operational Impacts

Once operational, the recharge facility would require periodic maintenance. Each recharge basin may require servicing on an annual basis. Maintenance activities would involve temporarily taking an individual basin out of commission, allowing the basin to thoroughly dry over several weeks, re-grading and ripping the basin bottom with a dozer, and, if necessary, re-grading and tracking the basin slopes, although this final step in not expected to be regularly required. Each basin would take approximately one day to grade, rip, and track.

Use of a dozer during maintenance activities would be the primary source of operational groundborne vibration on the recharge facility. As shown in Table 3.8-11, as a result of these maintenance activities, groundborne vibration levels expected at the nearest classroom buildings on the Mountain View Middle School campus, which are approximately 180 feet from the nearest proposed basin, would fall well below Caltrans's 0.5 PPV damage potential threshold for continuous/frequently intermittent sources (2.0 PPV for transient sources). In terms of human annoyance, groundborne vibration levels would fall below the "barely perceptible" perception level identified by Caltrans.

Therefore, long-term operational impacts associated with groundborne vibration would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Permanent Increase in Ambient Noise Levels

Impact NOI-3	**The project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.**

Impact Analysis

As addressed in Impact NOI-1, operation of the recharge facility, pipeline, and service connection facility would not generate noise levels in excess of those noise standards established by the City of Beaumont or County of the Riverside General Plan. The City and County established their respective long term noise level regulations to preserve the existing noise environment, avoid land use compatibility issues, and prevent annoyance and harm to nearby receptors. By complying with these long-term noise standards, the project would help preserve the existing noise levels in the project area, while not resulting in a substantial increase in ambient levels over the life of the project.

Once operational, the recharge facility would require periodic maintenance. Each recharge basin may require servicing on an annual basis. Maintenance activities would involve temporarily taking an individual basin out of commission, allowing the basin to thoroughly dry over several weeks, re-grading and ripping the basin bottom with a dozer, and, if necessary, re-grading and tracking the basin slopes, although this final step in not expected to be regularly required. Each basin would take approximately one day to grade, rip, and track.

Use of a dozer during basin maintenance activities and operation of an irrigation pump would be the primary sources of operational noise on the recharge facility. As shown in Table 3.8-10, noise levels expected at the Mountain View Middle School campus as a result of these temporary annual maintenance activities would be 63.7 dBA. These noise levels would be experienced along the northernmost portion of the middle school campus and only when basin maintenance activities are occurring within the southernmost basin. Regardless, the basin maintenance noise levels would not exceed the 70 dBA “maximum acceptable” threshold for school uses as established by the City of Beaumont General Plan.

In addition to basin maintenance activities, an irrigation pump, which would provide irrigation water for landscaping on the project site, would operate on the project site. The specific location for the proposed irrigation well is not known at this time, and thus, it is assumed that construction and operation of the well could occur anywhere within the recharge facility site where there is adequate room to construct a well and subsequently operate a groundwater pump. As such, as a worst-case evaluation, the drilling of the irrigation well could occur along the project site's southern boundary (directly adjacent to the Mountain View Middle School campus), along the western site boundary (immediately adjacent to Noble Creek Vistas Specific Plan's Planning Area 7), along the site's eastern boundary (140 feet from the Orchard Park Apartments property), or on the northeastern site corner (550 feet from the Beaumont High School campus). As shown in Table 3.8-10, if the irrigation pump is constructed and operated along the recharge facility site's boundary, noise levels experienced at the nearest receptor properties would be between 57.1 dBA L_{eq} and 91.9 dBA L_{eq}. Accordingly, noise levels as a result of groundwater pumping and experienced at the Mountain View Middle School campus, Planning Area 7 of the Noble Creek Specific Plan, and the Orchard Park Apartments property would exceed the 70 and 65 dBA "maximum acceptable" threshold for school and residential uses, respectively, as established by the City of Beaumont General Plan. Thus, Mitigation Measure NOI-1 would be required to reduce potential noise impacts associated with operation of the irrigation pump to less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

The implementation of Mitigation Measure NOI-1 is required.

Level of Significance After Mitigation

Less than significant impact.

The implementation of Mitigation Measure NOI-1 would provide adequate attenuation through a setback or a structure to reduce noise levels so that they do not exceed the City of Beaumont regulations.

Temporary or Periodic Increase in Ambient Noise Levels

Impact NOI-4	**The project would not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.**

Impact Analysis

Based on a review of the noise standards established by both the City of Beaumont and the County of Riverside, construction noise levels associated with the proposed project are exempt during the daytime hours (between 6 a.m. and 8 p.m.) in the City of Beaumont and all times within the County of Riverside. As such, the construction activities associated with the project that will occur during the daytime hours will not exceed either the City of Beaumont or County of Riverside noise standards. In

addition, the City of Beaumont prohibits construction noise between the hours of 8 p.m. and 6 a.m. Although the City of Beaumont prohibits construction noise during the evening and nighttime hours (i.e., between 8 pm and 6 am), the SGPWA has chosen not to use the City's evening and nightitme construction noise level standard as a threshold for determining the project's noise impact during construction of the irrigation well, which will be required to occur during a continuous 24-hour period over approximately two days. As discussed in Section 1, Introduction, of this Draft EIR, the proposed project is exempt from building and zoning ordinances of a county or city in accordance with Sections 53091(d) and 53091(e) of the California Government Code.

However, while both the proposed project's daytime construction activities and nighttime construction activities associated with the drilling of the irrigation well are exempt, construction noise can still result in a temporary or periodic increase in ambient noise levels in the project vicinity. The following provides an evaluation of the potential for noise produced during project construction to cause physical harm to nearby noise-sensitive receptors.

The OSHA has adopted noise exposure thresholds, which establish the highest permissible exposure limit based on periods of exposure. The permissible noise exposure limit increases with shorter periods of exposure. OSHA allows a noise exposure level of 90 dB over an eight-hour exposure period. The highest permissible noise exposure limit increases to 92 dB for a six-hour exposure period, 95 dB for four hours of exposure, 97 dB for a three-hour period, and 105 dB for one hour of exposure. The highest permissible noise exposure level for periods of 15 minutes or less is 115 dB. Exposure to impulsive or impact noise cannot exceed 140 dB peak sound pressure level. It is important to note that these noise exposure limits apply only to employees in the workplace, but are useful in understanding noise exposure levels with regard to potential hearing loss and physiological damage.

As shown in Table 3.8-9, short-term, intermittent construction noise levels are expected to be up to 95.7 dBA L_{eq} at the Mountain View Middle School campus and 90.2 dBA L_{eq} at the residential property on the southeastern corner of Beaumont Avenue and Orchard Street. Construction noise levels at the middle school campus would comply with OHSA exposure thresholds for time periods of three-hour, one-hour, and 15-minutes or less. Students, teachers, and administrators would experience these projected noise levels only when outside of their classroom, whether for recess, lunch, or physical education and standing near the property line. None of these activities are expected to collectively exceed three-hours during a typical school day, and thus, students and educators would not experience noise levels that exceed OSHA exposure thresholds. Similarly, the residential property at Beaumont Avenue and Orchard Street would experience noise levels that would comply with OSHA's 6-hour, 3-hour, 1-hour, and 15-minute or less exposure thresholds. Residents would experience the aforementioned projected noise levels only when outside of their residence. Since these residents would have to be exposed to these projected noise levels for six hours or more during a single construction workday, and since the estimated noise levels represent a "worst-case" scenario

that is unlikely to occur, it is not expected that construction noise levels would exceed exposure limits adopted by OSHA. As a result, project construction would not exceed noise levels recognized as causing harm to nearby receptors. Furthermore, both the City and County include provisions in their respective noise ordinances that exclude the project from complying with these noise requirements. Section 9.02.060, Prohibited Noise-Exemptions, of the Beaumont Municipal Code exempts activities performed in connection with public works projects, public service projects and public utilities services from the provisions of the City's noise ordinance. Section 9.52.020, Exemptions, of the Riverside County Code of Ordinances exempts sound emanating from capital improvement projects of a governmental agency, such as SGPWA, from the provisions of the County's noise standards.

Based on exemptions contained within both the Beaumont Municipal Code and the Riverside County Code of Ordinances for daytime construction noise and the exemption for nighttime construction contained in California Government Code Sections 53091(d) and 53091(e) for the project, noise generated during project construction would be exempt. Furthermore, the temporary increase in noise levels due to construction activities would not expose sensitive receptors (i.e., residents and school attendees) to harmful noise levels as discussed above. Therefore, the temporary or periodic increase in ambient noise levels associated with project construction activities would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

3.9 - Transportation and Traffic

This section describes the potential transportation and traffic effects of project implementation on the project site and its surrounding area. Descriptions and analysis in this section are based on information contained in the March 18, 2013 Traffic Impact Analysis prepared by Urban Crossroads, Inc. The Traffic Impact Analysis is included in this Draft EIR as Appendix H.

3.9.1 - Existing Conditions

Study Area Roadways and Intersections

Exhibit 3.9-1 shows the existing number of through lanes and intersection controls in the study area. The following study area roadways would be directly impacted by project construction and have been included in the traffic evaluation:

- **Beaumont Avenue** is a two-lane undivided roadway. The posted speed limit along Beaumont Avenue ranges between 35-40 miles per hour (mph). Left turn lanes are provided along Beaumont Avenue at the Cherry Valley Boulevard and Brookside Avenue intersections. Freeway access is provided to Interstate (I) 10 via Beaumont Avenue, Cherry Valley Boulevard, and Oak Valley Parkway.
- **Orchard Street** is a two-lane undivided local roadway. Orchard Street provides access primarily to residential areas located east and west of Beaumont Avenue.
- **Vineland Street** is also a two-lane undivided local roadway and provides access primarily to residential areas.
- **Cherry Valley Boulevard** is a three-lane divided roadway west of Beaumont Avenue and a two-lane undivided roadway east of Beaumont Avenue. Cherry Valley Boulevard directly connects to I-10 west of the study area.
- **Brookside Avenue** is a two-lane divided roadway west of Beaumont Avenue and a two-lane undivided east of Beaumont Avenue.

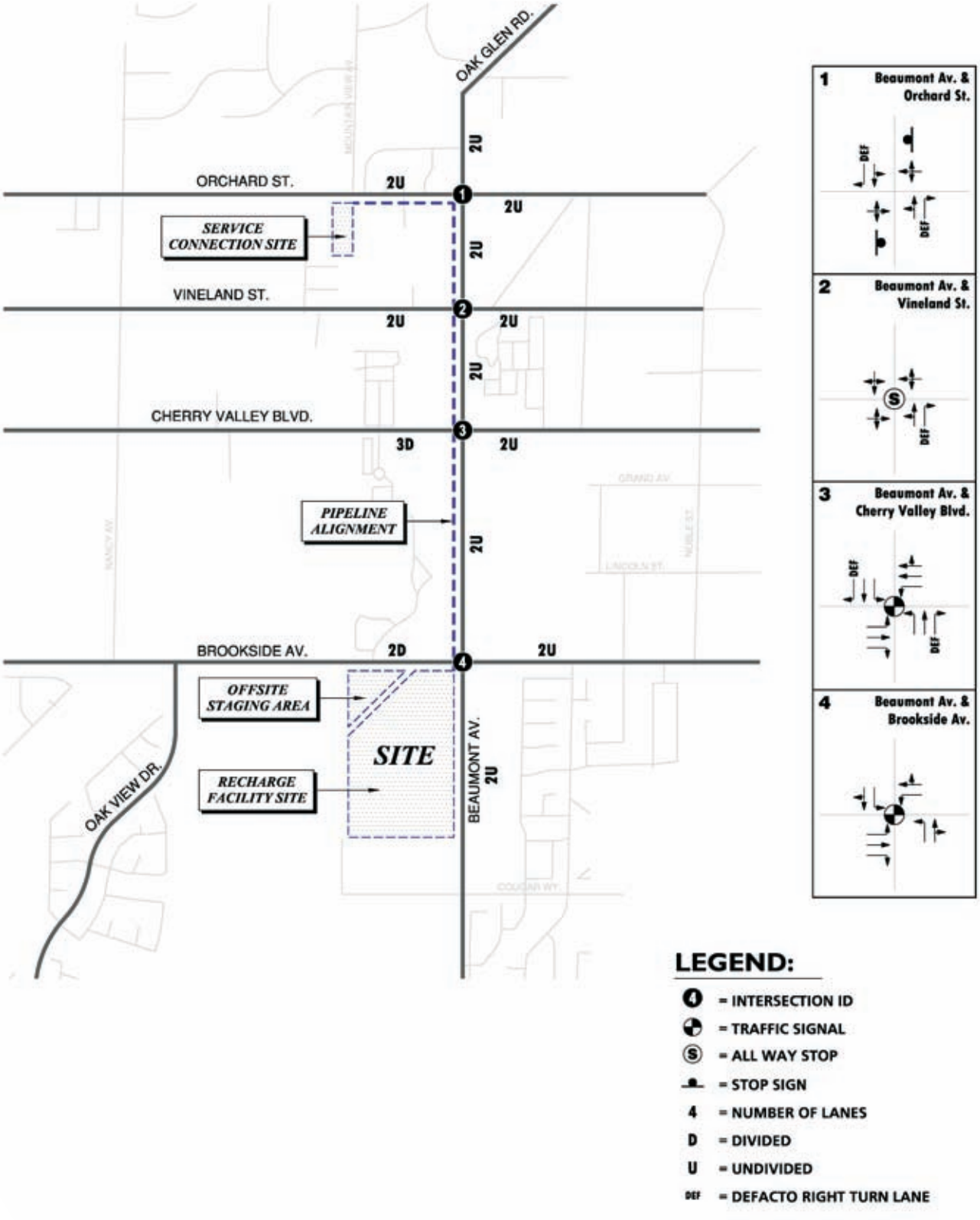
Level of Service

Existing average daily traffic (ADT) volumes on arterial highways throughout the study area are shown on Exhibit 3.9-2. Existing ADT volumes are based upon traffic data collected for Urban Crossroads, Inc. or estimated based on peak hour data. The estimated ADT volumes have been calculated by Urban Crossroads, Inc. using the following formula for each intersection leg:

> (AM Peak Hour (Approach + Exit Volume) + PM Peak Hour (Approach + Exit Volume)) / (5.70% + 8.50%) = Daily Leg Volume.

In the above formula, the constants of 5.70% and 8.50% are estimated AM and PM Peak Hour to ADT ratios based on the collected data, resulting in a peak hour to ADT factor of 7.0420. The highest existing ADT volume in the study area is 8,200 vehicles per day (VPD) and occurs on Beaumont Avenue, south of Brookside Avenue. Beaumont Avenue currently carries between 3,900 and 8,200 VPD. Orchard Street, adjacent to the service connection site, carries approximately 1,300 VPD. Brookside Avenue adjacent to the recharge facility site and offsite triangular parcel, carries approximately 2,400 VPD.

Peak hour roadway segment analysis has been performed for Existing Conditions and is summarized on Table 3.9-1. The peak hour roadway segment traffic volumes have been derived from the peak hour intersection turning movement traffic count data and are shown on Exhibit 3.9-3 and Exhibit 3.9-4 for the AM and PM Peak Hours, respectively. Based on the directional peak hour traffic volumes and number of available travel lanes, all roadway segments currently experience acceptable traffic operations (level of service (LOS) "A" for all analyzed segments).

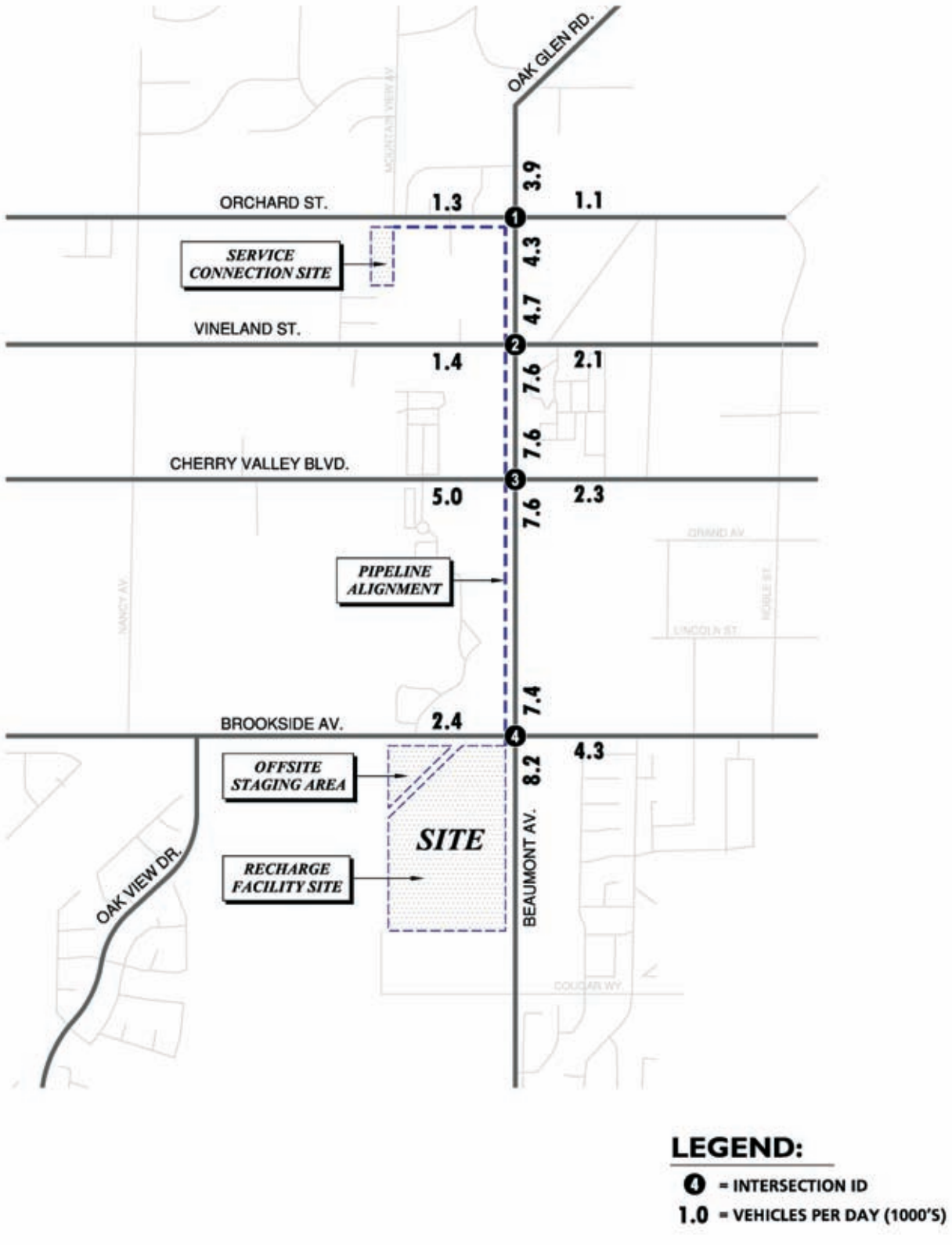


Source: Urban Crossroads.

NORTH

Michael Brandman Associates

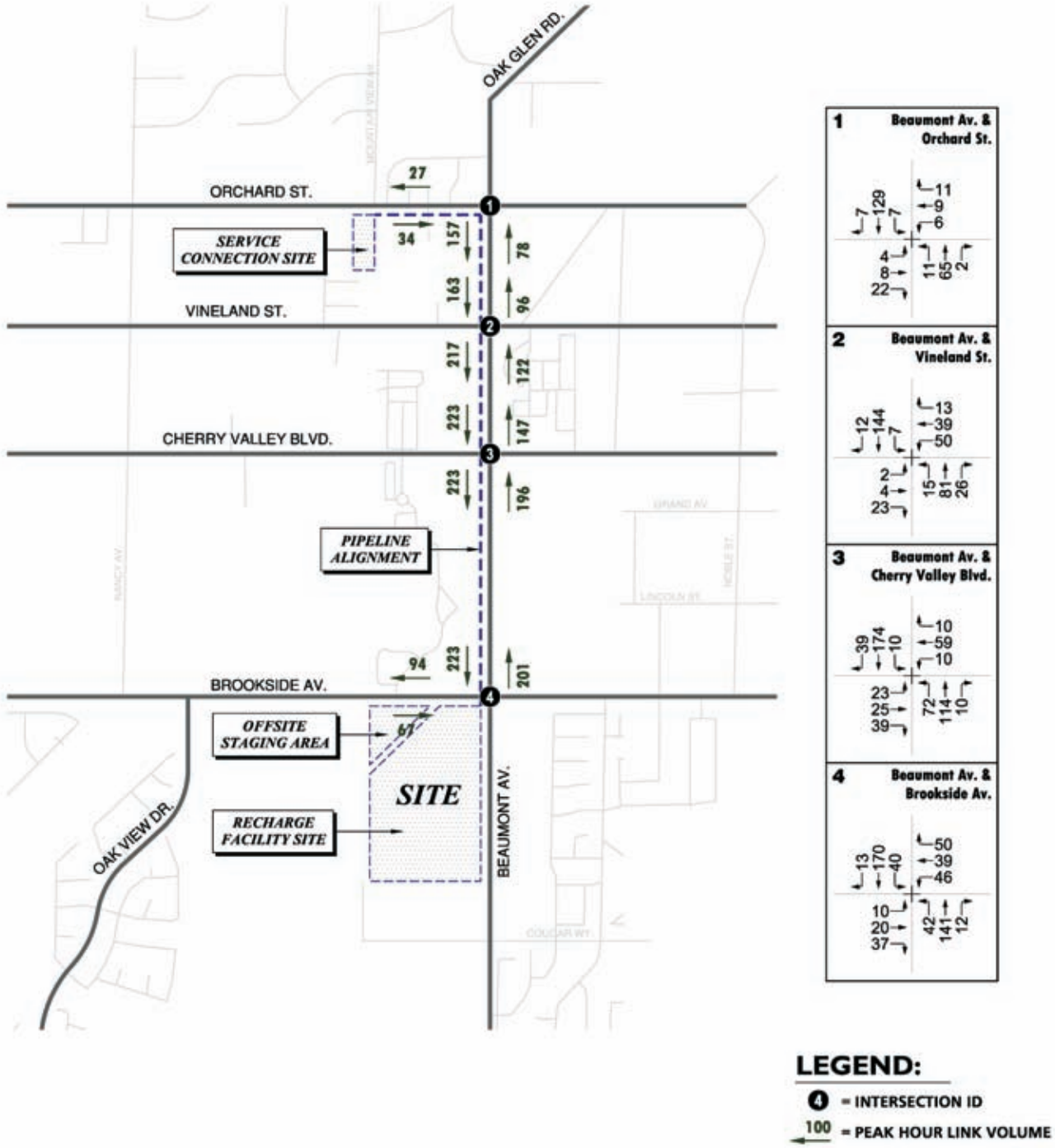
Exhibit 3.9-1
Existing Number of Through Lanes and Intersection Controls



Source: Urban Crossroads.

Michael Brandman Associates

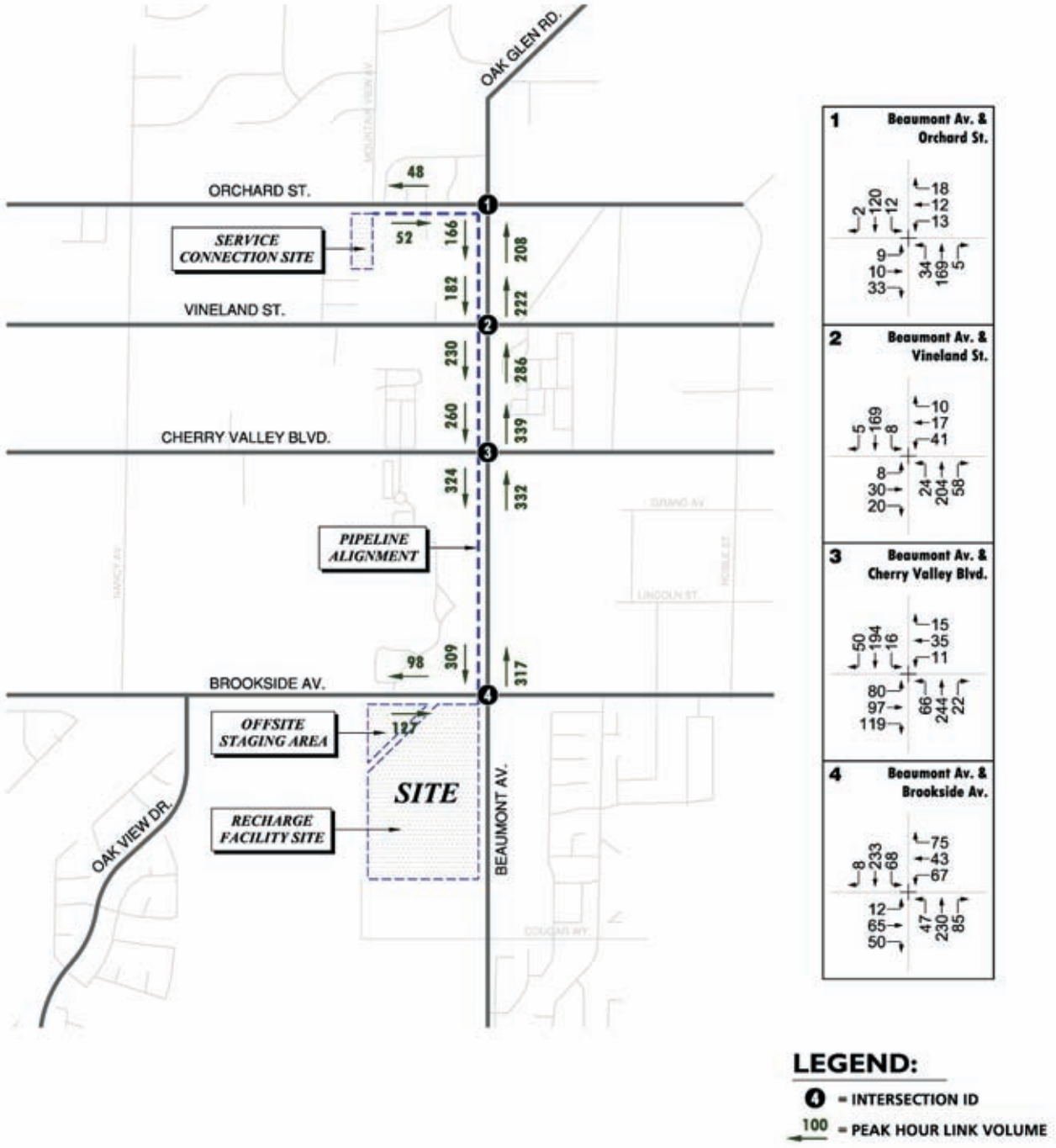
Exhibit 3.9-2
Existing (2012)
Average Daily Traffic (ADT)



Source: Urban Crossroads.

Michael Brandman Associates

Exhibit 3.9-3
Existing (2012)
AM Peak Hour Intersection Volumes



Source: Urban Crossroads.

Michael Brandman Associates

Exhibit 3.9-4
Existing (2012)
PM Peak Hour Intersection Volumes

Table 3.9-1: Existing (2012) Peak Hour Roadway Segment Operations

Roadway	Limits	Direction	# of Lanes	Volume		Capacity (1,900 Vehicles Per Lane)	V/C Ratio		LOS	
				AM	PM		AM	PM	AM	PM
Orchard Street	West of Beaumont Avenue	Eastbound	1	34	52	1,900	0.02	0.03	A	A
		Westbound	1	27	48	1,900	0.01	0.03	A	A
Beaumont Avenue	Between Orchard Street and Vineland Street	Northbound	1	96	222	1,900	0.05	0.12	A	A
		Southbound	1	163	182	1,900	0.09	0.10	A	A
Beaumont Avenue	Between Vineland Street and Cherry Valley Boulevard	Northbound	1	147	339	1,900	0.08	0.18	A	A
		Southbound	1	223	260	1,900	0.12	0.14	A	A
Beaumont Avenue	Between Cherry Valley Boulevard and Brookside Avenue	Northbound	1	201	332	1,900	0.11	0.17	A	A
		Southbound	1	223	324	1,900	0.12	0.17	A	A
Brookside Avenue	West of Beaumont Avenue	Eastbound	1	67	127	1,900	0.04	0.07	A	A
		Westbound	1	94	98	1,900	0.05	0.05	A	A

Source: Urban Crossroads, 2013.

Existing intersection LOS calculations are based upon the existing intersection geometric data and AM and PM Peak Hour turning movement counts. The results of the existing conditions peak hour intersection operations analysis are summarized on Table 3.9-2, along with the existing intersection geometrics and traffic control devices at each analysis location. All of the study area intersections are currently operating at acceptable LOS during both the AM and PM Peak Hours.

Table 3.9-2: Intersection Analysis for Existing Conditions

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Beaumont Avenue / Orchard Street	CSS	0.5	0.5	d	0.5	0.5	d	0	1!	0	0	1!	0	10.0	11.8	A	B
2	Beaumont Avenue / Vineland Street	AWS	0.5	0.5	d	0	1!	0	0	1!	0	0	1!	0	8.5	9.3	A	A
3	Beaumont Avenue / Cherry Valley Boulevard	TS	1	1	d	1	1	d	1	1	1	1	2	0	23.9	24.5	C	C
4	Beaumont Avenue / Brookside Avenue	TS	1	1	0	1	1	0	1	1	1	1	1	0	25.4	26.8	C	C

[1] When a right turn is designated, the lane can be either striped or un-striped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left T = Through R = Right 1! = Shared Left-Through-Right Lane d = Defacto Right Turn Lane

[2] Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] CSS = Cross-street Stop AWS = All-Way Stop TS = Traffic Signal

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[4] Volume-to-capacity ratio is greater than 1.00; Intersection unstable; Level of Service "F."

Source: Urban Crossroads, 2013.

Analysis Methodology

Traffic operations analysis has been performed to evaluate peak hour traffic operations along roadway segments and at key intersections within the study area. Intersections are the element of the highway system where the greatest conflicting demand for roadway space occurs, and thus, control the overall quality of traffic flow within the system.

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. The Highway Capacity Manual (HCM) methodology expresses LOS at an intersection in terms of delay time for the various intersection approaches. The HCM uses different procedures depending on the type of intersection control.

Since construction activities are anticipated during the summer months only, the intersection LOS analysis is based on traffic count data collected during the peak hours in August 2012 when school was not in session. The following peak hours were selected for traffic analysis:

- Weekday AM Peak Hour (peak hour between 7:00 AM and 9:00 AM)
- Weekday PM Peak Hour (peak hour between 4:00 PM and 6:00 PM)

The City of Beaumont and County of Riverside require signalized intersection operations analysis based on the methodology described in Chapter 16 of the HCM. Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Signalized intersections LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation (Table 3.9-3).

Table 3.9-3: Signalized Intersection LOS Thresholds

Level of Service	Description	Average Control Delay (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00

Table 3.9-3 (cont.): Signalized Intersection LOS Thresholds

Level of Service	Description	Average Control Delay (Seconds)
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00
F	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths	80.01 and up

For unsignalized intersections, the City of Beaumont and County of Riverside require that the operations of unsignalized intersections be evaluated using the methodology described in Chapter 17 of the HCM. The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (Table 3.9-4).

Table 3.9-4: Unsignalized Intersection LOS Thresholds

Level of Service	Description	Average Control Per Vehicle (Seconds)
A	Little or no delays.	0 to 10.00
B	Short traffic delays.	10.01 to 15.00
C	Average traffic delays.	15.01 to 25.00
D	Long traffic delays.	25.01 to 35.00
E	Very long traffic delays.	35.01 to 50.00
F	Extreme traffic delays with intersection capacity	> 50.00

At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is calculated as the average of all movements in that lane.

For both the intersection and roadway segment analysis, a saturation flow rate of 1,900 vehicles per hour of green (vphg) per lane (for all types of lanes) was used to evaluate the delay for each study intersection under "Existing Lanes" conditions. 1,900 vphg is the Riverside County default capacity and is cited specifically in the Riverside County Traffic Impact Analysis Preparation Guide. The HCM analysis has been performed using the software package Traffix (Version 8.0).

To account for reduced roadway capacity related to construction activities, a saturation flow rate of 1,500 vphg was used to evaluate each study intersection's delay for each proposed construction configuration. The reduced flow rate of 1,500 vphg represents an approximately 20-percent reduction (from 1,900 vphg) and is a result of lower vehicle speeds within a construction zone. This is consistent with research performed by the Iowa Department of Transportation (DOT) suggesting capacity reductions in the range of around 15 - 25%. Flow rates of 1,400 vphg to 1,600 vphg were identified in the Iowa research effort. The reduced capacity is applied to each roadway lane and intersection approach lane where the lane configuration is affected by construction activities. The reduced capacity was also used to evaluate the potential construction impacts to roadway segments.

The LOS thresholds in terms of roadway segment V/C ratio and corresponding LOS are summarized on Table 3.9-5.

Table 3.9-5: Volume to Capacity Ratio LOS Thresholds

Level of Service	Critical Volume To Capacity Ratio (V/C)
A	0.00 - 0.60
B	0.61 - 0.70
C	0.71 - 0.80
D	0.81 - 0.90
E	0.91 - 1.00
F	>1.00

The definitions of LOS for uninterrupted flow (flow unrestrained by the existence of traffic control devices) are:

- LOS "A" represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.
- LOS "B" is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.
- LOS "C" is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream.
- LOS "D" represents high-density but stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience.

- LOS "E" represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Small increases in flow will cause breakdowns in traffic movement.
- LOS "F" is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount, which can traverse the point. Queues form behind such locations.

Based on review of LOS standards contained in both the City of Beaumont General Plan and the County of Riverside General Plan, LOS "D" is generally the limit of acceptable LOS.

3.9.2 - Regulatory Setting

Regional Regulations

Approved by Riverside County voters in 1998, Measure A is a half-cent sales tax for transportation improvements. The Riverside County Transportation Commission (RCTC) is charged with ensuring that the over one billion dollars raised by Measure A since 1989 makes a significant difference on most major roadways in the County. Commuter rail, public transit, and commuters have also received benefits. Measure A funds go back to each of three districts: Western Riverside County, the Coachella Valley, and Palo Verde, in proportion to what they contribute. In addition to major highway projects, over half a billion dollars has improved local streets and roads throughout the County. Between 1990 and 2006, cities and county areas in Western Riverside County had received $370.3 million, cities and county areas in the Coachella Valley had received $119.6 million, and cities and county areas in the Palo Verde district had received $14.2 million. In 2002, Measure A was extended by Riverside County voters, with Measure A now continuing to fund transportation improvements through 2039.

Local Regulations

As discussed previously in Section 1 of this Draft EIR, the SGPWA is exempt from local land use policies and ordinances in accordance with California Government Code Sections 53091(d) and 53091(e). Although exempt for the proposed project, SGPWA has chosen to provide a discussion of the local land use policies and ordinances.

City of Beaumont General Plan

The City of Beaumont General Plan contains the following goal and policies that address transportation and traffic.

Circulation Element

Goal 2. The City of Beaumont will ensure the development and maintenance of a local roadway system that will meet both current and future transportation needs.

Policy 10. The City of Beaumont will strive to maintain a minimum Level of Service "C" at intersections during non-peak hours and Level of Service "D" at all intersections during peak hours.

Policy 14. The City of Beaumont will strive to limit the adverse impacts associated with the construction of roadways and the installation of infrastructure improvements.

County of Riverside General Plan

The County of Riverside General Plan contains the following policy that addresses transportation and traffic.

Circulation Element

Policy C 2.1. Maintain the following countywide target Levels of Service:

LOS "C" along all County maintained roads and conventional state highways. As an exception, LOS "D" may be allowed in Community Development areas, only at intersections of any combination of Secondary Highways, Major Highways, Urban Expressways, conventional state highways or freeway ramp intersections.

LOS "E" may be allowed in designated community centers to the extent that it would support transit-oriented development and walkable communities.

3.9.3 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether transportation and traffic impacts are significant environmental effects, the following questions are analyzed and evaluated. 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? (See Traffic Increase, Impact TRANS-1.)

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? (See Congestion Management Program Impact TRANS-2.)

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? (See Section 6.16.1, Air Traffic Patterns)

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (See Section 6.16.2, Hazards)

e) Result in inadequate emergency access? (See Section 6.16.3, Emergency Access)

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? (See Section 6.16.4, Conflict with Alternative Transportation)

3.9.4 - Project Impact Analysis and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Traffic Increase

Impact TRANS-1	**The project could 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.**

Impact Analysis

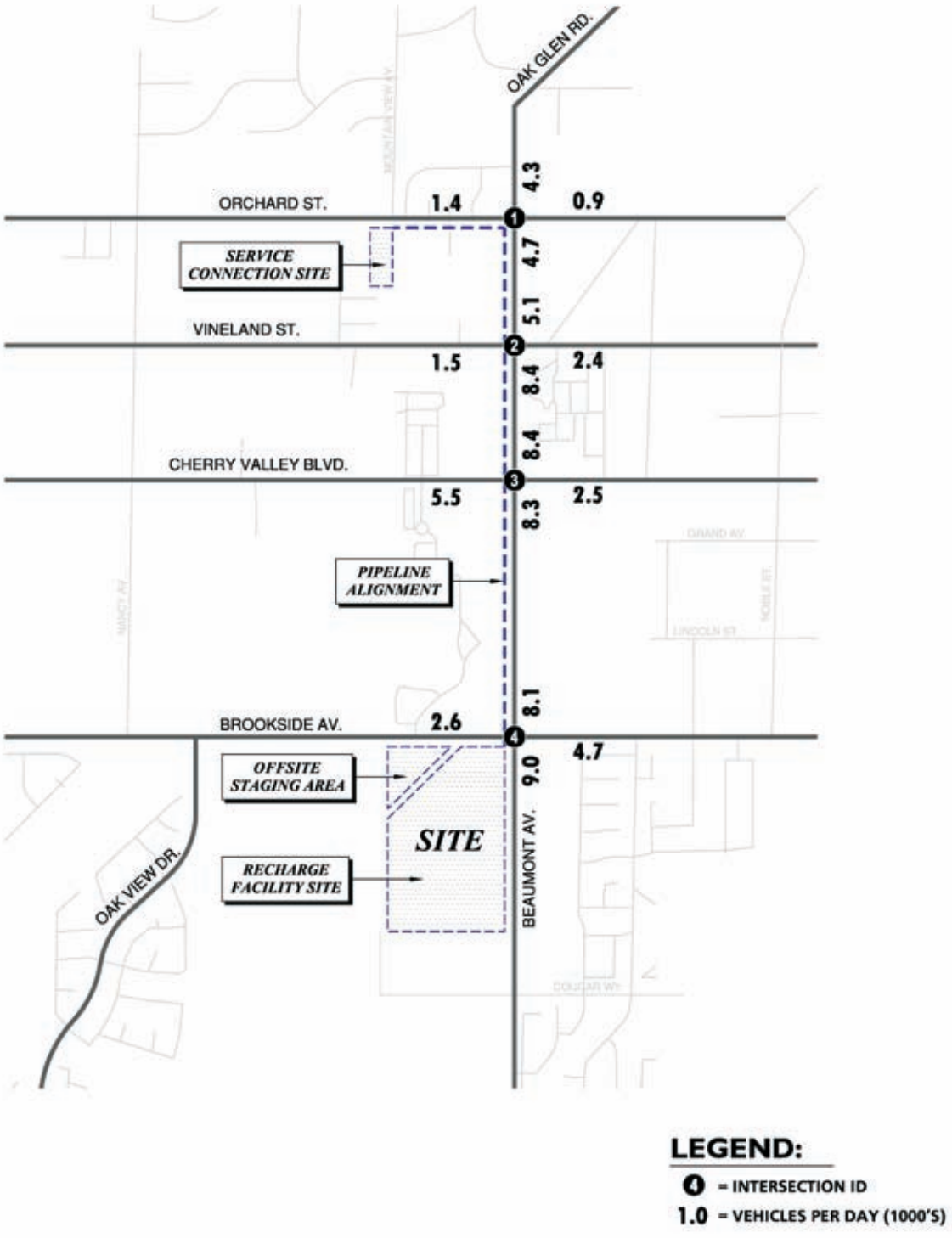
Construction of the proposed recharge facility and service connection facility would not result in the export of soil. Thus, construction traffic associated with the recharge facility and service connection facility would be considered nominal. The focus of the following construction traffic evaluation traffic generated during pipeline construction.

Construction of the pipeline is expected to occur in summer 2014. Most of the related cumulative projects that could contribute traffic to the study area are either relatively small (i.e., less than 10 dwelling units) or larger projects located a considerable distance from the study area that would only be partially occupied and/or would only contribute traffic within the study area on a limited basis. Thus, an aggressive ambient background growth factor of 10 percent (5 percent per year for two years) was applied to existing traffic volumes to conservatively account for the related cumulative projects that may contribute trips to the study area during summer 2014.

The ADT volumes that can be expected for Opening Year (2014) with Construction conditions are shown on Exhibit 3.9-5. Similar to Existing Conditions, the highest study area ADT volumes occur on Beaumont Avenue south of Brookside Avenue (9,000 VPD). Exhibit 3.9-6 and Exhibit 3.9-7 show the AM and PM Peak Hours intersection turning movement volumes for Opening Year (2014) with Construction conditions. These peak hour volumes have been used as the basis for the Opening Year (2014) with Construction conditions operations analysis.

Traffic analysis was initially performed assuming one travel lane in each direction while construction activities occur along the impacted roadway segments. Table 3.9-6summarizes the peak hour

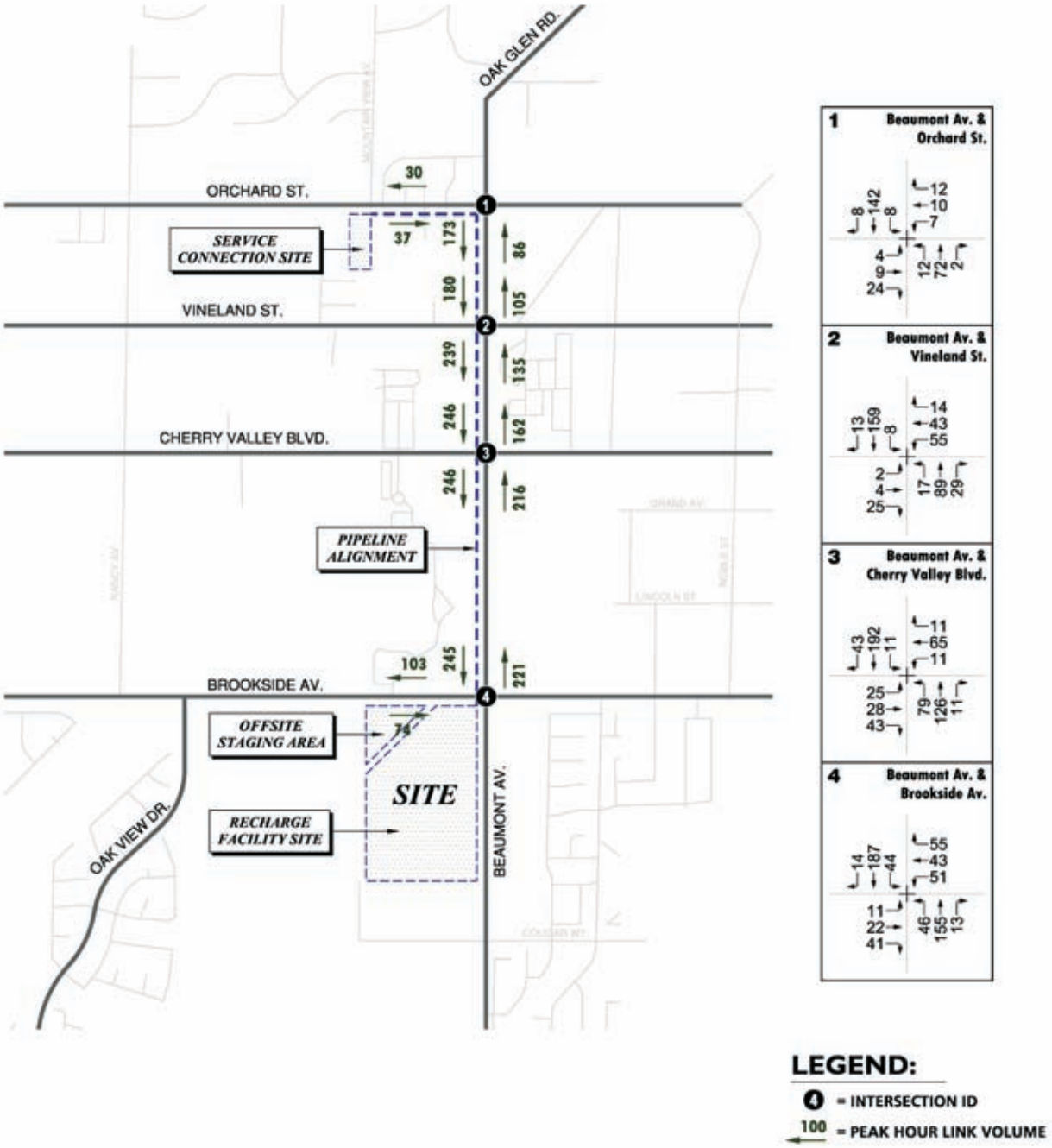
roadway segment analysis for Opening Year (2014) with Construction under these conditions. The peak hour roadway segment traffic volumes were derived from the peak hour intersection turning movement traffic count data shown on Exhibit 3.9-6 and Exhibit 3.9-7 for the AM and PM Peak Hours, respectively. Based on the directional peak hour traffic volumes and number of available travel lanes, all roadway segments would continue to experience acceptable peak hour operations during summer 2014, even with the reduced capacity due to pipeline construction (LOS "A" for all segments analyzed).



Source: Urban Crossroads.

Exhibit 3.9-5
Opening Year (2014) With Construction
Average Daily Traffic (ADT)

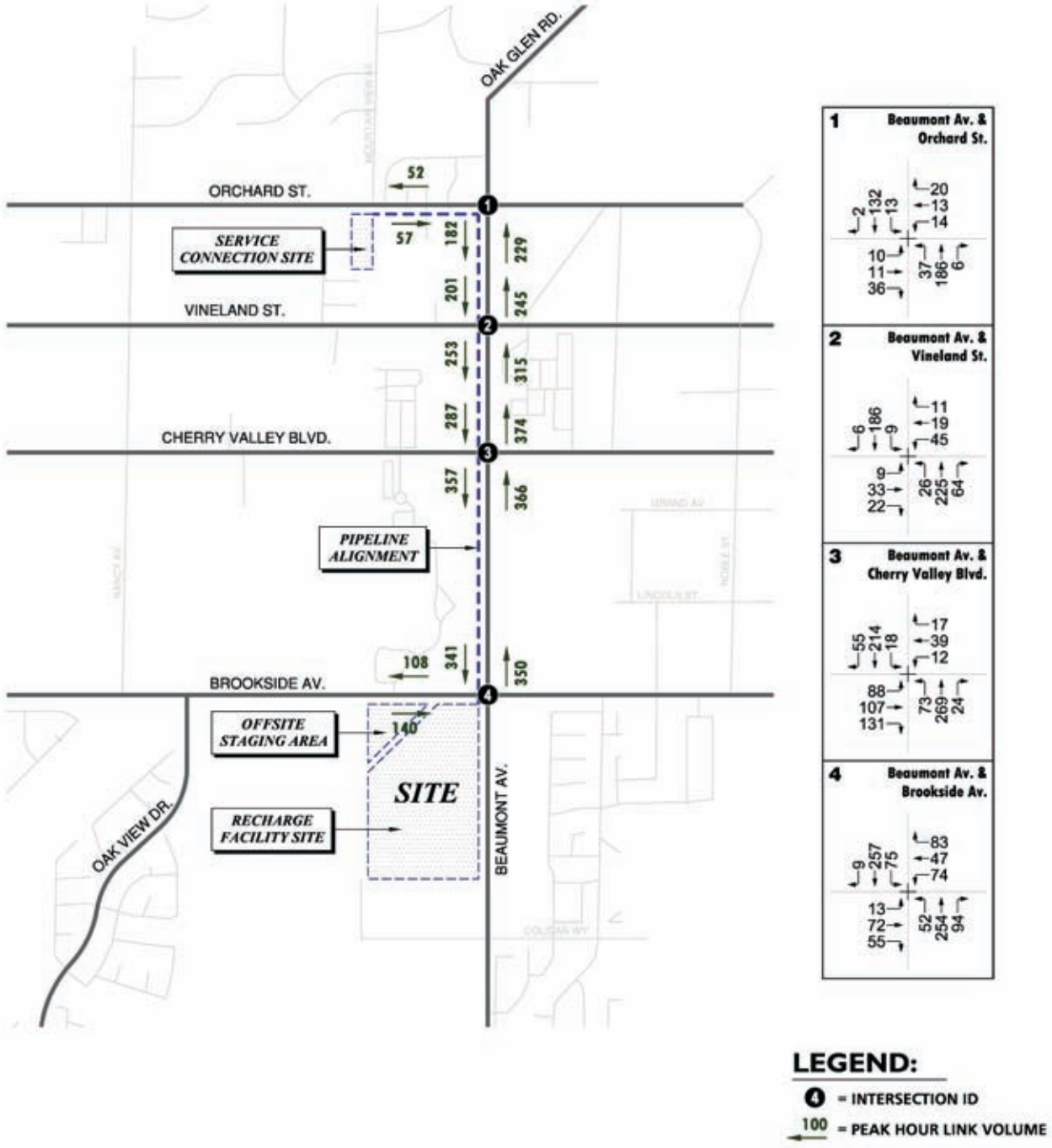
Michael Brandman Associates



Source: Urban Crossroads.

Michael Brandman Associates

Exhibit 3.9-6
Opening Year (2014) With Construction AM Peak Hour Intersection Volumes



Source: Urban Crossroads.

Exhibit 3.9-7
Opening Year (2014) With Construction
PM Peak Hour Intersection Volumes

Michael Brandman Associates

Table 3.9-6: Opening Year (2014) With Construction Peak Hour Roadway Segment Operations

Roadway	Limits	Direction	# of Lanes	Volume		Capacity (1,500 Vehicles Per Lane)	V/C Ratio		Los	
				AM	PM		AM	PM	AM	PM
Orchard Street	West of Beaumont Avenue	Eastbound	1	37	57	1,500	0.02	0.04	A	A
		Westbound	1	30	52	1,500	0.02	0.03	A	A
Beaumont Avenue	Between Orchard Street and Vineland Street	Northbound	1	105	245	1,500	0.07	0.16	A	A
		Southbound	1	180	201	1,500	0.12	0.13	A	A
Beaumont Avenue	Between Vineland Street and Cherry Valley Boulevard	Northbound	1	162	374	1,500	0.11	0.25	A	A
		Southbound	1	246	287	1,500	0.16	0.19	A	A
Beaumont Avenue	Between Cherry Valley Boulevard and Brookside Avenue	Northbound	1	221	366	1,500	0.15	0.24	A	A
		Southbound	1	245	357	1,500	0.16	0.24	A	A
Brookside Avenue	West of Beaumont Avenue	Eastbound	1	74	140	1,500	0.05	0.09	A	A
		Westbound	1	103	108	1,500	0.07	0.07	A	A

Source: Urban Crossroads, 2013.

For Opening Year (2014) with Construction conditions, it was assumed that the approach lanes at the study intersections (where pipeline excavation activities are anticipated to occur) with two or more lanes would be reduced to a single shared-lane and all study intersections would operate with an all-way-stop control.

Table 3.9-7 summarizes the LOS associated with the proposed construction plans for Opening Year (2014) with Construction conditions during the AM and PM Peak Hours. All study area intersections would operate at acceptable LOS during both the AM and PM Peak Hours with the assumed lane configurations.

Table 3.9-7: Intersection Analysis for Opening Year (2014) With Construction Conditions

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Beaumont Avenue / Orchard Street	**AWS**	0	**1!**	0	0	**1!**	0	0	1!	0	0	1!	0	7.9	9.0	A	A
2	Beaumont Avenue / Vineland Street	AWS	0	**1!**	0	0	1!	0	0	1!	0	0	1!	0	8.6	9.7	A	A
3	Beaumont Avenue / Cherry Valley Boulevard	**AWS**	0	**1!**	0	0	**1!**	0	1	1	1	1	2	0	9.7	12.7	A	B
4	Beaumont Avenue / Brookside Avenue	**AWS**	0	**1!**	0	0	**1!**	0	0	**1!**	0	1	1	0	10.3	15.3	B	C

[1] When a right turn is designated, the lane can be either striped or un-striped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left T = Through R = Right **1!** = Shared Left-Through-Right Lane 1 = With Construction Geometry
[2] Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with all way stop control.
[3] AWS = All-Way Stop
[4] For With Construction Conditions, all-way-stop control is recommended for all the study area intersections and lanes are reduced to a single shared left-through-right turn lane where needed.
BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).
CSS = Cross-street Stop AWS = All-Way Stop TS = Traffic Signal
Volume-to-capacity ratio is greater than 1.00; Intersection unstable; Level of Service "F."
Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.
Source: Urban Crossroads, 2013.

Traffic analysis for the roadway segments was also conducted assuming that reducing the available roadway to a single travel-lane serving both directions of traffic may be necessary. The estimated directional capacity under this construction configuration was estimated at 450 vehicles per hour. Table 3.9-8 summarizes the segment capacity calculations under this configuration. The capacity for each segment that includes a lane closure to a single-lane serving both directions has been reduced from 1,500 vehicles per lane per hour to 450 vehicles per lane per hour to reflect the effects of construction activities on roadway capacity with a single travel-lane for both directions.

Table 3.9-8: Single Travel Lane Segment Capacity Reduction Calculation

Roadway	Limits (%)	PM
Typical Construction Capacity	100	1,500
Northbound / Eastbound	30	450
Southbound / Westbound	30	450
Work Area Clearance Interval	25	380
Start Up Lost Time	15	230
Directional Capacity		**450**
Source: Urban Crossroads, 2013.		

Table 3.9-9 summarizes the peak hour roadway segment analysis for Opening Year (2014) with Construction conditions with a single travel-lane serving both directions. Based on the directional peak hour traffic volumes and number of available travel lanes, all roadway segments would continue to experience acceptable peak hour operations during summer 2014, even with the reduced capacity due to project construction.

Table 3.9-9: Opening Year (2014) With Construction Peak Hour Roadway Segment Operations

Roadway	Limits	Direction	# of Lanes	Volume		Capacity (1,500 Vehicles Per Lane)	V/C Ratio		LOS	
				AM	PM		AM	PM	AM	PM
Orchard Street	West of Beaumont Avenue	Eastbound	1	37	57	450	0.08	0.13	A	A
		Westbound	1	30	52	450	0.07	0.12	A	A
Beaumont Avenue	Between Orchard Street and Vineland Street	Northbound	1	105	245	450	0.23	0.54	A	A
		Southbound	1	180	201	450	0.40	0.45	A	A
Beaumont Avenue	Between Vineland Street and Cherry Valley Boulevard	Northbound	1	162	374	450	0.36	0.83	A	D
		Southbound	1	246	287	450	0.55	0.64	A	B
Beaumont Avenue	Between Cherry Valley Boulevard and Brookside Avenue	Northbound	1	221	366	450	0.49	0.81	A	D
		Southbound	1	245	357	450	0.54	0.79	A	C
Brookside Avenue	West of Beaumont Avenue	Eastbound	1	74	140	450	0.16	0.31	A	A
		Westbound	1	103	108	450	0.23	0.24	A	A

Source: Urban Crossroads, 2013.

Several additional issues and potential impacts related to project construction were also considered. These issues include the potential impacts of construction workers traveling to and from the project sites, as well as the potential impacts on emergency access, bus routes, pedestrian access, and bicycle circulation.

During project construction, there would be a temporary increase in truck trips and construction worker vehicles in the project area. Construction traffic would use the existing regional and local road network. Construction traffic is anticipated to access the project area primarily via I-10 and adjacent arterials (e.g., Cherry Valley Boulevard and Brookside Avenue).

Construction traffic would consist primarily of passenger cars (or light duty pickup trucks), with occasional movement of heavy equipment to and from the project sites. Construction traffic generally occurs prior to the typical peak hour of adjacent street traffic. In general, all traffic would use the arterial roadway system to access the project sites, and heavy trucks would use designated truck routes.

Based on the amount of construction equipment, number of construction workers, and anticipated hours of arrival and departure, construction traffic would result in a less than significant impact. Even considering the peak of construction traffic activity, less than 50 peak hour trips are anticipated as a result of project construction (or typical operating conditions).

During project construction, the number of travel lanes within the study area would be reduced. However, access to all adjacent commercial, residential, and other land uses would be maintained throughout the construction process. Moreover, pipeline construction would be limited to those hours when acceptable traffic operations can be adequately maintained and managed. Pipeline construction activities could result in potentially significant traffic operation impacts at adjacent intersections. Traffic analysis was performed under the assumption that Mitigation Measures TRANS-1 would be implemented during pipeline construction activities within study area roadways. Therefore, with incorporation of this mitigation measure, impacts associated with the performance of the circulation system would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measure

MM TRANS-1 To reduce potential operational impacts during pipeline construction, the following measures shall be implemented depending on whether the two-traffic lanes scenario or the single-traffic lane scenario is implemented.

Two-Traffic Lanes Scenario

- Temporary "All-Way STOP" signs at each of the currently signalized adjacent intersections shall be required.

Single-Traffic Lanes Scenario

- Temporary "All-Way STOP" signs at each currently signalized adjacent intersection shall be required. In addition, the project contractor shall utilize a "flagman" to direct one-way traffic, ensure adequate traffic flow, and avoid traffic flow conflicts.

Level of Significance After Mitigation

Less than significant.

The implementation of Mitigation Measure TRANS-1 would reduce potential operational impacts during pipeline construction to less than significant. The measure provides temporary traffic controls depending on whether the two-traffic lanes scenario or the single-traffic lane scenario is implemented.

Congestion Management Program

Impact TRANS-2	**The project would not 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.**

Impact Analysis

Every county in California is required to develop a Congestion Management Program (CMP) that looks at the links between land use, transportation, and air quality. As Riverside County's Congestion Management Agency, the Riverside County Transportation Commission (RCTC) prepares and periodically updates the county's CMP to meet federal Congestion Management System guidelines and State CMP legislation. The Southern California Association of Governments (SCAG) is required under federal planning regulations to determine that CMPs within its region are consistent with its Regional Transportation Plan.

According to the current CMP adopted on December 14, 2011, none of the local study area roadways are included as part of the CMP system. The closest regional roadway that is part of the CMP system is I-10. Construction and operation of the project would not result in impacts to I-10, as addressed in the March 2013 TIA. Therefore, impacts associated with the CMP would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

SECTION 4: CUMULATIVE IMPACT ANALYSIS

4.1 - CEQA Requirements

Cumulative impacts refer to the combined effect of project impacts with the impacts of other past, present, and reasonably foreseeable future projects. As established in the CEQA Guidelines, the discussion of cumulative impacts must reflect the severity of the impacts, as well as the likelihood of their occurrence attributable to the project alone. As stated in CEQA, Title 14, Section 21083(b), "a project may have a significant effect on the environment if the possible effects of a project are individually limited but cumulatively considerable."

According to the CEQA Guidelines:

> Cumulative impacts refers to two or more individual effects which, when considered together, are considerable and which compound or increase other environmental impacts.
>
> a) The individual effects may be changes resulting from a single project or a number of separate projects.
>
> b) "The cumulative impact from several projects is the change in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonable foreseeable probably future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time." (California Code of Regulations [CCR], Title 14, Division 6, Chapter 3, Section 15355)

In addition, as stated in CEQA Guidelines:

The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable. (CCR, Title 14, Division 6, Chapter 3, Section 15064[T][5])

4.2 - Cumulative Impact Setting

Cumulative impact discussions for each environmental topic area are provided below. As established in the CEQA Guidelines, related projects consist of "closely related past, present, and reasonably foreseeable probable future projects that would likely result in similar impacts and are located in the same geographic area." (CCR, Title 14, Division 6, Chapter 3, Section 15355.)

Based on information provided by the City of Beaumont, City of Calimesa, and County of Riverside, the March 18, 2013 Traffic Impact Analysis (TIA) prepared for the proposed project by Urban Crossroads, Inc. (Appendix H) identified related development projects in the project area that could

potentially contribute to cumulative impacts (Refer to Attachment E of the TIA for a detailed listing of specific related development projects). The following provides a general summary of the land uses and intensities associated with these related development projects:

- Residential (Single-Family, Multi-Family, Senior Housing): 30,660 dwelling units
- Commercial/Industrial/Public Facilities: 3,011 acres
- Office/Business Park: 145 acres
- Schools: 3,300 students

In addition to these related development projects, two water resources project that were not included in the March 2013 TIA's cumulative impacts evaluation shall also be considered related projects for the purpose of the following cumulative impacts discussion and analysis. The first of these water resources projects involves the future addition of a 20-horsepower (hp) pump at the Cherry Valley Pumping Station located at the western terminus of Orchard Street. The second of these projects involves a currently conceptual plan by the City of Beaumont, who is contemplating the conveyance and disposal of treated wastewater via pipelines to existing or future recharge facilities located within the City for groundwater replenishment. One of these recharge areas could potentially be the proposed recharge facility. At this time, this conceptual plan is not part of the proposed project, and its potential environmental effects have not been evaluated alongside the other project components. If eventually proposed, this conceptual plan would require its own environmental impact analysis and documentation prior to project approval. However, for the purpose of discussing and evaluating cumulative impacts, this conceptual plan is included amongst the other future related projects.

For the purpose of evaluated cumulative impacts, these related projects are viewed collectively in this Draft EIR as comprising the grouping of past, present, and reasonably foreseeable future projects against which the proposed project's contribution to cumulative impacts is assessed.

4.3 - Cumulative Impact Analysis

Air Quality

Cumulative impacts related to air quality are fully addressed by Impact AIR-3 in Section 3.1, Air Quality. The following is a summary of the cumulative impacts findings.

To explain how implementing the requirements in the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plans (AQMPs) ensures the project's incremental contribution to the cumulative effect is not cumulatively considerable, the following three-pronged analysis was performed. To conclude that a project could result in a less than significant impact, the following criteria must be true:

1. Regional analysis: emissions of nonattainment pollutants below the regional significance thresholds.
2. Plan approach: project consistency with current air quality attainment plans including control measures and regulations.
3. Cumulative health impacts: less than significant cumulative health effects of the nonattainment pollutants.

Criterion 1: Regional Analysis

If an area is in nonattainment for a criteria pollutant, then the background concentration of that pollutant has historically exceeded the ambient air quality standard. It follows that if a project exceeds the regional threshold for that nonattainment pollutant, then it would result in a cumulatively considerable net increase of that pollutant and result in a significant cumulative impact.

The South Coast Air Basin is in nonattainment for PM_{10}, $PM_{2.5}$, nitrogen dioxide, and ozone. Therefore, if the project exceeds the regional thresholds for PM_{10}, or $PM_{2.5}$, then it contributes to a cumulatively considerable impact for those pollutants. If the project exceeds the regional threshold for NO_X or VOC, then it follows that the project would contribute to a cumulatively considerable impact for ozone. If the project exceeds the NO_X threshold, it could contribute cumulatively to nitrogen dioxide concentrations.

Construction

The regional assessment includes all project-generated emissions from both onsite sources such as off-road construction equipment and off-site sources including worker and haul truck emission sources. Section 3.1, Air Quality, Table 3.1-13 compares the project regional construction emissions with the relevant SCAQMD regional construction emission significance threshold. As noted from this table, the project's construction emissions could exceed the SCAQMD's regional emission significance thresholds for NO_x emissions during the retention basin construction phase. In addition, the regional significance threshold for NOx could also be exceeded if the construction of the retention basins, the pipeline construction, or the service connection construction occurred simultaneously. As such, the project results in a significant regional air quality impact.

Operations

The project's regional operational emissions results from the off-road equipment used in the maintenance of the retention basin (i.e., bulldozer, water truck, and haul truck) and worker vehicles associated with the maintenance activities. The operation of the irrigation water pump is assumed to be electrically-powered. Table 3.1-14, in Section 3.1, Air Quality, provides the estimate of the project's operational emissions along with the relevant SCAQMD regional operational emission significance thresholds. As noted from this table, the project's operational emissions would not exceed the SCAQMD's regional operational emission significance thresholds.

The regional significance analysis of project impacts indicates that construction emissions could exceed the SCAQMD regional construction emission significance threshold for NOx. Therefore, the project could have a regionally cumulative impact according to this criterion.

Criterion 2: Plan Approach

The geographic scope for cumulative criteria pollution from air quality impacts is the South Coast Air Basin, because that is the area in which the air pollutants generated by the sources within the air basin circulate and are often trapped. The SCAQMD is required to prepare and maintain an AQMP and a State Implementation Plan to document the strategies and measures to be undertaken to reach attainment of ambient air quality standards. While the SCAQMD does not have direct authority over land use decisions, it is recognized that changes in land use and circulation planning are necessary to maintain clean air. The SCAQMD evaluated the entire air basin when it developed the AQMP.

According to the analysis contained in Impact AQ-2, the project is not consistent with the most recent AQMP without mitigation. Therefore, the project presents a potentially significant impact according to this criterion.

Criterion 3: Cumulative Health Impacts

The air basin is in nonattainment for ozone, nitrogen dioxide, PM_{10}, and $PM_{2.5}$, which means that the background levels of those pollutants are at times higher than the ambient air quality standards. The air quality standards were set to protect public health, including the health of sensitive individuals (such as the elderly, children, and the sick). Therefore, when the concentration of those pollutants exceeds the standard, it is likely that some sensitive individuals in the population would experience health effects that were described in Table 3.1-3. The concentration of the pollutant in the air, the length of time exposed, and the response of the individual are factors involved in the severity and nature of health impacts. If a significant health impact results from project emissions, it does not mean that 100 percent of the population would experience health effects.

The regional analysis of construction emissions indicates that without mitigation, the project would exceed the SCAQMD regional significance thresholds for NO_X. NO_X is a precursor to ozone. Because ozone is a secondary pollutant (it is not emitted directly but formed by chemical reactions in the air), it can be formed miles downwind of the project site. Project emissions of NO_X may contribute to the background concentration of ozone and nitrogen dioxide and cumulatively cause health effects, such as those identified in Table 3.1-3.

However, with the incorporation of Mitigation Measures AIR-1 and AIR-2, impacts associated with air quality issues would be less than significant. Thus, despite the potentially cumulative impacts resulting from implementation of the related development projects, the proposed project's incremental air quality impacts would be less than significant, and therefore, the project's contribution to cumulative impacts would not be considered cumulatively considerable because the

guidance provided by SCAQMD states that if an individual project does not exceed the SCAQMD thresholds, the individual project does not significantly contribute to significant cumulative air quality impacts. Thus, the project's cumulative impact would be less than significant after the implementation of the above mentioned mitigation measures.

Additionally, the aforementioned water resources related projects, and in particular the conceptual plan to convey and dispose of treated wastewater existing or future recharge facilities located within the City of Beaumont for groundwater replenishment, could result in cumulative impacts related to the creation of objectionable odors. Land uses typically associated with emitting objectionable odors include wastewater treatment facilities, waste disposal facilities, and agricultural operations. The proposed project does not contain land uses usually associated with odors. Since the SGPWA would maintain the proposed recharge basins to ensure that objectionable odors do not occur, less than significant project odors impacts would occur. Moreover, diesel exhaust and VOCs would be emitted during project construction, which are objectionable to some. However, emissions would disperse rapidly from the project sites and are not expected to reach an objectionable level. Thus, despite the potentially cumulative impacts resulting from implementation of the related water resources projects, the proposed project's incremental objectionable odors impacts would be less than significant, and therefore, the project's contribution to cumulative impacts would not be considered cumulatively considerable. Thus, the project's cumulative impact would be less than significant.

Biological Resources

Implementation of the related projects could result in a loss of suitable habitat for candidate, sensitive, or special status species. Suitable habitat for Los Angeles Pocket Mouse (LAPM) occurs on the both the recharge facility site and the offsite triangular parcel. Construction of the proposed recharge facility would directly affect 0.1 acre of low quality LAPM habitat. This impact to this low quality occupied habitat will not reduce the population of LAPM to a less than self-sustaining level, and therefore, is considered a less than significant impact. While the loss of a few individuals is considered an adverse impact, the small isolated patch of low quality remnant Riversidean Alluvial Fan Sage Scrub is not suitable for the long-term conservation of the species. Therefore, this loss of remnant low quality occupied habitat would not significantly contribute to cumulative impacts on the LAPM. Therefore, the project's direct cumulative impact on LAPM would be less than significant. In addition, the proposed project will result in the avoidance of 0.9 acre of suitable LAPM habitat and to reduce the project's contribution to indirect impacts on the LAPM, mitigation measures BIO-3 through BIO-11 will be required. These measures would reduce the project's indirect cumulative impacts on LAPM to less than significant.

The proposed project also has the potential to impact burrowing owls which could contribute to cumulative impacts; however, the project's mitigation measures (Mitigation Measures BIO-1 and BIO-2) would reduce these potential impacts through either passive relocation or avoidance during

nesting season, and thus reduce the project's potential contribution to cumulative impacts on this species to less than cumulatively considerable.

In addition, the construction activities associated with the project could result in impacts to nesting birds that could also contribute to cumulative impacts. However, the project's mitigation measures (Mitigation Measures BIO-12 through BIO-14) would reduce the project's potential contribution to cumulative impacts on this species to less than cumulatively considerable through avoidance during the nesting season or provision of a buffer around the active nests during construction.

Cultural Resources

Development of the related projects could engage in construction activities that would encounter unrecorded buried cultural resources. Since the proposed project involves grading, excavation, and other earthmoving activities, there is a possibility that project construction would disturb buried cultural resources. As a result, project impacts on cultural resources would be potential significant. However, with the incorporation of Mitigation Measures CULT-1 through CULT-7, impacts associated with cultural resources issues would be less than significant. Thus, despite the potentially cumulative impacts resulting from implementation of the related development projects, the proposed project's incremental cultural resources would be less than significant. Based on reducing the project's potential impact on unrecorded buried cultural resources through the implementation of the above referenced mitigation measures, the project's contribution to cumulative impacts would not be considered cumulatively considerable. Thus, the project's cumulative impact would be less than significant with the implementation of the above mentioned mitigation measures.

Geology and Soils

Implementation of the related projects could expose people and structures to strong ground shaking. Considering the seismically active nature of the project region, along with the proposed recharge facility's design requirement of sloped basins, the proposed project would be susceptible to seismic impacts. As a result, project impacts related to geology and soils would be potentially significant. However, with the incorporation of Mitigation Measures GEO-1 through GEO-11, impacts associated with geotechnical issues would be less than significant. Thus, despite the potentially cumulative impacts resulting from implementation of the related development projects, the proposed project's incremental geotechnical impacts would be reduced with the incorporation of the mitigation measures identified above. These mitigation measures would reduce the project's contribution to cumulative impacts to less than cumulatively considerable. Thus, the project's cumulative impact would be less than significant after the implementation of the above mentioned mitigation measures.

Greenhouse Gas Emissions

Development of the related projects could generate greenhouse gases emissions that may have an environmental effect or conflict with an applicable greenhouse gas plan or policy. No individual project can affect climate change through greenhouse gas emissions, and as such, greenhouse gas

impacts are always cumulative in nature. The proposed project would produce greenhouse gas emissions during the construction and operational phases, including several defined by AB 32 such as carbon dioxide, methane, and nitrous oxide. However, the proposed project would emit approximately 27 $MTCO_2e$ per year, averaged over 30 years, which is substantially under the SCAQMD's draft thresholds and the County of Riverside threshold of3,000 MTCO2e per year. As a result, project impacts on greenhouse gas emissions would be less than significant. Thus, despite the potentially cumulative impacts resulting from development of the related development projects, the proposed project's incremental greenhouse gas impacts would be less than significant, and therefore, the project's contribution to cumulative impacts would not be considered cumulatively considerable. Thus, the project's cumulative impact would be less than significant.

Hazards and Hazardous Materials

Implementation of the related projects could create a public or environmental hazard through the handling of hazardous materials, generate hazardous emissions within a sensitive land use, or cause a hazard by being located on a hazardous materials site. According to regulatory records searches, the proposed project is not located on any parcels identified as a recognized environmental concern (REC). Construction and operational activities have the potential to use hazardous materials in the form of oil, gas, pesticides, etc. However, it is unlikely that the project could result in a significant hazardous impact due to the nominal quantities associated with the project activities. As a result, project impacts on hazards and hazardous materials would be less than significant. Thus, despite the potentially cumulative impacts resulting from development of the related development projects, the proposed project's incremental hazardous materials impacts would be less than significant, and based on the unlikelihood of a potential significant hazardous impact, the project's contribution to cumulative impacts would be considered less than cumulatively considerable. Thus, the project's cumulative impact would be less than significant.

Hydrology and Water Quality

Development of the related projects could engage in construction and operational activities that would degrade water quality, affect groundwater supplies and recharge, alter existing drainage patterns, and impede and redirect flood flows. While the proposed project would place the proposed recharge facility adjacent to Noble Creek, a designated 100-year flood hazard area, the project would not be within this 100-year floodplain, and would not impede or redirect flood flows. As a result, project impacts on hydrology and water quality would be less than significant. Thus, despite the potentially cumulative impacts resulting from implementation of the related development projects, the proposed project's incremental hydrology impacts would be less than significant, and therefore, the project's contribution to cumulative impacts would not be considered cumulatively considerable. Thus, the project's cumulative impact would be less than significant.

Additionally, the aforementioned water resources related projects, and in particular the conceptual plan to convey and dispose of treated wastewater to existing or future recharge facilities located

within the City of Beaumont for groundwater replenishment, could contribute to the degradation of surface and subsurface water quality. However, the proposed project is not expected to result in significant water quality impacts. The recharge water that is proposed to be used would be from the SWP and has higher water quality (i.e., lower in nitrates) compared to the quality of water that is within the existing Beaumont groundwater basin. Thus, the proposed project would not contribute to the degradation of the groundwater basin through the proposed recharge activities. As a result, the proposed project would not contribute to the potential cumulative degradation of the quality of groundwater.

Noise

Implementation of the related projects could generate increased construction and operational noise levels that would exceed local noise standards or impact the existing ambient noise environment. During the construction phase, operation of construction equipment would temporarily produce higher noise levels in the project vicinity. However, according to both the Municipal Code and the Riverside County Code of Ordinances, noise related to project construction would be exempt from the provisions established by each jurisdiction's respective noise standards, except for the proposed irrigation well construction that would require a 24-hour construction time frame. Additionally, noise levels associated with project construction would not affect the noise environment at the nearest sensitive receptor and would not exceed OSHA thresholds for harm during the daytime or nighttime construction periods.

Long-term noise levels associated with the project would not exceed local noise standards except for potential noise from the long-term operation of a pump associated with an irrigation well. Since the proposed irrigation pump could result in significant noise levels, the project could contribute to potentially significant noise impacts. Thus, the project's cumulative impact is potentially significant. To reduce the project's contribution to the cumulative noise level, Mitigation Measure NOI-1 would be required. This mitigation measure would require the irrigation pump to be set back from the property line or housed in a structure. With the implementation of Mitigation Measure NOI-1, the project's contribution to cumulative impacts would be considered less than cumulatively considerable. Therefore, the project's cumulative long-term noise impact would be less than significant.

Transportation and Traffic

The March 2013 TIA prepared for the proposed project (Appendix H) evaluated the potential incremental and cumulative project impacts associated with project implementation. Cumulative impacts related to transportation and traffic are fully addressed in Section 3.9, Transportation and Traffic, and are provided below.

Development of the related projects could generate increased levels of construction and operational vehicle and truck trips that would impact the local and region circulation system. The traffic analysis

reviewed potential cumulative development and projected a growth in traffic volumes in the project area. The construction activities associated with the proposed pipeline were determine to be potentially significant based on traffic volumes that exists as well as the addition of traffic levels based on growth in the project area. Mitigation Measure TRANS-1 was determined to be necessary to reduce potential traffic associated with lane closures during project construction. This mitigation measure provides temporary traffic controls during the lane closures. The implementation of this mitigation measure would the project's contribution to cumulative traffic impacts to less than cumulatively considerable. Thus, the project's cumulative traffic impact would be less than significant after the implementation of the above mentioned mitigation measure.

SECTION 5: OTHER CEQA CONSIDERATIONS

5.1 - Growth Inducing Impacts

Section 15126.2(d) of the CEQA Guidelines requires that an EIR evaluate the growth inducing impacts of a proposed action:

> Discuss the way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects that would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

Growth inducing impacts can occur when development of a project imposes new burdens on a community by directly inducing population growth, or by leading to the construction of additional development in the project area. Also included in this category are projects that would remove physical obstacles to population growth, such as the construction of a new road into an undeveloped area or a wastewater treatment plant with excess capacity to serve additional new development. Construction of these types of infrastructure projects cannot be considered isolated from the immediate development that they facilitate and serve. Projects that physically remove obstacles to growth, or projects that indirectly induce growth, are those that may provide a catalyst for future unrelated development in the area (such as a new residential community that requires additional commercial uses to support residents). The growth inducing potential of a project could also be considered significant if it fosters growth in excess of what is assumed in the local master plans and land use plans, or in projections made by regional planning agencies.

The basic objective of the proposed project is to increase groundwater recharge capabilities within the Beaumont Basin with the delivery of State Water Project (SWP) water, as well as other supplemental water sources. The increased delivery capacity of the SWP is required for the SGPWA to obtain its full Table A amount (i.e., amount of SWP water that SGPWA has contracted for). This increase delivery capacity of the SWP was evaluated in the Final EIR for Phase II of SWP's East Branch Extension (EBX) (SCH No. 2007041017). This increase in raw water storage capacity would allow SGPWA to increase the replenishment of the groundwater in the region. The proposed project would provide the current population residing within the SGPWA service area with a more reliable source of potable water while replenishing a local groundwater table that has historically experienced dramatic

reductions in supply. Presently, the Beaumont Basin, which underlies the planned recharge facility site, is experiencing a severe overdraft condition, which means that the average amount of water withdrawn by pumping exceeds the average amount of water that naturally recharges the groundwater basin on an annual basis. The estimated hydrologic safe yield, which is the amount of groundwater that can be continuously withdrawn from the Beaumont Basin without adverse impact, is estimated at 6,100 acre-feet per year (AFY). In 2007 and 2009, the annual precipitation was among the driest on record in Beaumont while 2010 was one of the wettest (SGPWA 2012). In 2011, the annual precipitation was below normal (SGPWA 2012). In 2010, the total production within the Beaumont Basin was 13,469 while in 2011, the total production was 13,908 (SGPWA 2012), which means that the estimated exceedance of the hydrologic safe yield for 2010 was approximately 7,369 and for 2011 was approximately 7,808 AFY. The cumulative overdraft of the Beaumont Basin since development of the Basin began in the 1920s is over 100,000 af.

The proposed recharge basin has been designed for an infiltration rate of two feet per day and to accommodate a maximum flow rate of 20 cubic feet per second (cfs). With a capacity of 20 cfs, the normal operation of the facility would allow recharge of 3,000 AFY to 4,000 AFY because the existing Beaumont Cherry Valley Water District's recharge basins located northeast of the proposed recharge basin has a current capacity of approximately 14,000 AFY. The proposed recharge basin would be operating during wet periods of the year when the SGPWA can take advantage of surplus water, and when it needs to import its full Table A amount. However, in a very wet year when surplus water is available through the California Department of Water Resources Article 21 Program and exchanges, the proposed recharge facility could have a capacity up to a maximum of 14,500 AFY.

An evaluation of the potential inducement of growth resulting from SWP water being delivered to the SGPWA service area was prepared within the Final EIR for Phase II of SWP's East Branch Extension (EBX), which was prepared by the California Department of Water Resources and certified in 2009. The Final EIR for the Phase II EBX project acknowledged that the proposed EBX facilities would result in growth inducing impacts. These potential growth-inducing impacts were adequately addressed in the Phase II EBX Final EIR. The proposed project is a separate project than the Phase II EBX Final EIR, and the facilities that are part of the proposed project would accommodate the projected growth in the area regardless if the proposed project is implemented. This projected growth is identified in the general plans and associated EIRs for the City of Banning, City of Beaumont, City of Calimesa, and the County of Riverside.

5.2 - Significant Irreversible Changes

As mandated by the CEQA Guidelines, an EIR must address any significant irreversible environmental change that would result from project implementation. According to Section

15126.2(c) of the CEQA Guidelines, such a change would occur if one of the following scenarios is involved:

- The project would involve a large commitment of nonrenewable resources;
- Irreversible damage can result from environmental accidents associated with the project; and
- The proposed consumption of resources is not justified (e.g., the project would result in the wasteful use of energy).

The environmental effects of the proposed project are thoroughly discussed in Section 3, Environmental Impact Analysis, of this Draft EIR and summarized in the Executive Summary. Implementation of the project would require the long-term commitment of natural resources and land, as discussed below.

Approval and implementation of actions related to the proposed project would result in an irretrievable commitment of nonrenewable resources such as energy and construction materials. Energy resources would be used for construction, maintenance, and operation of the proposed project, including the recharge facility and service connection facility. Although project operation would require a permanent commitment of energy resources, the proposed project would increase the amounts of water entering the local groundwater supply. Since the proposed project would improve the future reliability of the local groundwater supply, operation of the project would result in an overall reduction in energy demand when compared with the energy resources that would be required to develop new potable water sources in the future. This reduction in overall energy demand would result in a corresponding reduction in the overall intensity of the environmental effects associated with these changes.

The consumption of nonrenewable or slowly renewable resources would result from project implementation. These resources include, but are not limited to, lumber and other forest products, sand and gravel, asphalt and concrete, steel, copper, lead, and water.

In addition, the proposed project is located in a moderately urbanized area containing several undeveloped parcels in the project area. Development of the project is responding to the existing needs of the existing population for water and would not directly contribute to the creation of additional housing or jobs within the region. Thus, the proposed project would not directly contribute to the conversion of currently undeveloped land to residential, commercial, industrial, or other land uses required as a result of future growth. Although project implementation would develop a presently undeveloped property, the proposed project would not result in the conversion of other vacant or undeveloped lands.

5.3 - Significant and Unavoidable Impacts

The environmental effects of the proposed project, along with recommended mitigation measures, are discussed in detail in Section 3, Environmental Impact Analysis, of this Draft EIR and summarized in the Executive Summary. The following environmental issues were determined to be less than significant, or can be reduced to less than significant with the incorporation of mitigation measures:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise
- Transportation and Traffic

Section 15126.2(b) of the CEQA Guidelines requires that an EIR describe any significant impacts, including those that can be mitigated but not reduced to less than significant levels, as a result of implementation of the project. As addressed in Section 3, Environmental Impact Analysis, none of the proposed project's environmental impacts would result in significant and unavoidable impacts.

SECTION 6: EFFECTS FOUND NOT TO BE SIGNIFICANT

This section is based on the Initial Study/Notice of Preparation (IS/NOP) prepared for the project and included in this Draft Environmental Impact Report (EIR) as Appendix A, Initial Study and Notice of Preparation, as well as additional information added after the preparation of the IS/NOP that supports the less than significant and no impact findings. In addition, a qualitative evaluation of energy consumption associated with the construction and operational activities associated with the proposed project is provided at the end of this section. Energy consumption was added in this section because the project's potential impact on energy resources was found to be less than significant. The IS/NOP was prepared to identify the potentially significant effects of the project and was circulated for public review between November 13, 2012 and December 13, 2012. Additionally, in the course of evaluating the project's potential impacts and preparing the Draft EIR, certain effects relating to certain subjects or topical areas within those particular subjects were found either to be less than significant or to have no impact. Therefore, these subjects were not discussed in detail in this Draft EIR. This section provides a brief discussion of the reasons for the less than significant and no impacts determinations, which are based on the detailed analysis conducted during preparation of the IS/NOP.

6.1 - Aesthetics

6.1.1 - Scenic Vista

The project would not have a substantial adverse effect on a scenic vista.

According to both the City of Beaumont General Plan and the County of Riverside Pass Area Plan, scenic resources in the project vicinity include ridgelines, rural and undeveloped areas, the "Badlands" area, the deodar cedar trees (*Cedrus deodara*) along Beaumont Avenue, and the San Bernardino and San Jacinto Mountains. The pipeline would be located underground and would not affect views either of or from any of these scenic resources. The recharge facility would have raised embankments along its perimeter that would extend approximately 9.5 feet above the existing surrounding grade. At this limited height, the embankments would not impact views of the adjacent deodar cedar trees along Beaumont Avenue or undeveloped areas. Additionally, the service connection facility would include an approximately 10-foot by 12-foot building. Based on the height and size of this structure, visual line-of-sight from adjacent areas would not be affected as a result of the structure. Therefore, impacts associated with scenic vistas would be less than significant.

6.1.2 - Scenic Resources within a State Scenic Highway

The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway.

The project would not be located within the viewshed of an Officially Designated or Eligible State Scenic Highway. The nearest such highways to the project are State Route (SR) 243, from SR-74 to

the City of Banning, and Interstate (I) 10 throughout the greater Beaumont area. The closest portions of these highway segments occur approximately 5.75 miles southeast of the project and roughly 1.5 mile southwest of the project, respectively. Views of the project from these portions of highway would be interrupted by both natural variation in topography and elements of the built environment, and as a result, no visual line-of-sight would occur between either of these highway segments and the project. Therefore, no impacts associated with State Scenic Highways would occur.

6.1.3 - Visual Character

The project would not substantially degrade the existing visual character or quality of the site and its surroundings.

During construction of the project, construction equipment and materials could be stored at one of four staging areas. Although storage of this equipment and materials could potentially affect the viewshed of the surrounding land uses, the storage would be temporary and cease upon completion of construction activities. Additionally, the project area could be characterized as undergoing steady change over the past decade, with several completed residential, commercial, institutional, and municipal projects having occurred in the project vicinity. Moreover, the future development of land in the project area that is currently vacant but is planned for eventual development would continue to provide views of construction equipment and materials. As a result, the presence of construction equipment and materials is and would continue to be a relatively familiar occurrence in the project vicinity, and thus, the presence of these construction elements and the use of the staging areas would not substantially degrade the existing character or quality of the project sites or surrounding area. Therefore, short-term impacts associated with the existing visual character and quality of the site and its surroundings would be less than significant.

The pipeline would be located underground and would not be visible from the surrounding area. The recharge facility would have raised embankments along its perimeter that would extend approximately 9.5 feet above the existing surrounding grade. Residential uses located east of Beaumont Avenue and north and south of Cougar Way have block walls ranging from four to six feet in height and building facades ranging 15 to 20 feet in height. Because of the presence of these existing walls and facades, the addition of the embankments along the western side of Beaumont Avenue would only be visible at certain limited vantage points and would not substantially degrade the existing character or quality of the project sites or surrounding area. Additionally, the service connection facility would include an approximately 10-foot by 12-foot building. Based on the height and size of this structure, the improvements on the service facility site would be smaller than the existing residential buildings located along Orchard Street. Moreover, because of their scale, the improvements on the service connection site would not serve as a prominent feature in the project area or otherwise be obtrusive. Therefore, long-term impacts associated with the existing visual character and quality of the site and its surroundings would be less than significant.

6.1.4 - Light or Glare

The project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Limited nighttime lighting would be provided at the recharge facility and service connection facility for safety and security purposes. Although the specific type of lighting that will be used at the project facilities would not be finalized until the preparation of final development drawings, all lighting fixtures would use low wattage light bulbs with hoods. All lighting would be directed towards the ground and similar to the existing exterior residential and school nighttime lighting used in the project area. Therefore, impacts associated with lighting would be less than significant.

The project facilities would not include any components with vertical reflective surfaces that could potentially create glare that could affect surrounding land uses. Although the water contained within the basins could produce glare, the water level within the basins would be lower than the adjacent berms, and as a result, ground-level receptors in the project area would be affected by glare produced by the water. Therefore, impacts associated with glare would be less than significant.

6.2 - Agriculture and Forestry Resources

6.2.1 - Convert Farmland to Non-Agricultural Use

The project would not 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.

The recharge facility site, the service connection site, and the offsite triangular parcel have likely supported historical farming and other agricultural operations. However, under the existing conditions, none of the project sites support agricultural activities. Regardless, according to the California Department of Conservation: Division of Land Resource Protection, the recharge facility site, the service connection site, and the offsite triangular parcel are identified as Farmland of Local Importance. Currently, 229,877 acres of Farmland of Local Importance occurs in Riverside County. The approximately 50.9 acres of Farmland of Local Importance that constitute the project sites compromise roughly 0.02 percent of the County's total Farmland of Local Importance. As a result, the loss of Farmland of Local Importance due to the project represents a nominal amount of the total amount of Farmland of Local Importance found in the County. No other Farmland, including Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, is located on, adjacent to, or within one mile of the project. Therefore, impacts associated with the conversion of Farmland would be less than significant.

6.2.2 - Conflict with Existing Zoning or Williamson Act Contract

The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract.

According to the City of Beaumont and the County of Riverside Zoning Maps, neither the project sites nor any adjacent lands are zoned for agricultural use. Additionally, in accordance with Sections 53091(d) and 53091(e) of the California Government Code, as a municipal water storage/recharge facility, the project would be exempt from the zoning ordinances of a county or city, including the provisions contained in the City of Beaumont and County of Riverside Zoning Ordinances. As a result, the project would not conflict with zoning in the City of Beaumont or the County of Riverside, including existing agricultural zoning. Therefore, no impacts associated with agricultural zoning would occur.

Per the California Department of Conservation: Division of Land Resource Protection, the recharge facility site, the service connection site, and the offsite triangular parcel not located on, adjacent to, or within 0.6 mile of the project. Therefore, no impacts associated with Williamson Act contracts would occur.

6.2.3 - Conflict with Zoning or Rezoning of Forest Land or Timberland

The project would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).

According to the City of Beaumont and County of Riverside Zoning Maps, neither the project sites nor any adjacent lands are zoned for forestland, timberland, or timberland-zoned Timberland Production. The nearest forested lands to the project is the San Bernardino National Forest, whose boundary is located approximately 2.0 miles northeast of the project. Based on this distance, the project would not conflict with these forested lands. Therefore, no impacts associated with forestland, timberland, or Timberland Production zoning would occur.

6.2.4 - Loss or Conversion of Forest Land

The project would not result in the loss of forest land or conversion of forest land to non-forest use.

Neither the project sites nor any adjacent lands are zoned for forestland, timberland, or timberland-zoned Timberland Production. The nearest forested lands to the project is the San Bernardino National Forest, whose boundary is located approximately 2.0 miles northeast of the project. Based on this distance, the project would not conflict with these forested lands. Therefore, no impacts associated with the loss or conversion of forestland would occur.

6.2.5 - Conversion to Non-Agricultural or Non-Forest Use

The project would not involve changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use of conversion of forest land to non-forest use.

Currently, 229,877 acres of Farmland of Local Importance occurs in Riverside County. The project would result in the conversion of 50.9 of these acres, compromising roughly 0.02 percent of the County's total Farmland of Local Importance. As a result, the loss of Farmland of Local Importance due to the project represents a nominal amount of the total amount of Farmland of Local Importance found in the County. No other Farmland, including Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, is located on, adjacent to, or within one mile of the project. Therefore, impacts associated with the conversion of Farmland would be less than significant. Additionally, the project would not introduce any use or activity that would be incompatible with agricultural production. Therefore, no impacts associated with the conversion of Farmland to non-agricultural use would occur.

Based on the approximately two miles between the project and the nearest forested land, the project would not affect forestland or result in the conversion of such lands. Therefore, no impacts associated with conversion of forestland to non-forest use would occur.

6.3 - Air Quality

All environmental issues concerning Air Quality are addressed in Section 3.1, Air Quality, of this Draft EIR.

6.4 - Biological Resources

6.4.1 - Local Policies or Ordinances Protecting Biological Resources

The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

No Impact. Beaumont Avenue, from Cherry Valley Boulevard south to Oak Valley Parkway, is currently lined with mature street trees, consisting of deodar cedar. Both the Beaumont Municipal Code and the County of Riverside General Plan Open Space Element contain provisions regarding tree preservation, maintenance, removal, and relocation. Additionally, the Noble Creek Vistas Specific Plan, which encompasses the recharge facility site, establishes various provisions related to the protection of the deodar cedar trees, including setback and buffer requirements for areas west of Beaumont Avenue. Although SGWPA is not bound by the provisions contained in the Noble Creek Specific Plan per Sections 53091(d) and 53091(e) of the California Government Code, the following design features included in the Specific Plan would still be incorporated as part of the project:

- A 40-foot landscape buffer from the western edge of the Beaumont Avenue right-of-way into the proposed recharge facility site.

- A 25-foot permeable surface around each deodar cedar tree (except where the distance between tree and existing road is less than 25 feet).

While not bound to the aforementioned tree preservation provisions per Sections 53091(d) and 53091(e) of the California Government Code, the project would include the placing of the pipeline towards the centerline of Beaumont Avenue to reduce potential effects on the deodar cedar trees and their root systems. This, along with incorporation of the above design features, would further reduce potential impacts to the deodar cedar trees along Beaumont Avenue. Because the SGPWA is not bound by the provisions contained in the City's Municipal Code and the County's General Plan, the project would not conflict with either the City's tree preservation provisions or the County's tree preservation policy. Therefore, no impacts associated with local policies or ordinances protecting biological resources would occur.

6.5 - Cultural Resources

All environmental issues concerning Cultural Resources are addressed in Section 3.3, Cultural Resources, of this Draft EIR.

6.6 - Geology and Soils

6.6.1 - Earthquakes

The project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:

iv) Landslides.

The recharge facility would include earthen berms and embankments. However, all slopes created as part of the recharge facility would be engineered to ensure structural integrity and to prevent instability, reducing the potential for landslide. The pipeline, service connection site, and offsite triangular parcel are relatively flat; any improvements related to the project would not alter this flat topography. As a result, landslide activity is not anticipated following implementation of the project. Therefore, impacts associated with landslides would be less than significant.

6.6.2 - Soil Erosion or Topsoil Loss

The project would not result in substantial soil erosion or the loss of topsoil.

The pipeline would be located underground and would not result in substantial soil erosion or loss of topsoil. The recharge facility would alter the existing, relatively flat topography by creating five basins, each separated by earthen berms, as well as raised earthen embankments along the facility's perimeter. These slopes would be engineered to ensure structural integrity and to prevent instability, reducing the potential for substantial soil erosion or loss of topsoil during storm events. To prevent the basins from overflowing during larger than normal storm events, some of the water within the

basins may be directed via pipes to an existing storm drain located immediately southwest of the recharge facility site. However, the amount of basin water that could potentially be directed to this existing storm drain during storm events would be less than the amount of stormwater that is currently directed to this storm drain during storm events.

Additionally, the service connection site consists of a relatively flat, undeveloped parcel predominantly covered by bare earth. When left unprotected from the elements, bare earth can be susceptible to the effects of soil erosion and the loss of topsoil. Construction of the service connection facility would remove a portion of this bare earth and replace it with a 10-foot by 12-foot building, which would not be susceptible to the impacts of soil erosion and the loss of topsoil.

Moreover, if the offsite triangular parcel would be used for depositing soils, all deposits would be distributed evenly throughout the site so that existing topography would not be substantially altered. By maintaining the existing topography, drainage characteristics would remain similar to the existing conditions, and as a result, substantial soil erosion or loss of topsoil would not occur.

6.6.3 - Expansive Soil

The project would not 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.

At the time of preparing the Initial Study, it was unknown if the sites of the proposed facilities had expansive soils. Due to the nature of the proposed project (i.e., construction of a recharge facility, pipeline, and service connection facility), the presence of expansive soil was found to not result in substantial risks to life or property. Furthermore, as the detailed design is prepared for the proposed facilities, the soil characteristics would be taken into account. Therefore, the proposed facilities would not have a potential to create a substantial risk to life or property.

The evaluation within the 2013 Geotechnical Investigation Report supported the above conclusion that the proposed facilities would result in less than significant impacts would occur from expansive soils. The report identified that based on visual classification and sieve analysis, soils on the project sites have very low expansion potential. Therefore, impacts associated with expansive soils would be less than significant.

6.6.4 - Wastewater Disposal Systems

The project would not 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.

The project does not include/require any wastewater disposal system. Therefore, no impacts would occur.

6.7 - Greenhouse Gas Emissions

All environmental issues concerning greenhouse gas emissions are addressed in Section 3.5, Greenhouse Gas Emissions, of this Draft EIR.

6.8 - Hazards and Hazardous Materials

6.8.1 - Routine Use

The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

During construction of the project, hazardous or potentially hazardous materials would be routinely handled, transported, used, and disposed of at the project sites. These hazardous materials would include gasoline, diesel fuel, lubricants, and other petroleum-based products used to operate and maintain construction equipment and vehicles. This handling, transporting, use, and disposal of hazardous materials would be a temporary activity and coincide with short-term construction activities. Any handling of hazardous materials would be limited in both quantity and concentrations. Hazardous materials associated with operation and maintenance of construction equipment and vehicles may be stored on the project sites, although only the amounts needed are expected to be stored onsite; excessive amounts are not expected to be stored onsite. Removal and disposal of hazardous materials from the project sites would be conducted by a permitted and licensed service provider. Any handling, transporting, use, or disposal would comply with applicable federal, State, and local agencies and regulations, including the U.S. Environmental Protection Agency (EPA), the Resource Conservation and Recovery Act (RCRA), the California Department of Transportation (Caltrans), and the Riverside County Department of Environmental Health (the Certified Unified Program Agency [CUPA] for Riverside County). Therefore, short-term construction impacts associated with hazardous materials would be less than significant.

During the operation phase of the project, hazardous or potentially hazardous materials may be handled, transported, used, and disposed of at the project sites. Because of the nature of the project, these materials could vary, but would generally be limited to fertilizers, herbicides, pesticides, and similar materials used at the recharge facility site and the service connection site. These types of materials are common and represent a low risk to people and the environment when used as intended. Therefore, long-term operation impacts associated with hazardous materials would be less than significant.

6.8.2 - Public Airports

The project is not located within an airport land use plan nor within two miles of a public airport or public use airport; therefore, the project would not result in a safety hazard for people residing or working in the project area.

The nearest public airport to the project would be Banning Municipal Airport, which is located approximately seven miles southeast of the project sites in the City of Banning. According to the Riverside County Airport Land Use Commission's Riverside County Airport Land Use Compatibility Plan, the project sites occur outside of any designated Compatibility Contour. The project would not include any improvements that would occur at heights that could potentially interfere with air traffic. The tallest improvements introduced to the project area as part of the project would be the service connection facility building, which would be less than 10 feet in height, and the recharge facility embankments, which would extend less than eight feet above the existing surrounding grade. Both of these improvements would occur well below any flight path. Any overhead air traffic would be coincidental and would occur at elevations that would not pose a safety hazard for people on or adjacent to the project sites. Therefore, no impacts associated with safety hazards from public airports would occur.

6.8.3 - Private Airstrips

The project is not within the vicinity of a private airstrip; therefore, the project would not result in a safety hazard for people residing or working in the project area.

No private airstrips are located within a 20-mile radius of the project. Therefore, no impacts associated with safety hazards from private airstrips would occur.

6.8.4 - Emergency Plans

The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Construction of the recharge facility and the service connection facility would occur off the public street system and would not interfere with emergency response or an emergency evacuation plan.

Construction of the pipeline could result in the temporary closure of one traffic lane along the existing two-lane Beaumont Avenue and two-lane Orchard Street in the area undergoing construction. This lane closure could occur as excavation, placement, and backfilling activities occur. In areas where jack and bore activities are planned, such as at the Mountain View Channel and Noble Creek, one lane could also be closed. Because both Beaumont Avenue and Orchard Street have unpaved dirt shoulders, there would be an opportunity for emergency vehicles to pass traffic in the vicinity of the lane closure.

Operation of the project would not impact circulation on the local street system, and as a result, would not affect emergency response or an emergency evacuation plan. Therefore, impacts associated with interfering with emergency response or an emergency evacuation plan would be less than significant.

6.8.5 - Wildland Fires

The project would not 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.

The project would be located within an increasingly developed area outside of a wildland-urban interface. According to the California Department of Forestry and Fire Protection, none of the project sites are located within areas deemed highly susceptibility to wildland fire. Therefore, impacts associated with wildland fires would be less than significant.

6.9 - Hydrology and Water Quality

6.9.1 - Water Quality Standards and Requirements

The project would not violate any water quality standards or waste discharge requirements.

During construction of the project, earthmoving activities could potentially introduce sediments into stormwater runoff during storm events. As established by the State Water Resources Control Board (SWRCB), a project that would disturb more than one acre of area would be required to obtain coverage under the General Construction Permit for discharges of stormwater associated with construction activities. In addition to the General Construction Permit, the project would also be required to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would include erosion and sediment control best management practices (BMPs), as well as other BMPs designed to maintain water quality during construction activities.

During the operation phase of the project, the amount of stormwater runoff produced on the project site would not increase over the existing quantity. The recharge facility has been designed to contain stormwater runoff to the site. The perimeter of the basins would consist of unlined earthen slopes, which would reduce the amount of stormwater runoff generated from the recharge facility site. Maintenance roads provided along the perimeter of these earthen slopes would have a slight grade that would allow stormwater runoff to drain into the basins. Stormwater runoff would also flow from the top of the earthen slopes toward the project boundary, similar to under existing conditions. Because at least some of the stormwater runoff would be captured by the basins, this flow would be less than under exiting conditions.

The basins would require periodic maintenance by heavy-construction equipment. To reduce the potential for construction equipment to transfer sediments from the recharge facility site into local streets, a steel grate would be provided at the entrance of the basin and BMPs would be incorporated in accordance with the requirements of the County of Riverside and City of Beaumont.

Additionally, since raw SWP water would be used to recharge the groundwater basin, the potential effects related to turbidity must be evaluated. Turbidity impacts certain portions of the SWP and has the potential to affect recharge projects, since sediment loads can reduce recharge rates. However,

the turbidity of the SWP water in the East Branch Extension, which is located downstream of Lake Silverwood, is much less than in the SWP Aqueduct, and is not expected to cause clogging problems. Moreover, recharge projects have a potential to pollute groundwater basins, if the imported water is high in TDS, nitrates, or other pollutants. However, the introduction of imported SWP water into the groundwater basin should not pose a water quality problem, as SWP water is low in TDS and other constituents of concern. The average TDS of water measured at Devil Canyon Afterbay near San Bernardino is about 250 mg/l over a 14-year period from 1990 to 2003, ranging from about 175 to 380 mg/l. This average is lower than that of the extracted groundwater in the project vicinity. Other constituents, such as nitrates, are well within Basin Plan objectives and drinking water maximum contaminant levels (MCL) standards. Therefore, short-term construction and long-term operation impacts associated with stormwater and groundwater quality would be less than significant.

6.9.2 - Groundwater Supplies and Recharge

The project would not 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).

The purpose of the project is to facilitate groundwater recharge. The project would have a beneficial effect on groundwater supplies. Therefore, no adverse impacts associated with groundwater supplies or recharge would occur.

6.9.3 - Drainage Pattern: Erosion or Siltation

The project would not substantially alter the existing drainage pattern of the 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.

The proposed pipeline would be located underground and would not alter the existing drainage pattern of the area. However, development of the recharge facility would alter the relatively flat topography currently found on the site, which could potentially alter the current drainage pattern of the area. Under the existing conditions, the majority of onsite stormwater runoff flows to the southwest, although some runoff flows from the northwestern portion of the recharge facility site into Noble Creek. Following construction of the recharge facility, much of the onsite stormwater runoff would be contained within the basins, while runoff flowing from the perimeter of the earthen slopes to the project boundary would be conveyed to an existing storm drain located southwest of the site. The amount of stormwater runoff directed to this existing storm drain would be less than under the existing conditions, and the quantity of runoff that would flow from the perimeter of the northernmost basin into Noble Creek would be less than under current conditions as well. With this decrease in stormwater runoff flows from the recharge facility site, there would be a subsequent decrease in erosion and siltation from the site.

Additionally, the service connection site consists of a relatively flat, undeveloped parcel predominantly covered by bare earth. When left unprotected from the elements, bare earth can be

susceptible to the effects of erosion and siltation. Construction of the service connection facility would remove a portion of this bare earth and replace it with a 10-foot by 12-foot building, which would not be susceptible to the impacts of erosion and siltation.

Moreover, if the offsite triangular parcel would be used for depositing soils, all deposits would be distributed evenly throughout the site so that existing topography would not be substantially altered. By maintaining the existing topography, drainage characteristics would remain similar to the existing conditions, and as a result, substantial erosion or siltation would not occur. Therefore, impacts associated with altering the existing drainage pattern would be less than significant.

6.9.4 - Drainage Pattern: Flooding

The project would not 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.

The pipeline would be located underground and would not alter the existing drainage pattern of the area. Additionally, although development of the aboveground project facilities would introduce basins, embankments, buildings, and other improvements that would alter the existing topography and could potentially alter the current drainage pattern of the project sites, the project would not increase stormwater runoff flows from the sites when compared to existing conditions. However, the basin would be uncovered, and as a result, could potentially be susceptible to overflow conditions, although unlikely, if filled beyond capacity, either by SWP water or precipitation from storm events, or a combination of both.

Flooding is the covering of land that is not normally covered with water. The filling of the basins with SWP water would not be considered flooding because, under normal circumstances, the basins would typically be covered with water. The recharge facility would be designed to direct water to a specific basin with the capacity to receive water, and as a result, overflow conditions would not occur. As such, even though the recharge facility would alter the existing drainage pattern of the site, on- or off-site flooding would not occur.

Moreover, construction of the service connection facility would remove a small portion of the undeveloped 3.5-acre site and replace it with a 10-foot by 12-foot building. The footprint of this structure would represent only a nominal percentage of the overall service connection site and would not be large enough to substantially alter the current drainage pattern of the site.

Furthermore, if the offsite triangular parcel would be used for depositing soils, all deposits would be distributed evenly throughout the site so that existing topography would not be substantially altered. By maintaining the existing topography, drainage characteristics would remain similar to the existing conditions, and as a result, substantial flooding impacts would not occur. Therefore, impacts associated with altering the existing drainage pattern would be less than significant.

6.9.5 - Runoff Water and Drainage Systems

The project would not 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.

The pipeline would be located underground and would not create or contribute runoff water. Additionally, much of the onsite stormwater runoff would be contained within the basins, while runoff flowing from the perimeter of the earthen slopes to the project boundary would be conveyed to an existing 36-inch storm drain located southwest of the site. During large storm events, a portion the southwesternmost basin may be drained so that stormwater runoff entering the basins would not result in an overflow condition. The amount of stormwater runoff and basin water anticipated that would be conveyed to the existing storm drain would be less than the amount of stormwater that is currently collected by the storm drain.

The design capacity of a 36-inch storm drain is approximately 57.6 cubic feet per second (cfs). Generally, a pervious property such as the recharge facility site will yield a stormwater runoff flow of approximately one cfs per acre for a 100-year storm event. As a result, under the worst-case scenario, the 44-acre recharge facility site would yield a stormwater runoff flow of roughly 44 cfs, which could be accommodated by the existing storm drain. Since the recharge facility would reduce the amount of land that could contribute onsite stormwater runoff because the basins would retain precipitation falling on the majority of the site, the amount of runoff from the site would be less than under existing conditions. As such, the recharge facility would not result in an exceedance of the existing storm drain, and would not increase the amount of stormwater runoff that could potentially convey pollutants offsite.

Moreover, development of the project would not alter the drainage pattern of either the service connection site or the offsite triangular parcel to the extent that a substantial increase in onsite stormwater runoff would occur, exceeding the capacity of existing or planned storm drains that currently serve these sites. Therefore, impacts associated with the exceedance of stormwater drainage systems would be less than significant.

6.9.6 - Water Quality

The project would not otherwise substantially degrade water quality.

During construction of the project, earthmoving activities could potentially introduce sediments into stormwater runoff during storm events. As established by the SWRCB, a project that would disturb more than one acre of area would be required to obtain coverage under the General Construction Permit for discharges of stormwater associated with construction activities. In addition to the General Construction Permit, the project would also be required to prepare and implement a SWPPP. The SWPPP would include erosion and sediment control best management practices BMPs, as well as other BMPs designed to maintain water quality during construction activities.

During the operation phase of the project, the amount of stormwater runoff produced on the project site would not increase over the existing quantity. The recharge facility has been designed to contain stormwater runoff to the site. The perimeter of the basins would consist of unlined earthen slopes, which would reduce the amount of stormwater runoff generated from the recharge facility site. Maintenance roads provided along the perimeter of these earthen slopes would have a slight grade that would allow stormwater runoff to drain into the basins. Stormwater runoff would also flow from the top of the earthen slopes toward the project boundary, similar to under existing conditions. Because at least some of the stormwater runoff would be captured by the basins, this flow would be less than under exiting conditions.

However, as with all groundwater recharge operations, there would be a possibility for groundwater mounding to occur below the recharge facility, which could potentially degrade shallow subsurface aquifers and surface water features should the deeper groundwater table contain constituents that are conveyed upwards as a result of the mounding.

Generally, groundwater mounding is an outward and upward expansion of the free groundwater table caused by shallow re-injection, percolation below an impoundment, or other surface recharge process. Groundwater mounding can potentially alter groundwater flow rates and direction, reduce the integrity of soils supporting foundations and basements, and convey constituents suspended in deeper aquifers upwards. The shape and height of the groundwater mound depend on many factors, including the distance between the surface recharge body and the groundwater table, the size and depth of the surface water body, the infiltration rate of the subsurface soils, the flow pattern of the groundwater, and the specific features and characteristics of the subsurface geology and aquifers.

The SGPWA considered groundwater mounding when evaluating potential locations for the recharge facility. Depth to groundwater was an importing factor that contributed to the SGPWA choosing the recharge facility site as the appropriate location for the recharge facility, as the distance between the floor of the facility and the groundwater table below would be great enough to support groundwater recharge while also preventing impacts from groundwater mounding. Depth to groundwater is important because this distance affects the recharge performance of the facility, and serves as a measure of the available storage capacity below the facility. Generally, the rate of groundwater recharge is independent of the depth to groundwater as long as the groundwater table does not rise to the floor of the recharge facility. Accordingly, a site having a comparatively large depth to groundwater would typically be favored over a location where the groundwater table is shallower, since there would be greater opportunity for groundwater mounding without the mound impeding on the floor of the recharge basin.

Depth to groundwater also serves as a measure of the available storage capacity below a recharge facility. Again, a site having a greater depth to groundwater would generally be favored over a location where the groundwater table is shallower, as a greater depth represents a greater capacity for

groundwater storage. According to the U.S. Geological Survey (USGS), depth to groundwater below the recharge facility site is estimated between 400 and 500 feet below the ground surface. Even with other groundwater recharge efforts occurring in the project vicinity, at these depths, it is highly unlikely that a groundwater mound would come into contact with a surface recharge body or otherwise interfere with groundwater recharge. Additionally, the USGS estimates that artificial recharge in the San Gorgonio Pass area may take decades to reach the groundwater table because of the thickness of the unsaturated zone in most of the San Gorgonio Pass area being between 150 and 465 feet. At these thicknesses, the elevation of the groundwater table would not substantially rise in the near future, and may potentially take numerous years before a noticeable change in elevation is detected. Because of this, any groundwater mounding occurring atop the groundwater table would not be substantially elevated over the next decades due to an overall rise in aquifer elevation.

Intervening, low permeability layers could possibly impede movement of water from the recharge facility to the groundwater table, and potentially contribute towards groundwater mounding. Sediments within the project vicinity are stratified, with intermittent layers of clay separating layers of silt, sand, and gravel. While the degree of stratification is specific to the particular site, individual layers do not persist over large areas in the project vicinity. This absence of laterally persistent clays over broad areas of the Beaumont Basin means that percolating water would be allowed to move relatively freely below the recharge facility.

In the highly unlikely event that groundwater mounding occurs at shallow depths, the USGS has determined that groundwater quality in the San Gorgonio Pass area is good, as indicated by samples collected for a previous study. Thus, should the groundwater table ever reach an elevation where it could potentially affect surface or shallow subsurface waters, water quality would not be substantially impacted.

Therefore, impacts associated with groundwater mounding and its effects on water quality would be less than significant.

6.9.7 - Housing Placement: Flood Hazard Area

The project would not 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.

The project would not include residential uses. Therefore, no impacts associated with placing housing within a 100-year flood hazard area would occur.

6.9.8 - Seiche, Tsunami, or Mudflow

The project would not be subject to or create inundation by seiche, tsunami, or mudflow.

Because of the geographical and topographical characteristics of the project sites, including the relatively flat terrain found on and adjacent to the site and the lack of coastline or large water body in

the project vicinity, the project would not be susceptible to seiche, tsunami, or mudflow. Therefore, no impacts associated with seiche, tsunami, or mudflow would occur.

6.10 - Land Use and Planning

6.10.1 - Divide Established Community

The project would not physically divide an established community.

The pipeline would be located underground and would not include any aboveground improvements that could potentially divide any surrounding established community. Additionally, the recharge facility and service connection site would be constructed upon vacant, undeveloped parcels that are not currently being used to connect an existing community. Therefore, no impacts associated with division of an established community would occur.

6.10.2 - Conflict with Applicable Plans, Policies, or Regulations

The project would not 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.

According to California Government Code Section 53091(d) and 53091 (e), as a municipal water storage/recharge facility, the project would be exempt from the land use policies and zoning ordinances of a county or city, including the provisions contained in the City of Beaumont General Plan and Zoning Ordinance, as well as the County of Riverside General Plan and Zoning Ordinance.

Per California Government Code Section 53091(d):

> Building ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency.

Additionally, California Government Code Section 53091(e) establishes that:

> Zoning ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, or for the production or generation of electrical energy, facilities that are subject to Section 12808.5 of the Public Utilities Code, or electrical substations in an electrical transmission system that receives electricity at less than 100,000 volts. Zoning ordinances of a county or city shall apply to the location or construction of facilities for the storage or transmission of electrical energy by a local agency, if the zoning ordinances make provision for those facilities.

In accordance with Sections 53091(d) and 53091(e) of the California Government Code, the proposed recharge facility, pipeline, and service connection facility, and offsite triangular parcel are exempt

from the provisions of the City of Beaumont and County of Riverside's Land Use Plan and Zoning Ordinance. Therefore, no impact associated with applicable land use plans, policies, or regulations of an agency with jurisdiction over the project would occur.

6.11 - Mineral Resources

6.11.1 - Loss of Known Mineral Resource

The project would not 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.

The project area is located within a Mineral Resource Zone (MRZ) 3, as designated by the State Mining and Geology Board (SMGB), which is defined as an area where the available geologic information indicates that mineral deposits are likely to exist, although the significance of the deposit is undetermined. According to the City of Beaumont General Plan, although there are potential aggregate resources located in the western portion of the City of Beaumont, there are currently no significant mineral extraction operations in the City. Additionally, none of the project sites are located in an area of potential aggregate resources, none of these locations occur within the Mineral Resource Overlay (MRO) zone as identified on the City's Zoning Map. Therefore, less than significant impacts associated with the availability of a known mineral resource would occur.

6.11.2 - Loss of Mineral Resource Recovery Site

The project would not 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.

None of the project sites are located in an area of potential aggregate resources and there are currently no significant mineral extraction operations in the project vicinity. Therefore, less than significant impacts associated with the availability of a locally-important mineral resource would occur.

6.12 - Noise

6.12.1 - Public Airport Noise Levels

The project is not located within an airport land use plan nor within two miles of a public airport or public use airport; therefore, the project would not expose people residing or working in the project area to excessive noise levels.

The nearest public airport to the project would be Banning Municipal Airport, which is located approximately seven miles southeast of the project sites in the City of Banning. According to the Riverside County Airport Land Use Commission's Riverside County Airport Land Use Compatibility Plan, the project sites occur outside of any designated Community Noise Equivalent Level (CNEL) Compatibility Contour. Therefore, no impacts associated with public airport noise would occur.

6.12.2 - Private Airstrip Noise Levels

The project is not located within the vicinity of a private airstrip; therefore, the project would not expose people residing or working in the project area to excessive noise levels.

No private airstrips are located within a 20-mile radius of the project. Therefore, no impacts associated with private airstrip noise would occur.

6.13 - Population and Housing

6.13.1 - Housing Displacement / Replacement Housing

The project would not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

In the existing conditions, no residential uses located on any of the project sites. Therefore, no impacts associated with the displacement of existing housing would occur.

6.13.2 - Population Displacement / Replacement Housing

The project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

None of the project sites currently contain residential uses, and as a result, no people presently reside on any of the sites. As such, no people would be displaced as a result of the project. Therefore, no impacts associated with the displacement of people would occur.

6.14 - Public Services

6.14.1 - Fire Protection

The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection.

The project would not include improvements that would increase calls for service to the project sites or otherwise increase the need for increased RCFD facilities. The project does not involve the development of land uses that typically increase the need for fire protection and emergency medical services, including residential and commercial uses. No people would be residing or employed full-time on the project sites, which would reduce the need for increase RCFD services to the sites.

Additionally, the project would develop two vacant, undeveloped parcels, removing ruderal brush and scattered debris in the process, reducing the opportunity for wildland fire and the need for RCFD services to the sites. Therefore, impacts associated with the construction of new, or the expansion of existing, RCFD facilities would be less than significant.

6.14.2 - Police Protection

The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection.

The project would not include improvements that would increase calls for service to the project sites or otherwise increase the need for increased BPD facilities. The project does not involve the development of land uses that typically increase the need for police protection service, including residential and commercial uses. No people would be residing or employed full-time on the project sites, which would reduce the need for increase BPD service to the sites.

Additionally, the recharge facility site consists of a vacant, undeveloped parcel that is currently accessible to unauthorized users. The project would include construction of a fence/wall around the recharge facility, which would limit access to the facility while also reducing the calls for service regarding trespassing and other similar to the site. Moreover, nighttime security lighting would be provided at the recharge facility and service connection facility, which would illuminate that facilities and deter unauthorized users from trespassing on the sites. Therefore, impacts associated with the construction of new, or the expansion of existing, BPD facilities would be less than significant.

6.14.3 - Schools

The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools.

The project does not involve the development of land uses such as residential uses that typically generate students, resulting in the need for new or expanded school facilities. Therefore, no impacts associated with the construction of new, or the expansion of existing, BUSD facilities would occur.

6.14.4 - Parks

The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks.

The project does not involve the development of land uses that typically increase park patronage, resulting in the need for new or expanded park facilities. Therefore, no impacts associated with the construction of new, or the expansion of existing, park facilities would occur.

6.14.5 - Other Public Facilities

The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities.

The project does not involve the development of land uses that typically increase the usage of libraries, community centers, and other public facilities, resulting in the need for new or expanded public facilities. Therefore, no impacts associated with the construction of new, or the expansion of existing, public facilities would occur.

6.15 - Recreation

6.15.1 - Increase Use of Parks

The project would not 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.

The project does not involve the development of land uses that typically increase patronage at park and recreational facilities. Therefore, no impacts associated with the increased usage of existing parks or other recreational facilities would occur.

6.15.2 - Recreational Facilities Physical Effect on Environment

The project would not include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

The project does not involve the development of land uses that typically create a demand for recreational facilities. As a result, the project would not include recreational facilities. Therefore, no impacts associated with recreational facilities would occur.

6.16 - Transportation and Traffic

6.16.1 - Air Traffic Patterns

The project would not 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.

The nearest public airport to the project would be Banning Municipal Airport, which is located approximately seven miles southeast of the project sites in the City of Banning. Additionally, no private airstrips occur within a 20-mile radius of the project. According to the Riverside County Airport Land Use Commission's Riverside County Airport Land Use Compatibility Plan, the project sites occur outside of any designated Compatibility Contour. The project would not include any improvements that would occur at heights that could potentially interfere with air traffic. Therefore, no impacts associated with air traffic patterns would occur.

6.16.2 - Hazards

The project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

The project does not include any roadway improvements that involve hazardous design features such as sharp curves or dangerous intersections. Additionally, the project would not introduce incompatible uses to the project area. Therefore, no impacts associated with hazardous design features or incompatible uses would occur.

6.16.3 - Emergency Access

The project would not result in inadequate emergency access.

Construction of the project would not interfere with the emergency access to the project sites and within the project area. All equipment and materials related to construction of project facilities would be stored in designated staging areas. These staging would be physically separated from vehicular traffic, and as a result, would not impede emergency access.

Additionally, construction of the pipeline would result in the temporary closure of traffic lanes along the existing two-lane Beaumont Avenue and two-lane Orchard Street in the area undergoing construction. These lane closures would occur as excavation, placement, and backfilling activities occur. In areas where jack and bore activities are planned, such as at the Mountain View Channel and Noble Creek, lanes would also be closed. Because both Beaumont Avenue and Orchard Street have unpaved dirt shoulders, there would be an opportunity for emergency vehicles to pass traffic in the vicinity of the lane closure. Moreover, unlike typical motorists, emergency vehicles would be allowed to make left or u-turns at locations and intersections under construction.

Operation of the project would not impact circulation on the local street system, and as a result, would not affect emergency access within the project area. The recharge facility site and service connections facility site would be accessible via driveways from Cougar Way and Orchard Street, respectively. Therefore, impacts associated with emergency access would be less than significant.

6.16.4 - Conflict with Alternative Transportation

The project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Construction of the pipeline would require temporary southbound lane closures of individual segments of Beaumont Avenue (e.g., Brookside Avenue to Cherry Valley Boulevard, Cheery Valley Boulevard to Vineland Street) for approximately one to two weeks at a time. Closure of these roadway segments would affect the existing Class II bike lane located along the southbound lane of Beaumont Avenue, as well as the existing multipurpose trail located along the western edge of Beaumont Avenue. During these closures, signage would be used to inform bicyclists, pedestrians, and equestrians of the closure and to direct users to alternative routes. For example, users needing to

traverse Beaumont Avenue could be directed to Noble Street. As the nearest north/south trending roadway, Noble Street would provide users with a continuous connection between Brookside Avenue and Orchard Street, while not adding substantial time to their commute.

Additionally, pipeline construction would occur during the summer months when Beaumont High School, Mountain View Middle School, and other nearby schools are closed for summer recess, which would reduce the number of commuters using the bike lane and multipurpose trail. Moreover, while Pass Transit bus service along Beaumont Avenue would be affected by the temporary lane closures, bus service could still use Beaumont Avenue as a bus route during construction of the pipeline. In the immediate vicinity of the proposed pipeline construction along Beaumont Avenue, Pass Transit bus stops are located along Cherry Valley Boulevard and Cougar Way. Although adjacent to Beaumont Avenue, these bus stops would not be directly impacted by the lane closures.

Operation of the project would not affect existing portions of pedestrian, bicycle, equestrian, and multipurpose facilities that are located in the project area because neither the recharge facility site nor the service connection facility contain transit, bicycle, or pedestrian uses. The pipeline would be located underground, and as a result, would not affect transit, bicycle, or pedestrian facilities. Therefore, short-term construction and long-term operation impacts associated with the transit, bicycle, or pedestrian facilities would be less than significant.

6.17 - Utilities and Service Systems

6.17.1 - Wastewater Treatment

The project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

The project would not include activities that would create the need for additional levels of wastewater treatment. As a result, implementation of the project would not exceed the wastewater treatment requirements established by the San Ana Regional Water Quality Control Board (RWQCB). Therefore, no impacts associated with exceedance of wastewater treatment requirements would occur.

6.17.2 - Water or Wastewater Treatment Facilities

The project would not 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.

Although the project includes a groundwater recharge facilities, implementation of the project would not create the need for additional water facilities, as well as any wastewater treatment facilities. Therefore, no impacts associated with the construction of new, or the expansion of existing, water or wastewater treatment facilities would occur.

6.17.3 - Stormwater Drainage Facilities

The project would not 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.

The project would include installation of stormwater drainage facilities at the recharge facility site that would connect to the existing 36-inch storm drain located southwest of the site. Much of the stormwater runoff flowing from the perimeter of the earthen slopes of the recharge facility to the project boundary would be conveyed to this storm drain. During large storm events, a portion the southwesternmost basin may be drained so that stormwater runoff entering the basins would not result in an overflow condition. The amount of stormwater runoff and basin water anticipated that would be conveyed to the existing storm drain would be less than the amount of stormwater that is currently collected by the storm drain.

The design capacity of a 36-inch storm drain is approximately 57.6 cubic feet per second (cfs). Generally, a pervious property such as the recharge facility site will yield a stormwater runoff flow of approximately one cfs per acre for a 100-year storm event. As a result, under the worst-case scenario, the 44-acre recharge facility site would yield a stormwater runoff flow of roughly 44 cfs, which could be accommodated by the existing storm drain. Since the recharge facility would reduce the amount of land that could contribute onsite stormwater runoff because the basins would retain precipitation falling on the majority of the site, the amount of runoff from the site would be less than under existing conditions. As such, the recharge facility would not result in an exceedance of the existing storm drain an expansion of this existing drainage facility would not be required. Therefore, no impacts associate with the construction of new, or the expansion of existing, stormwater drainage facilities would occur.

6.17.4 - Water Supplies

The project would have sufficient water supplies available to serve the project from existing entitlements and resources, and no new or expanded entitlements are needed.

In part, the project would convey raw, imported water from the East Branch Extension of the SWP to the SGPWA service area to facilitate groundwater recharge of the currently overdrawn groundwater table. This groundwater would be available to regional water purveyors who hold the right to withdraw water from the local groundwater supply. In and of itself, however, the project would not create the need for additional water supplies. Therefore, no impacts associated with water supplies would occur.

6.17.5 - Wastewater Treatment Capacity

The project would not 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.

The project would not include activities that would create the need for additional levels of wastewater treatment. Implementation of the project would not create the need for wastewater treatment facilities. Therefore, no impacts associated with wastewater treatment capacity would occur.

6.17.6 - Landfill Capacity

The project would served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.

Construction of the project could potentially generate solid waste that would be required to be disposed of at a landfill. However, the majority of the excess soils related to grading and excavation of the pipeline and other project facilities would deposited at one of three designated spoils sites: the recharge facility site, the offsite triangular parcel, and the service connection site. The operational phase of the project is expected to create only a nominal amount of solid waste during maintenance of the project facilities. Therefore, impacts associated with landfill capacity would be less than significant.

6.17.7 - Compliance with Solid Waste Regulations and Statutes

The project would comply with federal, state, and local statutes and regulations related to solid waste.

All collection, transportation, and disposal of any solid waste generated by the project would comply with all applicable federal, State, and local statutes and regulations. Prior to entering into a landfill facility, solid waste collection service providers, include those that would serve the project sites, would be required to comply with federal, State, and local statutes and regulations related to solid waste. Therefore, no impacts associated with solid waste statutes and regulations would occur.

6.18 - Energy

6.18.1 - Energy Consumption

The project would not consume energy resources in a wasteful, inefficient and unnecessary manner, and would result in a less than significant impact on energy resources.

The proposed project would use energy resources such as electricity, natural gas, and petroleum products (gasoline, diesel fuel, lubricants, and asphalt) during the construction and potentially the operational phases.

Based on construction trips and construction equipment hours obtained in Appendix B, Air Quality and Greenhouse Gas Emissions, of this Draft EIR, the total on-road vehicle miles for workers and haul trucks for the proposed project is approximately 54,500 miles. Based on a general estimate of 10

miles per gallon of fuel, the on-road fuel consumption during project construction activities would be approximately 5,450 gallons of fuel. Also based on information from Appendix B, the total number of construction equipment hours is estimated to be 7,200 hours. Based on a general construction equipment fuel consumption of 9 gallons per hour, the total amount of fuel that would be consumed by construction equipment is estimated to be approximately 64,800 gallons of fuel. Therefore, the total amount of fuel that would be consumed by on-road vehicles (worker vehicles and haul trucks) and construction equipment is estimated to be approximately 70,250 gallons of fuel. There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient that at comparable construction sites in other parts of the State. Therefore, it is expected that construction fuel consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.

During the operation of the proposed project, a nominal amount of fuel is expected to be used. Gasoline fuel is expected to be used by maintenance vehicles as well as the annual cleaning of the basins. Based on estimates provided in Appendix B of this Draft EIR, on-road vehicle miles for workers and haul trucks is estimated to be approximately 4,000 miles per year. Based on a general estimate of 10 miles per gallon, the on-road fuel consumption during project operational activities would be approximately 400 gallons of fuel. Also based on estimates in Appendix B, the total number of construction vehicle hours during the cleaning of the recharge basins is approximately 50 hours. Based on a general construction equipment hours of 9 gallons per hour, the total amount of fuel that would be consumed by construction equipment is estimated to be approximately 450 gallons of fuel. Therefore, the total amount of fuel that would be consumed by on-road vehicles (workers vehicles and haul trucks) and construction equipment is estimated to be approximately 850 gallons of fuel per year.

The proposed project will also include the use of electricity for an onsite pump associated with an onsite irrigation well. Based on data from Appendix B of this Draft EIR, the pump will run approximately 624 hours per year and use approximately 9,300 kilowatt hours per year. There are no additional pumps associated with the proposed pipeline because the pipeline has been designed with a down gradient from the service connection site to the proposed recharge facility. The service connection site will include security lighting on the service connection structure; however, the amount of electricity that will be used is considered nominal.

Based on the operational characteristics of the proposed project, fuel and electrical consumption associated with the proposed project would not be inefficient, wasteful, or unnecessary. Therefore, the proposed project would result in a less than significant impact on energy resources.

SECTION 7: ALTERNATIVES TO THE PROPOSED PROJECT

7.1 - Introduction

In accordance with Section 15126.6 of the CEQA Guidelines, this Draft Environmental Impact Report (EIR) contains a comparative evaluation of the Beaumont Avenue Recharge Facility and Pipeline project with alternatives to the proposed project, including a No Project Alternative. Per Section 15126.6 of the CEQA Guidelines, this section focuses on alternatives to the proposed project that are capable of avoiding or substantially reducing any significant adverse impacts associated with the proposed project, despite the possibility that the alternatives could impede attainment of project objectives or prove less cost efficient. Additionally, the alternatives could result in new impacts that would not have resulted from the proposed project. CEQA requires that alternatives analysis provide sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project.

Under case law and CEQA Section 15126.6(f), the discussion of alternatives need not be exhaustive and is subject to a rule of reason. In addition, an EIR that determines the potential adverse impacts of a project can be avoided or substantially lessened by mitigation measures, as the case of the proposed project, the lead agency is not required to make findings regarding the feasibility of proposed alternatives (*Rio Vista Farm Bureau v. County of Solano (1992) 5 Cal.App.4th 351, 379*).

CEQA Section 15126.6(d) states that "if an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternatives shall be discussed, but in less detail than the significant effects of the project as proposed." Determining factors that may be used to eliminate alternatives from detailed consideration in an EIR are (a) failure to meet most of the basic project objectives, (b) infeasibility, or (c) inability to avoid significant environmental impacts. CEQA Section 15364 defines "feasibility" as "Capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors."

An EIR need not consider an alternative whose effects cannot be reasonably ascertained, whose implementation is remote and speculative, or whose execution does not substantially lessen or avoid the significant effects of the project.

At the project and cumulative level prior the incorporation of mitigation measures, this Draft EIR has identified the following impacts to be significant:

- Air Quality
- Biological Resources
- Cultural Resources

- Geology and Soils
- Transportation and Traffic

As addressed in Section 2, Project Description, of this Draft EIR, implementation of the project is needed to meet the following SGPWA objectives:

- To enable the Agency to deliver its entire Table A amount of water from the State Water Project.
- To enable the Agency to purchase Article 21 water or other supplemental water sources that become available over and above the Agency's Table A water.
- To provide a regional recharge facility that would be available to all retail water agencies.
- To augment regional storage capacity.
- To provide water supply for the ongoing and projected needs of the SGPWA's service area.

The May 28, 2008 Evaluation of Potential Recharge Sites for San Gorgonio Pass Water Agency report identified six potential recharge sites within SGPWA's service area. This report was intended to provide SGPWA with a decision making tool for future planning related to recharge of SWP water. Based on a review of this report and discussions with SGPWA, the assumptions in this report that recharge would only occur over 150 days is applicable to the Brookside South Site due to the site being within Noble Creek and the need to remove recharge operations during the rainy season. However, the 150 days has been modified for the remainder of the alternative sites to approximately 300 days and that the recharge capability for these other sites is revised from 3 acre-feet per day to 2 acre-feet per day, similar to the proposed project. Therefore, the recharge potential at each site, except for the Brookside South Site, has been doubled in the discussion below. The following is a description of each of the sites that were identified:

- **Site 1 (Sullivan Site):** The 15.3-acre property (APN 401-110-019/-020) located at the northeast corner of Beaumont Avenue and Orchard Street. The estimated recharge potential of this site is 5,600 acre-feet per year (AFY). The basic objective of the project is to increase recharge capabilities with the delivery of State Water Project (SWP) water, as well as other supplemental water source. To only receive the full Table A water of 17,300 AFY, the SGPWA needs a recharge facility with a capacity of 3,000 to 4,000 AFY; however, the SGPWA would actually require substantially more capacity due to the need for intermittent maintenance of the basins, variability in sources of supply that may be available for recharge other than SWP water, and the potential that SWP water may not be available continuously over the course of the year. Furthermore, additional capacity is required to receive Article 21 water or other supplemental water sources when they become available. Therefore, a recharge facility that provides a capacity of 5,600 AFY would not meet the basic objectives of the

project to receive not only Table A water, but also receive Article 21 water and other supplemental water sources when they become available. Thus, implementation of a recharge facility on Site 1 was considered but rejected.

- **Site 2 (BUSD Site):** The 38.2-acre property (APN 405-240-003/-004) located on Brookside Avenue west of Mountain View Channel and Beaumont High School. Although undeveloped in 2008, BUSD has since expended Beaumont High School facilities and constructed District offices onto this site, making development of a recharge facility at Site 2 physically infeasible. Thus, implementation of a recharge facility on Site 2 was considered but rejected.

- **Site 3 (Brookside South Site):** The 18.2-acre property (APN 406-080-012) located within Noble Creek downstream from the confluence of Noble Creek and Mountain View Channel, totaling approximately 6,400 feet long. The estimated recharge potential of this site is 5,700 AFY. Since development of a recharge facility at Site 3 would allow SGPWA to receive its full allotment of SWP water, constructing a facility on this site would meet the basic project objective. Thus, implementation of a recharge facility on Site 3 is considered and further evaluated in Section 7.3, Reduced Footprint/Alternate Site Location Alternative. Construction of a recharge facility at Site 3 was initially evaluated in the 2008 Brookside South Recharge project IS/MND.

- **Site 4 (BEK Site):** The 44-acre property (APN 406-080-032) located on the southwest corner of Beaumont Avenue and Brookside Avenue. This site represents the location of the proposed project and is considered and evaluated in Section 3, Environmental Impact Analysis, of this Draft EIR.

- **Site 5 (Noble Creek Meadows Site):** The 101-acre property (APN 406-070-024) located north of Oak Valley Parkway, east and south of Noble Creek, and west of Cougar Way. The estimated recharge potential of this site is 36,400 AFY. Since development of a recharge facility at Site 5 would allow SGPWA to receive its full allotment of SWP water, constructing a facility on this site would meet the basic project objective. Thus, implementation of a recharge facility on Site 5 is considered and further evaluated in Section 7.4, Secondary Alternate Site Location Alternative.

- **Site 6 (Noble Creek SGPWA Site):** The 7.3-acre property (APN 403-080-010/-011/-012/-024 and 403-090-016/-017) located along Noble Creek on the northwest corner of Vineland Street and Noble Street. The estimated recharge potential of this site is 2,300 AFY. Since development of a recharge facility at Site 6 would only allow SGPWA to receive an additional 2,300 AFY of SWP water, constructing a facility on this site would not meet the basic project objective of receiving the Agency's full allotment of SWP water. In addition, the construction of a facility that would not allow the Agency to receive its full Table A water would require the Agency to construct another recharge basin to meet its primary objectives to receive not only Table A water, but also receive Article 21 water and other supplemental water sources when

they become available. Thus, implementation of a recharge facility on Site 6 was considered but rejected.

Based on the above, this Draft EIR evaluates three alternatives:

- No Project Alternative (Alternative 1)
- Reduced Footprint/Alternate Site Location Alternative (Alternative 2)
- Secondary Alternate Site Location Alternative (Alternative 3)

Discussed above includes the alternatives that were considered but rejected from further consideration by the SGPWA, and below provides an evaluation of the two build alternatives selected for consideration for the proposed project in addition to the No Project Alternative. The analysis below is intended to provide a relative comparison between the proposed project and each individual alternative. The analysis only considers the issue areas analyzed in Section 3, Environmental Impact Analysis, of this Draft EIR. In several cases, different scenarios may share the same level of significance descriptions (i.e., both scenarios would result in a "less than significant" impact). However, although they might share the same level of significance under CEQA, the actual degree of impact may be slightly different for each scenario, and this relative difference is the basis for a conclusion of greater or lesser impacts.

An Environmentally Superior Alternative is identified among the alternatives evaluated in this Draft EIR. An alternative would be environmentally superior to the proposed project if it would result in fewer or less significant environmental impacts while achieving most of the project objectives.

7.2 - No Project Alternative

The discussion and evaluation of a No Project Alternative is required by the CEQA Guidelines. Under the No Project Alternative (Alternative 1), the Beaumont Avenue Recharge Facility and Pipeline project would not be constructed. The recharge facility site and the service connection site would remain vacant and undeveloped, as they currently are under existing conditions. Since the recharge basins would not be constructed, the associated pipeline along Beaumont Avenue and Orchard Street and the service connection facility connecting this pipeline to the existing EBX pipeline, would not occur. The proposed groundwater recharge operations resulting from the project would not occur.

Impact Analysis

Air Quality

Under Alternative 1, no construction activities would occur on the project sites, which would avoid the construction emissions that would result from project construction. The recharge facility site and the service connection site would remain vacant and undeveloped, and absent of any existing

operations that produce emissions or contribute to air quality effects. Therefore, impacts associated with air quality would be avoided compared to the proposed project.

Biological Resources

No construction activities would occur on the currently vacant and undeveloped recharge facility site and service connection site, as well as adjacent to Noble Creek, as a result of Alternative 1. No biological resources would be affected by implementation of Alternative 1. Therefore, impacts associated with biological resources would be avoided compared to the proposed project.

Cultural Resources

Under Alternative 1, no ground-disturbing construction activities would occur on the currently vacant and undeveloped recharge facility site and service connection site, no cultural resources, including any presently unknown buried resources, would be affected by implementation of Alternative 1. Therefore, impacts associated with cultural resources would be avoided compared to the proposed project.

Geology and Soils

No ground-disturbing construction activities would occur on the currently vacant and undeveloped recharge facility site and service connection site as a result of Alternative 1. Alternative 1 would not place a recharge facility, pipeline, and service connection facility in a seismically active region that is also susceptible to subsidence. Therefore, impacts associated with geology and soils would be avoided compared to the proposed project.

Greenhouse Gas Emissions

Under Alternative 1, no construction activities would occur on the project sites, which would avoid the greenhouse gas emissions that would result from project construction. The recharge facility site and the service connection site would remain vacant and undeveloped, and absent of any existing operations that produce greenhouse gas emissions or contribute to greenhouse gas effects. Therefore, impacts associated with greenhouse gas emissions would be avoided compared to the proposed project.

Hazards and Hazardous Materials

No ground-disturbing construction activities would occur on the project sites as a result of Alternative 1, which would avoid the possibility of unearthing potentially contaminated subsurface soils from previous contamination events. Alternative 1 would prevent the handling and disposal of such potentially contaminated soils on the project sites and adjacent to existing schools. Therefore, impacts associated with hazards and hazardous materials would be avoided compared to the proposed project.

Hydrology and Water Quality

Under Alternative 1, the recharge facility would not be constructed on the recharge facility site, which is outside of 100-year flood hazard area as designated by FEMA. Similar to the proposed project, by not constructing anything within or adjacent to a 100-year floodplain, Alternative 1 would avoid any and all potential affects related to impeding or redirecting flood flows or exposing structures or people to a significant risk of loss or injury. In addition, Alternative 1 would avoid potential surface water quality impacts during construction activities. Without the construction of the proposed project, however, Alternative 1 would also avoid the beneficial effects to local and regional groundwater levels as a result of the proposed project's groundwater replenishment efforts. Overall, the potential effects related to constructing adjacent to a 100-year flood hazard area would be balanced by the beneficial effects of groundwater recharge. Therefore, impacts associated with hydrology and water quality would be similar compared to the proposed project.

Noise

No construction activities would occur on the project sites as a result of Alternative 1, which would avoid the need to operate noise-producing and groundborne vibration-generating construction equipment on the project sites. The recharge facility site and the service connection site would remain vacant and undeveloped, and absent of any existing operations that produce noise or contribute to noise effects. Therefore, impacts associated with noise and groundborne vibration would be avoided compared to the proposed project.

Transportation and Traffic

Under Alternative 1, no construction activities would occur on the project sites, which would produce temporary construction traffic on the local roadway network. The recharge facility site and the service connection site would remain vacant and undeveloped, and absent of any existing operations that produce traffic or contribute to traffic effects. Therefore, impacts associated with transportation and traffic would be avoided compared to the proposed project.

Conclusion and Relationship to Project Objectives

Alternative 1 would avoid project impacts associated with air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, noise, and transportation and traffic. Impacts associated with hydrology and water quality under Alternative 1 would be similar to the proposed project. Therefore, Alternative 1 would be environmentally superior compared to the proposed project. However, Alternative 1 would not meet the project objectives.

7.3 - Reduced Footprint/Alternate Site Location Alternative (Alternative 2)

Under the Reduced Footprint/Alternate Site Location Alternative (Alternative 2), the recharge facility would be constructed on 18.2 acres downstream of the confluence of Noble Creek and Mountain View Channel, totaling approximately 6,400 feet long. Alternative 2 involves using the Noble Creek

stream channel south of Brookside Avenue to impound and recharge SWP water during the non-storm season. This Alternative consists of constructing multiple earthen berms within and perpendicular to Noble Creek. The berms would create shallow impoundments that would cover the channel bottom and serve as temporary barriers, causing ponding of the released SWP water during the non-storm season. The berms would slow flows and allow the SWP water to form shallow ponds. The ponded water would then percolate into the channel bottom, migrate through the vadose zone, and ultimately recharge the main water table of the Beaumont Basin. Since these berms would be constructed within Noble Creek, which serves as flood control facility during the storm season, Alternative 2 would be constructed and removed on an annual basis. The estimated recharge potential of Alternative 2 is 5,700 AFY.

Since the location of the Alternative 2 site is adjacent to the proposed project, the pipeline length would generally remain the same as under the proposed project. The service connection facility would be constructed as proposed without any modifications.

Impact Analysis

Air Quality

Similar to the proposed project, Alternative 2 would require the use of heavy construction equipment and diesel trucks that would produce air pollutant emissions during project construction. However, since the size of the recharge facility would be reduced under Alternative 2, there will be a corresponding reduction in the amount of earthmoving activities that would be required. Because of this reduction in earthmoving activities, there would be an incremental reduction in the quantity of air pollutants emitted during project construction. During project operations, the berms within Noble Creek would be constructed and removed on an annual basis, requiring the use of a dozer over the course of approximately 5 days annually, which is roughly the same amount of time required for the proposed project's annual maintenance activities. Therefore, since construction emissions would be incrementally reduced under Alternative 2, impacts associated with air quality would decrease when compared to the proposed project.

Biological Resources

While the size of the recharge facility would be reduced under Alternative 2, project construction would occur within Noble Creek, which could directly affect jurisdictional areas delineated as Waters of the United States and/or Water of the State. Additionally, the existing Riversidean alluvial fan sage scrub (RAFSS) plant communities located along the upper tiers of Noble Creek could be directly impacted during project construction and operations. Since RAFSS provides suitable habitat for Los Angeles Pocket Mouse (LAPM), this species could also be affected. There is substantially more RAFFS within the upper tiers of Noble Creek compared to the RAFFS located on the proposed recharge basin site. Therefore, biological resources impacts associated with Alternative 2 would be greater than biological resources impacts associated with the proposed project.

Cultural Resources

Similar to the proposed project, Alternative 2 would require earthmoving activities that could affect unknown buried cultural resources. However, since the size of the recharge facility would be reduced under Alternative 2, there will be a corresponding reduction in the amount of earthmoving activities that would be required, and thus, a reduction in the potential that undiscovered buried cultural resources would be encountered during earthmoving activities. Therefore, since the area of disturbance would be reduced under Alternative 2, impacts associated with cultural resources will decrease when compared to the proposed project.

Geology and Soils

Although the size of the recharge facility would be reduced under Alternative 2, the recharge facility would still be located within a seismically active region susceptible to strong seismic ground shaking, expansive soils, and related geotechnical effects. Subsurface characteristics are generally shared throughout the region, and as a result, Alternative 2 would be susceptible to the same soil conditions and issues as the proposed project. Therefore, impacts associated with geology and soils would be similar to the proposed project.

Greenhouse Gas Emissions

Similar to the proposed project, Alternative 2 would require the use of heavy construction equipment and diesel trucks that would produce greenhouse gas emissions during project construction. However, since the size of the recharge facility would be reduced under Alternative 2, there will be a corresponding reduction in the amount of earthmoving activities that would be required. Because of this reduction in earthmoving activities, there would be an incremental reduction in the quantity of greenhouse gases emitted during project construction. During project operations, the berms within Noble Creek would be constructed and removed on an annual basis, requiring the use of a dozer over the course of approximately 5 days annually, which is roughly the same amount of time required for the proposed project's annual maintenance activities. Therefore, since construction emissions would be incrementally reduced under Alternative 2, impacts associated with greenhouse gases would decrease when compared to the proposed project.

Hazards and Hazardous Materials

While the size of the recharge facility would be reduced under Alternative 2, the recharge facility would still be located within the search radius of the same potentially hazardous materials sites evaluated for the proposed project. As addressed in Section 3.6, Hazards and Hazardous Materials, none of these potentially hazardous materials sites represent a recognized environmental concern (REC). As a result, Alternative 2 would not be affected by any such hazardous sites. Therefore, impacts associated with hazards and hazardous materials would be similar to the proposed project.

Hydrology and Water Quality

Alternative 2 would be located within Noble Creek, an area designated by FEMA as Zone A, which is a Special Flood Hazard Area (SFHA) subject to inundation by a 100-year flood. The berms that are constructed as part of Alternative 2 would be removed during the flood season and constructed during the non-flood season. Therefore, less than significant effects related to flood flows would occur with the implementation of Alternative 2. This potential effect will be greater under Alternative 2 compared to the proposed project.

Noise

Similar to the proposed project, Alternative 2 would require the use of heavy construction equipment and diesel trucks that would produce higher noise levels during project construction. However, since the size of the recharge facility would be reduced under Alternative 2, there will be a corresponding reduction in the amount of earthmoving activities that would be required. Because of this reduction in earthmoving activities, there would be an incremental reduction in the duration of noise that would be emitted during project construction. During project operations, the berms within Noble Creek would be constructed and removed on an annual basis, requiring the use of a dozer over the course of approximately 5 days annually, which is roughly the same amount of time required for the proposed project's annual maintenance activities. Therefore, since construction noise levels would be incrementally reduced under Alternative 2, impacts associated with noise would decrease when compared to the proposed project.

Transportation and Traffic

While the size of the recharge facility would be reduced under Alternative 2, the amount of haul trips related to pipeline excavation activities would remain similar to the proposed project. The length of the pipeline under Alternative 2 would generally remain the same as the proposed project, and as a result, the number of haul trips required during pipeline construction would not change. Therefore, impacts associated with transportation and traffic materials would be similar to the proposed project.

Conclusion and Relationship to Project Objectives

Alternative 2 would result in a reduction in project impacts associated with air quality, cultural resources, greenhouse gas emissions, and noise. Impacts associated with geology and soils, hazards and hazardous materials, and transportation and traffic would be similar to the proposed project. Alternative 2 would result in increase impacts related to biological resources and hydrology/water quality. Overall, the implementation of Alternative 2 could be considered environmentally superior to the proposed project.

Alternative 2 could meet most of the project objectives. This alternative could result in recurring impacts to sensitive habitat and species within Noble Creek and may not provide the SGPWA with a cost effective system of replenishing groundwater in the region, as the collective costs of purchasing or leasing the site from its current owner, the Riverside County Flood Control and Water

Conservation District (RCFCWCD); constructing and removing the berms on an annual basis; and performing emergency maintenance on the berms following large storm events would result in higher recurring costs compared to the proposed project.

7.4 - Secondary Alternate Site Location Alternative (Alternative 3)

Under the Secondary Alternate Site Location Alternative (Alternative 3), the recharge facility would be constructed on the 101-acre site located north of Oak Valley Parkway, east and south of Noble Creek, and west of Mountain View Avenue. The Alternative 3 site includes 101 acres, 40.4 acres available for spreading, and 36,400 AFY of estimated recharge potential. However, based on the presence of the approximately 200-foot wide Southern California utility easement, as well as irregular terrain, on the southern portion of this site, this alternative assumes the construction of a recharge facility of approximately the same size as the proposed project (e.g., +/-44 acres, 20 acres available for spreading, 3,00 to 4,000 AFY of estimated recharge during normal operations and a capacity of up to 14,500 AFY) on the northern half of the Alternative 3 site.

Due to the more southwesterly location of the Alternative 3 site, the pipeline length would be increased approximately 1,250 feet as compared to the proposed project. The service connection facility would be constructed as proposed without any modifications.

Impact Analysis

Air Quality

Similar to the proposed project, Alternative 3 would require the use of heavy construction equipment and diesel trucks that would produce air pollutant emissions during project construction. Since the size of the recharge facility would remain the same under Alternative 3, the amount of earthmoving activities would be similar as well. However, since Alternative 3 would require an additional 1,250 feet of pipeline, there will be a corresponding increase in the amount of pipeline excavation activities that would be required. Because of this increase in excavation activities, there would be an incremental increase in the quantity of air pollutants emitted during project construction. During project operations, maintenance activities would require the use of a dozer over the course of approximately 5 days annually, which is the same amount of time required for the proposed project's annual maintenance activities. Therefore, since construction emissions would be incrementally increased under Alternative 3, impacts associated with air quality would increase when compared to the proposed project.

Biological Resources

Based on a general review of the habitat within the northern portion of Alternative 3 and based on information derived from the focused trapping and survey efforts that were conducted on the proposed recharge basin site as well as adjacent areas, the unnamed creek that extends west of Mountain View Avenue has a low to moderate potential for LAPM and the upper benches of Noble

Creek have a moderate potential for LAPM. While the jurisdictional status of the unnamed drainage west of Cougar Way is presently undelineated, this feature could have state and federal jurisdiction. Due to the potential for Alternative 3 to potentially impact LAPM and state and federal jurisdictional areas, the implementation of Alternative 3 could have an increased impact on biological resources compared to the proposed project.

Cultural Resources

Similar to the proposed project, Alternative 3 would require earthmoving activities that could affect unknown buried cultural resources. However, since Alternative 3 would require an additional 1,250 feet of pipeline, there will be a corresponding increase in the amount of pipeline excavation activities that would be required, and thus, an increase in the potential that undiscovered buried cultural resources would be encountered during earthmoving activities. Therefore, since the area of disturbance would be increase under Alternative 3, potential impacts associated with cultural resources will increase when compared to the proposed project.

Geology and Soils

Similar to the proposed project, the Alternative 3 site would still be located within a seismically active region susceptible to strong seismic ground shaking, expansive soils, and related geotechnical effects. Subsurface characteristics are generally shared throughout the region, and as a result, Alternative 3 would be susceptible to same soil conditions and issues as the proposed project. Therefore, impacts associated with geology and soils would be similar to the proposed project.

Greenhouse Gas Emissions

Similar to the proposed project, Alternative 3 would require the use of heavy construction equipment and diesel trucks that would produce greenhouse gas emissions during project construction. Since the size of the recharge facility would remain the same under Alternative 3, the amount of earthmoving activities would be similar as well. However, since Alternative 3 would require an additional 1,250 feet of pipeline, there will be a corresponding increase in the amount of pipeline excavation activities that would be required. Because of this increase in excavation activities, there would be an incremental increase in the quantity of greenhouse gases emitted during project construction. During project operations, maintenance activities would require the use of a dozer over the course of approximately 5 days annually, which is the same amount of time required for the proposed project's annual maintenance activities. Therefore, since construction emissions would be incrementally increased under Alternative 2, impacts associated with greenhouse gases would increase when compared to the proposed project.

Hazards and Hazardous Materials

Similar to the proposed project, the Alternative 3 site would still be located within the search radius of the same potentially hazardous materials sites evaluated for the proposed project. As addressed in Section 3.6, Hazards and Hazardous Materials, none of the potential hazardous materials sites

represent a REC. As a result, the Alternative 3 site would not be affected by any such hazardous sites. Therefore, impacts associated with hazards and hazardous materials would be similar to the proposed project.

Hydrology and Water Quality

Similar to the proposed project, the recharge facility constructed under Alternative 3 would be located outside of an area designated by FEMA as Zone A, which is a Special Flood Hazard Area (SFHA) subject to inundation by a 100-year flood. As a result, Alternative 3 would not be susceptible to 100-year flood events and would not redirect flood flows within a 100-year flood hazard area. Therefore, impacts associated with hydrology and water quality would be similar to the proposed project.

Noise

Similar to the proposed project, Alternative 3 would require the use of heavy construction equipment and diesel trucks that would produce higher noise levels during project construction. The size of the recharge facility would remain the same under Alternative 3 as the proposed project. The amount of earthmoving activities would be similar as well. However, the design of the basins could be different under this alternative resulting in less grading operations adjacent to Mountain View Middle School. Under the proposed project, grading operations would include the excavation of the recharge basins and fill in the southern portion of the recharge basin site adjacent to Mountain View Middle School. Under alternative 3, the fill portion could be located further away from the school and result in less noise impacts. Although Alternative 3 would require an additional 1,250 feet of pipeline and a corresponding increase in the amount of pipeline excavation activities, the placement of fill material further away from the school compared to the proposed project could result in less noise impacts to sensitive uses (i.e., school) compared to the proposed project.

Transportation and Traffic

Since Alternative 3 would require an additional 1,250 feet of pipeline, there will be a corresponding increase in the amount of excavation activities that would be required. While the size of the recharge facility would remain the same under Alternative 3, the amount of haul trips would increase, as the majority of haul trips will be related to pipeline excavation. Therefore, since the number of haul trips would increase, impacts associated with transportation and traffic would increase when compared to the proposed project.

Conclusion and Relationship to Project Objectives

Alternative 3 could result in less noise impacts during construction activities compared to the proposed project. This alternative would result in similar impacts associated with geology and soils, hazards and hazardous materials, and hydrology and water quality compared to the proposed project. Alternative 3 would result in increase impacts related to air quality, biological resources, cultural resources, greenhouse gas emissions, noise, and transportation and traffic. Overall, Alternative 3 would not be environmentally superior to the proposed project.

Alternative 3 could meet the basic objectives of the project. To implement Alternative 3, the SGPWA would be required to purchase or lease the property from its present owner, Noble Creek Meadows, LLC.

7.5 - Environmentally Superior Alternative

Section 15126(e)(2) of the CEQA Guidelines requires an EIR to identify an "environmentally superior alternative." If the No Project Alternative is the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives.

Each of the three alternatives would have a reduction of at least one environmental impact relative to the proposed project. As previously addressed, if the No Project Alternative is the environmentally superior alternative, which is the case with the conclusions in this alternatives analysis, the EIR must also identify another environmentally superior alternative among the remaining alternatives. Table 7-1 provides a comparison of the proposed project and the three alternatives based on the environmental topics addressed in Section 3, Environmental Impact Analysis.

Based on a comparison of the two build alternatives (Alternatives 2 and 3), impacts associated with air quality, cultural resources, greenhouse gas emissions, noise, and traffic would be less under Alternative 2 compared to Alternative 3. Impacts associated with geology and soils, and hazards and hazardous materials under Alternative 2 would be similar to Alternative 3. Impacts associated with biological resources and hydrology and water quality would be greater under Alternative 2 compared to Alternative 3. Overall, based on the above evaluations, the Reduced Footprint/Alternate Site Alternative (Alternative 2) is considered the environmentally superior alternative.

Table 7-1: Alternatives Comparison

Environmental Issue	Proposed Project	Alternative 1: No Project Alternative	Alternative 2: Reduced Footprint/Alternate Site Alternative	Alternative 3: Secondary Alternate Site Location Alternative
Air Quality	SM	NI (L)	LTS (L)	SM (G)
Biological Resources	SM	NI (L)	SM (G)	SM (G)
Cultural Resources	SM	NI (L)	SM (L)	SM (G)
Geology and Soils	SM	NI (L)	SM (E)	LTS (E)
Greenhouse Gas Emissions	LTS	NI (L)	SM (L)	LTS (G)
Hazards and Hazardous Materials	LTS	NI (L)	SM (E)	LTS (E)

Table 7-1 (cont.): Alternatives Comparison

Environmental Issue	Proposed Project	Alternative 1: No Project Alternative	Alternative 2: Reduced Footprint/Alternate Site Alternative	Alternative 3: Secondary Alternate Site Location Alternative
Hydrology and Water Quality	LTS	LTS (E)	LTS (G)	LTS (E)
Noise	LTS	NI (L)	LTS (L)	LTS (L)
Transportation and Traffic	LTS	NI (L)	LTS (E)	LTS (G)

Abbreviations:
L Lesser impact than the proposed project
E Equivalent impact to the proposed project
G Greater impact than the proposed project
SM Significant Prior to Mitigation, but Less Than Significant After Mitigation
NI No Impact
LTS Less than Significant

SECTION 8: PERSONS AND ORGANIZATIONS CONSULTED

8.1 - Public Agencies

8.1.1 - San Gorgonio Pass Water Agency

General Manager ..... Jeff Davis, P.E.

8.1.2 - City of Beaumont

Planning Department

Director of Planning ..... Rebecca Deming

8.2 - Consultants

Albert A. Webb Associates (Recharge Basin Engineer) ..... Joseph Caldwell, P.E.
Atkins (Pipeline and Service connection Engineer) ..... Erik Howard, P.E.

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9.2 - Lead Consultant

9.2.1 - FirstCarbon Solutions | Michael Brandman Associates

Project Manager ..... Mike Houlihan, AICP
Assistant Project Manager ..... Collin Ramsey, MS
Environmental Specialist ..... Charles Holcombe
Environmental Specialist ..... Arabesque Said
Air Quality Analyst ..... Vince Mirabella
Noise Analyst ..... Katie Wilson
Natural Resources Director ..... Kenneth J. Lord, Ph.D.
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9.3 - Technical Consultants

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9.3.2 - Atkins

Project Engineer – Pipeline and Service Connection ..... Erik Howard, P.E.

9.3.3 - Leighton Consultants, Inc.

Project Geologist.....Philip A. Buchiarelli, CEG
Project Engineer.....Jason D. Hertzberg, GE

9.3.4 - Converse Consultants

Project Engineer..... Hashmi S. E. Quazi, Ph.D., G.E., P.E.

9.3.5 - Urban Crossroads

Project Traffic Engineer..... Carleton Waters, P.E.

9.4 - Legal Counsel

9.4.1 - Best Best & Krieger LLP

Project Attorney..... Charity Schiller

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