Subsequent Initial Study and Mitigated Negative Declaration

Quail Valley Sewer Improvements Subarea 9, Phase 1 (State Clearinghouse No. 2010031113)

Prepared for:

Eastern Municipal Water District
Post Office Box 8300
Perris, California 92572-8300

Prepared by:

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July 2015

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Executive Summary

Project Summary

EMWD intends to construct a wastewater collection system to serve the properties in the Quail Valley Subarea 9 Phase I area. The proposed sewer Improvement project will include the installation of sewers along Vista Way, Casa Bonita Avenue, Datil Drive, and Platino Drive located within the Phase 1 project boundary. Approximately 1.6 miles of 8-inch diameter collection pipelines will be installed within the public right-of-way and sewer laterals will extend onto private property to service residences. The sewer laterals will connect to sewer sources at the private property eliminating the need for septic tanks.

The majority of pipelines will be installed in the public rights-of-way using conventional open cut construction methods. Based on the geological formations, a portion of the pipeline and sewer laterals may utilize specialized construction methods such as directional drilling or micro tunneling. There will be traffic impacts during construction along the public streets. Proper traffic control measures will be implemented to route the traffic away from the work area and to protect the public. The sewer laterals at private residences will be constructed after obtaining right-of-entry agreements from the property owners. The property owners will be notified well in advance of any construction activity within their private property. All the construction activities will take place during normal working hours of 7:00 am to 5:00 pm, Monday through Friday.

Wastewater will be conveyed from the Quail Valley Sewer Improvements Subarea 9 – Phase 1 Project to the regional lift station near the intersection of Audie Murphy Ranch Road and Normandy Road. At this time, EMWD is considering two alternative alignments for the “transport line”.

The first alternative alignment (Alternative A) would include a new 8-inch diameter pipeline from Manhole “A” in Vista Way which would be constructed across a vacant property adjacent to Vista Way (APN: 351-084-016) and then along the property boundary of two additional properties (APN: 351-084-017 and 351-084-028) before reaching the northwesterly side of the Audie Murphy Ranch Development. The 8-inch pipeline would be constructed through the proposed fire station property and finally connected to Manhole “F” at “A” Street in the Audie Murphy Ranch Development. An 18-inch diameter pipeline would then follow the alignment from A Street in a southerly direction to its intersection with B Street. It would then follow B Street in an easterly direction to its intersection with Goetz Road. It would then follow Goetz Road in a southerly direction to its intersection with Audie Murphy Ranch Road. It would then follow Audie Murphy Ranch Road in an easterly and northeasterly direction to the regional lift station to be constructed near the intersection of Audie Murphy Ranch Road and Normandy Road (Figure ES-1).

The second alternative alignment (Alternative B) would follow the same route from Vista Way to Manhole “F” at “A” Street in the Audie Murphy Ranch Development. It would then follow “D” Street in a southeasterly direction to its intersection with “C” Street and thence in a northeasterly direction along “C” Street to its intersection with Goetz Road. It would then follow Goetz Road in a southerly direction to its intersection with Audie Murphy Ranch Road. It would then follow Audie Murphy Ranch Road in an easterly and northeasterly direction to the regional lift station to be constructed near the intersection of Audie Murphy Ranch Road and Normandy Road.

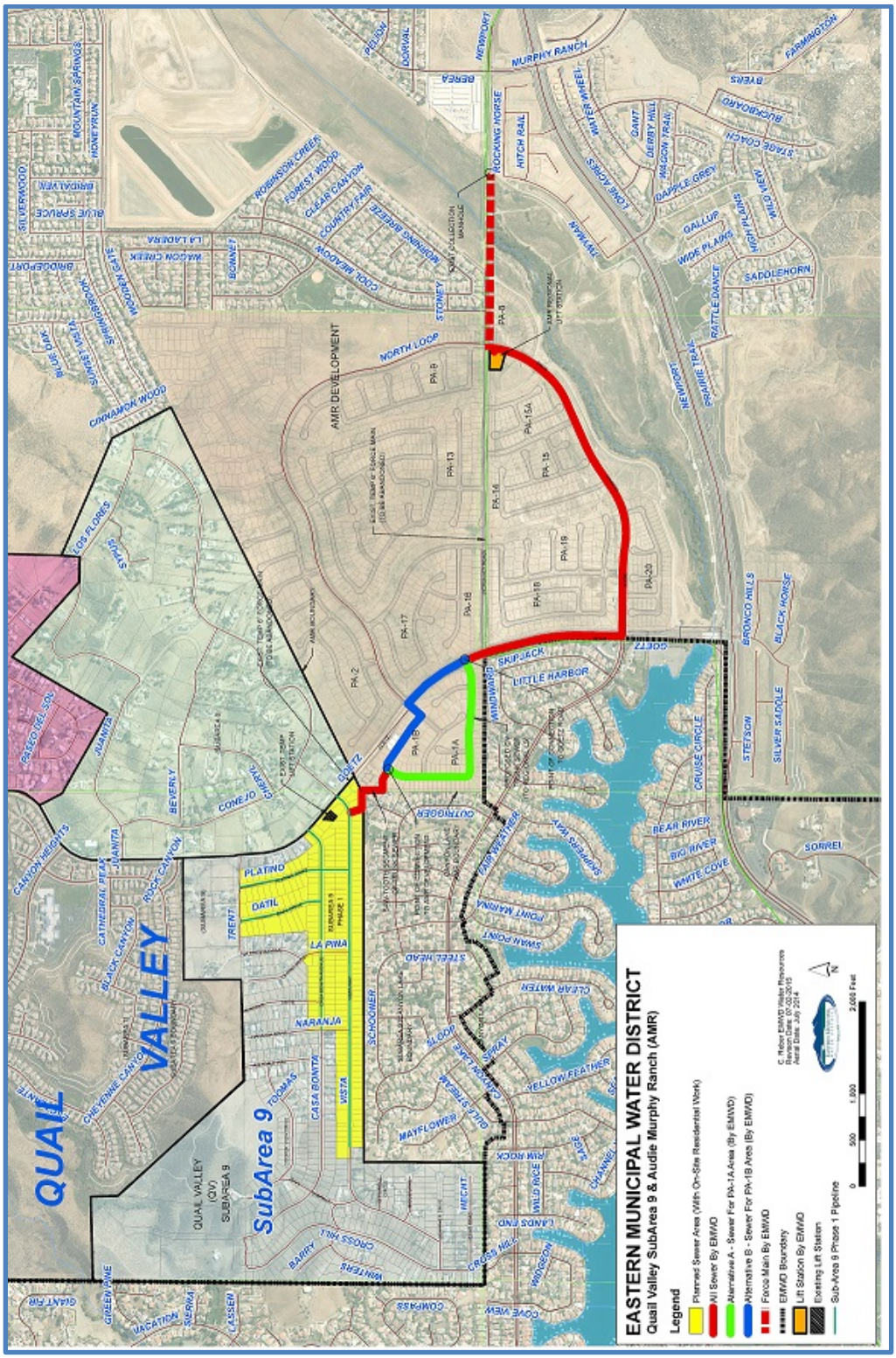

Figure ES-1 Quail Valley Subarea 9 – Phase 1 Wastewater Project

The regional lift station would be designed to handle flows from 750 gallons per minute (gpm) to 2,900 gpm. It would include two wet wells each 10 feet in diameter and 30 feet deep. It would also include engineering controls including sealed wet well covers, standby pumps and an emergency generator to reduce the potential for the release of odorous gases from the facility. The facility would also include an active air phase odor control system which would be operated when necessary.

Two 10-inch diameter force mains would also be constructed from the regional lift station to an existing collection manhole located in Normandy Road.

Impacts and Mitigation Measures

Table ES-1 identifies each significant effect and proposed mitigation measures that would reduce or avoid that effect. Proposed mitigation measures are EMWD Staff's and its consultant's recommendations to reduce potential impacts associated with implementation of the proposed Project. Should EMWD's Board of Directors adopt the Mitigation Monitoring and Reporting Program (Appendix E in the Subsequent Initial Study and Mitigated Negative Declaration document) including these mitigation measures would become mandatory and part of the Project.

Table ES-1
Impacts and Mitigation Measures

Impact	Recommended Mitigation Measures	Level of Significance After Mitigation
Aesthetics		
None.	None required.	N/A
Agricultural and Forest Resources		
None.	None required.	N/A
Air Quality		
Temporary emissions from equipment during construction.	EMWD will: ❖ Appoint a construction relations officer to act as a community liaison concerning on-site construction activities including resolution of issues related to PM_{10} generation. ❖ In addition, add the following best management practices in its contract documents for this Project: The contractor shall: ❖ Utilize electricity from on-site power sources instead of from temporary diesel or gasoline powered generators, when feasible. ❖ Require the use of 2010 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export) and if the lead agency determines that 2010 model year or newer diesel trucks cannot be obtained the contractor shall use trucks that meet EPA 2007 model year NO_x emissions requirements. ❖ Require that all on-site construction	Less than significant.

Impact	Recommended Mitigation Measures	Level of Significance After Mitigation
	equipment meet EPA Tier 3 or higher emissions standards according to the following: ✓ All construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. ✓ A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided at the time of mobilization of each applicable unit of equipment. ❖ Maintain construction equipment engines by keeping them properly tuned and maintained according to manufacturer's specifications. ❖ Use alternative fuels or clean and low-sulfur fuel for equipment. ❖ Idle trucks in accordance with the Airborne Toxic Control Measure (ACTM) to Limit Diesel Fueled Commercial Motor Vehicle Idling and other applicable laws. ❖ Water site and equipment as necessary to control dust. ❖ Sweep all streets at least once per day using SCAQMD Rule 1186 certified street sweepers or roadway washing trucks if visible soil materials are carried to adjacent streets. ❖ Conduct operations in accordance with SCAQMD Rule 403 requirements. ❖ If necessary, wash off trucks leaving the site. ❖ Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least two feet of freeboard in accordance with the requirements of California Vehicle Code (CVC) Section 23114.	

Impact	Recommended Mitigation Measures	Level of Significance After Mitigation
Biological Resources		
Potential Impacts to nesting birds.	❖ If ground-disturbing activities or removal of any trees, shrubs, or any other potential nesting habitat are scheduled within the avian nesting season (nesting season generally extends from February 1 - August 31), a pre-construction clearance survey for nesting birds shall be conducted within 10 days prior to any ground disturbing activities. The biologist conducting the clearance survey should document a negative survey with a brief letter report indicating that no impacts to active bird nests will occur. If an active avian nest is discovered during the 10-day preconstruction clearance survey, construction activities should stay outside of a 300-foot buffer around the active nest. For raptor species, this buffer is expanded to 500 feet. It is recommended that a biological monitor be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged, normal construction activities can occur.	Less than significant.
Potential impacts to burrowing owls.	❖ A burrowing owl clearance survey shall be conducted prior to any ground disturbing activities in accordance with the CDFW 2012 Staff Report on Burrowing Owl Mitigation. Two pre-construction clearance surveys shall be conducted 14-30 days and 24 hours prior to ground disturbing activities to document the continued absence of burrowing owl from the Project site.	Less than significant.
Cultural Resources		
Possible inadvertent discoveries of cultural resources during excavation activities.	Although there were no archeological resources as defined in §15064.5 of the State CEQA Guidelines identified on the Project site, there is always the possibility of inadvertent discoveries during excavation activities. Therefore, EMWD will adhere to the following: ❖ At least 30 days prior to beginning Project construction, EMWD shall contact the Pechanga Band of Luiseño Indians to notify the Luiseño of grading and excavation activities and to coordinate and develop a Cultural Resources Treatment and Monitoring Agreement. The Agreement shall address the treatment of known cultural resources; the designation, responsibilities, and participation of a professional Native American Tribal monitor during grading, excavation and other ground disturbing activities; Project grading and excavation schedule; terms of compensation for the monitor; and treatment and final disposition of any cultural resources, sacred items and human remains discovered on site. The Tribal monitor shall be allowed to monitor all grading, excavation and ground disturbing activities and, with the concurrence of EMWD's Field Engineering Inspector, have the authority to stop or redirect grading and/or excavation	Less than significant.

Impact	Recommended Mitigation Measures	Level of Significance After Mitigation
	activities. ❖ If inadvertent discoveries of cultural resources are encountered at any time during construction, these materials and their context shall be avoided until a qualified archeologist and representatives from the Pechanga Band of Luiseño Indians have consulted with EMWD regarding appropriate avoidance and mitigation measures for the newly discovered resources. Project personnel shall not collect or retain cultural resources. Prehistoric resources include, but are not limited to: chert or obsidian flakes; projectile points; mortars and pestles; dark, friable soil containing shell and bone; dietary debris; heat-affected rock; or human burials. Historic resources include stone or adobe foundations or walls; structures and remains with square nails; and refuse deposits (glass, metal, wood, ceramics), often found in old wells and privies. Pursuant to California Public Resources Code §21083.2(b) avoidance is the preferred method of preservation for archeological resources. ❖ All sacred items, should they be encountered within the project site, shall be avoided and preserved as the preferred mitigation, if feasible. All cultural materials that are collected during excavation and other earth disturbing activities on the Project site, with the exception of sacred items, burial goods and human remains which will be addressed in the Treatment Agreement, shall be tribally curated according to the current professional repository standards. The collections and associated records shall be transferred, including title, to the Pechanga Band of Luiseño Indians. ❖ In addition, EMWD will relinquish ownership of all cultural resources, including sacred items, burial goods and all archeological artifacts that are found on the Project site to the Pechanga Band of Luiseño Indians for proper treatment and disposition.	
Possible inadvertent discovery of paleontological resources during excavation activities.	❖ Should construction/development activities uncover paleontological resources, work will be moved to other parts of the Project site and a qualified paleontologist shall be contacted to determine the significance of these resources. If the find is determined to be significant, avoidance or other appropriate measures shall be implemented. Appropriate measures would include that a qualified paleontologist be permitted to recover and evaluate the find(s) in accordance with current standards and guidelines.	Less than significant.

Impact	Recommended Mitigation Measures	Level of Significance After Mitigation
Possible inadvertent discovery of human remains during excavation activities.	❖ Consistent with State CEQA Guidelines §15064.5, subdivision (e), in the event of an accidental discovery or recognition of any human remains, the County Coroner shall be notified and construction activities at the affected work site shall be halted. If the remains are found to be Native American, the Native American Heritage Commission (NAHC) shall be notified within 24 hours. The NAHC must immediately notify the Most Likely Descendant(s) under Public Resources Code §5097.98 and the descendants must make recommendations or preference for treatment within 24 hours of being granted access to the site. Guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains in accordance with the provisions of Health and Safety Code §7050.5 and Public Resources Code §5097.98.	Less than significant.
Geology and Soils		
Potential to encounter groundwater during excavation of the pipeline trenches.	Due to the likelihood of encountering groundwater within the pipe zone and to mitigate potential impacts to the greatest extent feasible, EMWD shall include the following mitigation measures in its construction specifications for the proposed Project: ❖ Where pipe bedding is necessary to bring the trench bottom up to grade, a minimum of six (6) inches will be placed to provide uniform and adequate longitudinal support under the pipe. ❖ In the event groundwater is encountered on Vista Way, placement of clay dams shall be required at 500 foot intervals and any other locations where groundwater is encountered within the pipe zone. Elsewhere, dams shall be placed as directed in the field by the engineer. ❖ All excavations shall be configured in accordance with the requirements of CalOSHA. Classification of the soil and the shoring and/or slope configuration shall be determined by the contractor prior to excavation on the basis of trench depth and the soil encountered. The contractor shall have a "competent person" on-site for the purposes of assuring safety within and about all construction excavations.	Less than significant.
Hazards and Hazardous Materials		
During construction, the contractor would utilize equipment that uses petroleum based fuels and lubricants, which are subject to both leakage from engine blocks and containers or spilling during refueling and lubrication operations.	To reduce potentially hazardous conditions and minimize the impacts from the handling of potentially hazardous materials, EMWD shall include the following in its construction contract documents: ❖ The contractor(s) shall prepare a *Health and Safety Plan* in compliance with the requirements of Chapter 6.95, Division 20 of the Health and Safety Code (§§ 25500—25532). The plan shall include measures to be taken in the event of an accidental spill.	Less than significant.

Impact	Recommended Mitigation Measures	Level of Significance After Mitigation
	❖ The contractor(s) shall enforce strict on-site handling rules to keep construction and maintenance materials out of receiving waters and storm drains. In addition, the contractor(s) shall store all reserve fuel supplies only within the confines of a designated construction staging area, refuel equipment only within the designated construction staging area, and regularly inspect all construction equipment for leaks. ❖ The construction staging area shall be designed to contain contaminants such as oil, grease, and fuel products so that they do not drain towards receiving waters or storm drain inlets.	
Potential limited access to emergency responders during construction of the pipelines.	To further ensure adequate ingress and egress for emergency responders at all time, EMWD shall include the following in its construction specifications for this Project: ❖ Traffic control plans shall be prepared by a qualified professional engineer prior to construction. ❖ Traffic control plans shall consider the ability of alternative routes to carry additional traffic and identify the least disruptive hours of construction site truck access routes and the type and location of warning signs, lights and other traffic control devices. Consideration shall be given to maintaining access to commercial parking lots, private driveways and sidewalks, bikeways and equestrian traffic to the greatest extent possible. ❖ Traffic control plans shall comply with Part 6 of the California Manual on Uniform Traffic Control Devices and the California Supplement as determined by each affected local agency to minimize any traffic and pedestrian hazards that exist during project construction. ❖ Encroachment permits for all work within public rights-of-way shall be obtained from each affected local agency prior to commencement of any construction. EMWD shall comply with all traffic control requirements of the affected local agencies. ❖ Working hours and lane closures shall be as specified by the affected local agency. ❖ Public streets shall be restored to a condition mutually agreed to between EMWD and the local jurisdictions prior to construction.	Less than significant.
Hydrology and Water Quality		
Potential impacts to water quality due to sediment laden runoff from the construction sites.	EMWD shall require contractors to implement a program of best management practices (BMP's) and	Less than significant.

Impact	Recommended Mitigation Measures	Level of Significance After Mitigation
	best available technologies to reduce potential impacts to water quality that may result from construction activities. To reduce or eliminate construction-related water quality impacts before the onset of construction activities, EMWD shall obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Construction Permit. Construction activities shall comply with the conditions of this permit that include preparation of a storm water pollution prevention plan, implementation of BMP's, and monitoring to insure impacts to water quality are minimized. As part of this process, multiple BMP's shall be implemented to provide effective erosion and sediment control. These BMP's shall be selected to achieve maximum sediment removal and represent the best available technology that is economically achievable. BMP's to be implemented as part of this mitigation measure shall include, but not be limited to, the following: ❖ Temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other groundcover shall be employed for disturbed areas. ❖ Storm drain inlets on the site and in downstream offsite areas shall be protected from sediment with the use of BMP's acceptable to EMWD, local jurisdictions and the California Regional Water Quality Control Board, Santa Ana Region. ❖ Dirt and debris shall be swept from paved streets in the construction zone on a regular basis, particularly before predicted rainfall events. ❖ No disturbed surfaces shall be left without erosion control measures in place between October 15 and April 15. EMWD shall file a Notice of Intent with the Regional Board and require the preparation of a pollution prevention plan prior to commencement of construction. EMWD shall routinely inspect the construction site to verify that the BMP's specified in the pollution prevention plan are properly installed and maintained. EMWD shall immediately notify the contractor if there were a noncompliance issue and require immediate compliance. ❖ Controls on construction site dewatering shall be implemented. If possible, water generated as a result of construction site dewatering shall be discharged onsite so that there will be no discharge to downstream Canyon Lake. If discharge to surface water were unavoidable,	

Impact	Recommended Mitigation Measures	Level of Significance After Mitigation
	EMWD shall obtain coverage under the NPDES General Dewatering Permit prior to commencement of construction. The provisions of this permit are sufficiently protective of water quality to ensure that impacts to surface waters will remain below significance thresholds. During dewatering activities, all permit conditions shall be followed. EMWD shall routinely inspect the construction site to verify that all permit measures are properly implemented. EMWD shall notify the contractor of any noncompliance and require immediate compliance.	
Land Use and Planning		
None.	None Required.	N/A
Mineral Resources		
None.	None Required.	N/A
Noise		
It may be necessary to utilizing blasting during construction of the pipelines which could cause groundbourne vibration.	In order to minimize impacts related to blasting to the greatest extent feasible, EMWD shall notify all affected homeowners of the possible inconvenience as soon as a firm construction schedule is known. In addition, EMWD shall include the following in its construction specifications for this Project: ❖ Any blasting shall be done by a licensed blasting contractor. ❖ Each blast shall be monitored and recorded with an approved seismic monitor outside of the closest residence to the blast. ❖ Residents shall be notified well in advance of the blasts. ❖ The blasting plan, including calculations, shall be submitted to the City of Menifee for review and approval prior to the first blast. ❖ EMWD's consultant shall include additional specification language to mitigate air-borne sound waves.	Less than significant.
Construction activities would temporarily increase the ambient noise levels in the Project area.	EMWD should include the following in its construction contract documents: ❖ All equipment used during construction shall be muffled and maintained in good operating condition. All internal combustion engines should be fitted with well-maintained mufflers in accordance with manufacturer's recommendations.	Less than significant.
Population and Land Use		
None.	None Required	N/A
Public Services		
None.	None Required	N/A
Recreation		
None.	None Required	N/A

Impact	Recommended Mitigation Measures	Level of Significance After Mitigation
Traffic/Transportation		
During construction of the pipelines, there could be times that traffic lanes of affected streets could be closed.	See mitigation measures included under *Hazards and Hazardous Materials*.	Less than Significant
Utilities and Service Systems		
None.	None Required.	N/A

Areas of Controversy

There are no areas of controversy associated with the Quail Valley Sewer Improvements Subarea 9, Phase 1 Project.

Issues to be Resolved

At this time, EMWD has not selected the final alignment of the "transport" line to the regional lift station.

Document Availability and Contact Personnel

The Subsequent Initial Study and Mitigated Negative Declaration as well as the May 2010 Final Initial Study and Mitigated Negative Declaration and the Addendum to the May 2010 Final Initial Study and Mitigated Negative Declaration are available for review at the following locations:

Eastern Municipal Water District
2270 Trumble Road
Perris, California 92570

http://www.emwd.org/meet-emwd/news-information/public-notices.

All comments regarding the Project or environmental documents should be forwarded to:

Helen Stratton
CEQA/NEPA Analyst II
Eastern Municipal Water District
Post Office Box 8300
Perris, California 92572-8300
951-928-3777 ext. 4545
Email: strattoh@emwd.org

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July 2015

1 Introduction

1.1 Introduction

The May 2010 Initial Study and Mitigated Negative Declaration (IS&MND) for the Quail Valley Sewer Improvements Subarea 9 Project (State Clearinghouse No. 2010031113) was approved by the Eastern Municipal Water District's (EMWD) Board of Directors on June 23, 2010. Also, on June 23, 2010, EMWD filed a Notice of Determination approving the Project with the County of Riverside and the State Clearinghouse.

At the time of Project approval, EMWD proposed the installation of a combination gravity and low pressure sewer collection system to serve the entire Subarea 9 development. As shown on Figure 1.1-1, Subarea 9 is bounded by the City of Canyon Lake to the south and west, Goetz Road to the east, and the Canyon Heights development to the north. At that time, it was also necessary to install a lift station to pump the wastewater into EMWD's Goetz Road Lift Station and Force Main.

Subsequently, EMWD decided to only proceed with the Phase 1 portion of the Project as shown on Figure 1.1-2. The Quail Valley Sub-Area 9, Phase 1 (Phase 1) project will provide gravity sewer services to 149 existing homes and 66 vacant lots located within the Phase 1 project boundary. Phase 1 is bounded by Trent Drive in the north, Goetz Road in the east, and Vista Way on the South. On the western side, it covers part of Vista Way and Casa Bonita Avenue. As shown on Figure 1.1-2, the Phase 1 area covers approximately one third of the Quail Valley Sub-Area 9 sewer Improvements area. The Quail Valley area, which is located within the City of Menifee boundary, is divided into nine sub areas for sewer improvement purposes. As part of the project, existing septic tanks located at residential properties will be abandoned and the pipes connecting to the septic tanks will be sealed off. The sewer from the residential properties will be directed to a public sewer system. This effort is in support of meeting groundwater and surface water quality objectives for the Quail Valley Area of Riverside County contained in California Regional Water Quality Control Board, Santa Ana Region's Resolution No. R8-2006-0024.

Therefore, during July 2014, EMWD published the *Addendum to the May 2010 Final Initial Study and Mitigated Negative Declaration for the Quail Valley Sewer Improvements Subarea 9 Project.* The Addendum was approved by EMWD's Board of Directors on September 17, 2014. Also, on September 17, 2014, EMWD filed a Notice of Determination approving the Project with the County of Riverside and the State Clearinghouse.

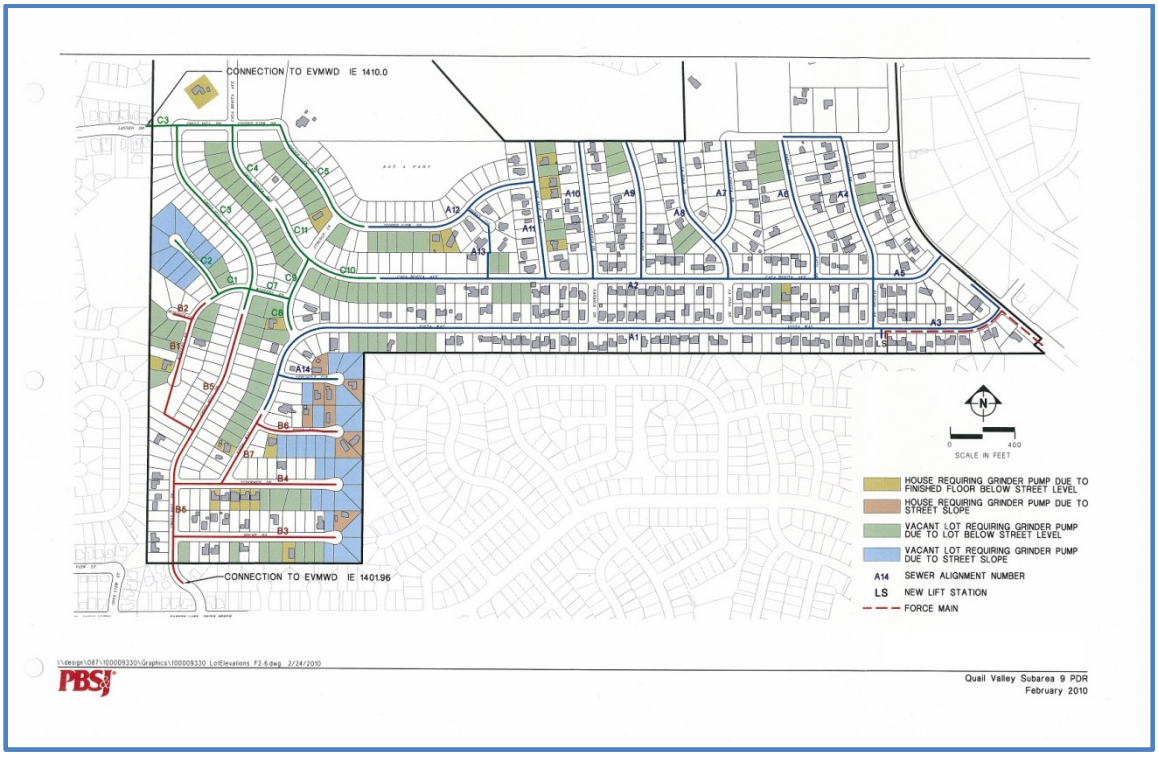

Figure 1.1-1 Quail Valley Sewer Improvements Subarea 9

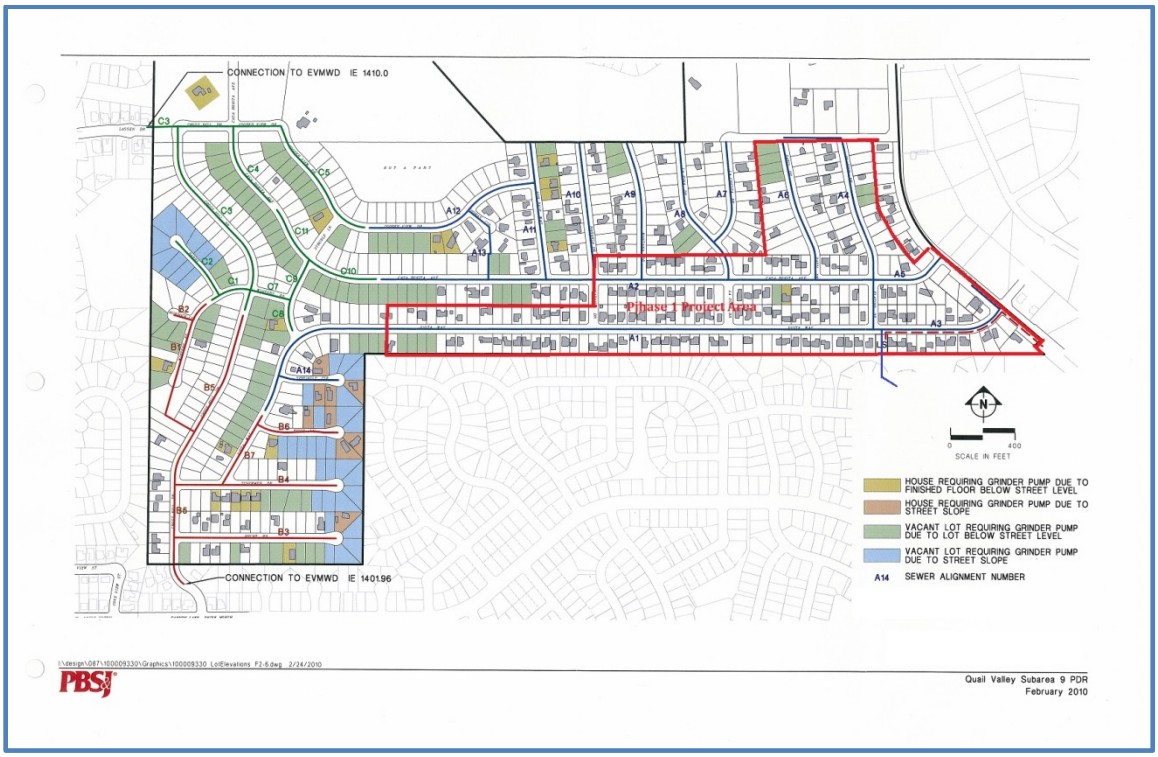

Figure 1.1-2 Quail Valley Sewer Improvements Subarea 9 - Phase 1

The July 2010 Addendum described the project as follows:

The proposed sewer Improvement project will include the installation of sewers along Vista Way, Casa Bonita Avenue, Naranja Drive, Manzana Drive, La Pina Drive, Datil Drive, and Platino Drive located within the Phase 1 project boundary. Approximately 1.6 miles of 8-inch diameter collection pipelines will be installed within the public right-of-way and sewer laterals will extend onto private property to service residences. The sewer laterals will connect to sewer sources at the private property eliminating the need for septic tanks. For those 85 private properties located well below the street grade, there will be a need to install grinder pumps to lift the sewage to the collection system.

The majority of pipelines will be installed in the public rights-of-way using conventional open cut construction methods. Based on the geological formations, a portion of the pipeline and sewer laterals may utilize specialized construction methods such as directional drilling or micro tunneling. There will be traffic impacts during construction along the public streets. Proper traffic control measures will be implemented to route the traffic away from the work area and to protect the public. The sewer laterals at private residences will be constructed after obtaining right-of-entry agreements from the property owners. The property owners will be notified well in advance of any construction activity within their private property. All the construction activities will take place during normal working hours of 7:00 am to 5:00 pm.

The entire wastewater flow from Phase 1 will be conveyed by an 8-inch pipeline along Vista Way. There are two alternative alignments to convey the Phase1 flows to Goetz Road and finally to a regional lift station in the Audie Murphy Ranch Development.

Alternative Alignment 1

The 8-inch pipeline in Vista Way would be connected to a new trunk sewer in Goetz Road. Approximately 400 feet of the 21-inch diameter trunk sewer would be constructed along Goetz Road from Vista Way to the Audie Murphy Ranch Development. New manholes would also be constructed at each end of the new trunk sewer. This trunk sewer would be connected to a pipeline in Goetz Road planned for the Audie Murphy Ranch Development. Figure 3 shows the details for the pipe layout for this alignment. As shown on Figure 1.1-3, additional facilities would have to be installed in Goetz Road downstream of the planned connection point. It is anticipated that these facilities would be constructed as part of the Audie Murphy Ranch development. However, if these facilities are not completed by the developers prior to the completion of the Subarea 9, Phase 1 facilities, EMWD would have to construct them to complete its project.

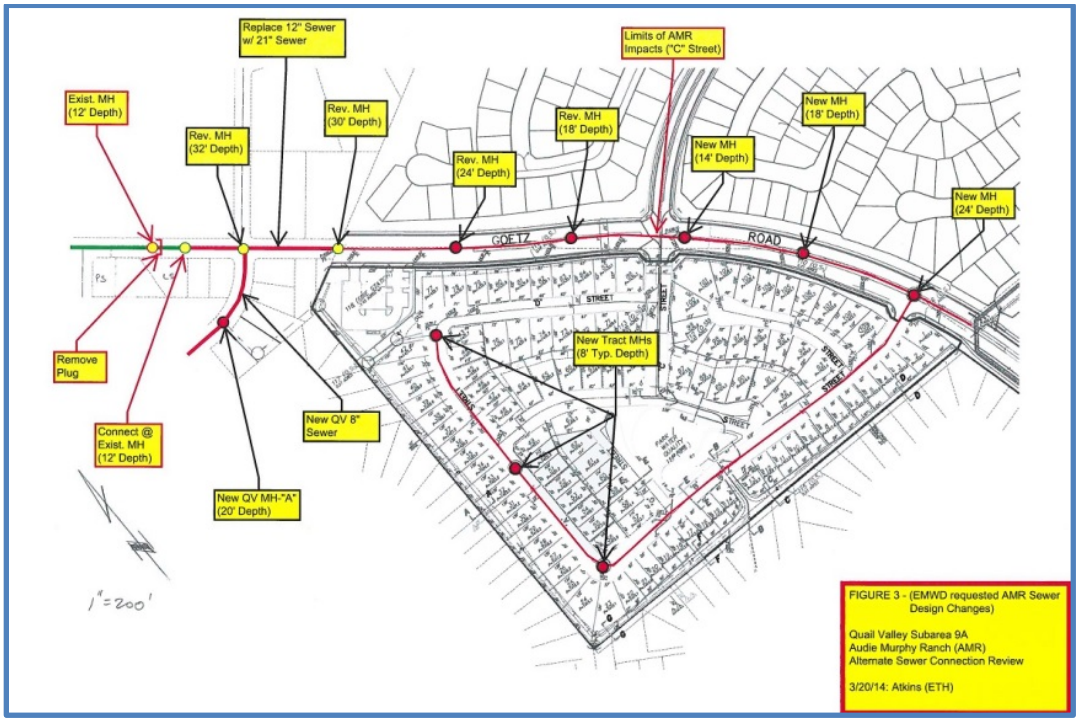

Figure 1.1-3 Alternative Alignment 1

Alternative Alignment 2

The 8-inch pipeline in Vista Way would be terminated at Manhole "A". A new pipeline would be constructed across a vacant property adjacent to Vista Way (APN: 351-084-016) and then along the property boundary of two additional properties (APN: 351-084-017 and 351-084-028) before reaching the northwesterly side of the Audie Murphy Ranch Development. The 8-inch pipeline would be constructed through the proposed fire station property and finally connected to the manhole at "A" Street in the Audie Murphy Ranch Development. Approximately 800 feet of 8-inch diameter pipeline would be constructed from Vista Way to the manhole at "A" Street in the Audie Murphy Ranch Development. Figure 1.1-4 shows the pipe layout for this alignment. As shown in Figure 1.1-4, additional facilities would have to be constructed in the Audie Murphy Ranch and in Goetz Road. It is anticipated that these facilities would be constructed as part of the Audie Murphy Ranch development. However, if these facilities are not completed by the developers prior to the completion of the Subarea 9, Phase 1 facilities, EMWD would have to construct them to complete its project.

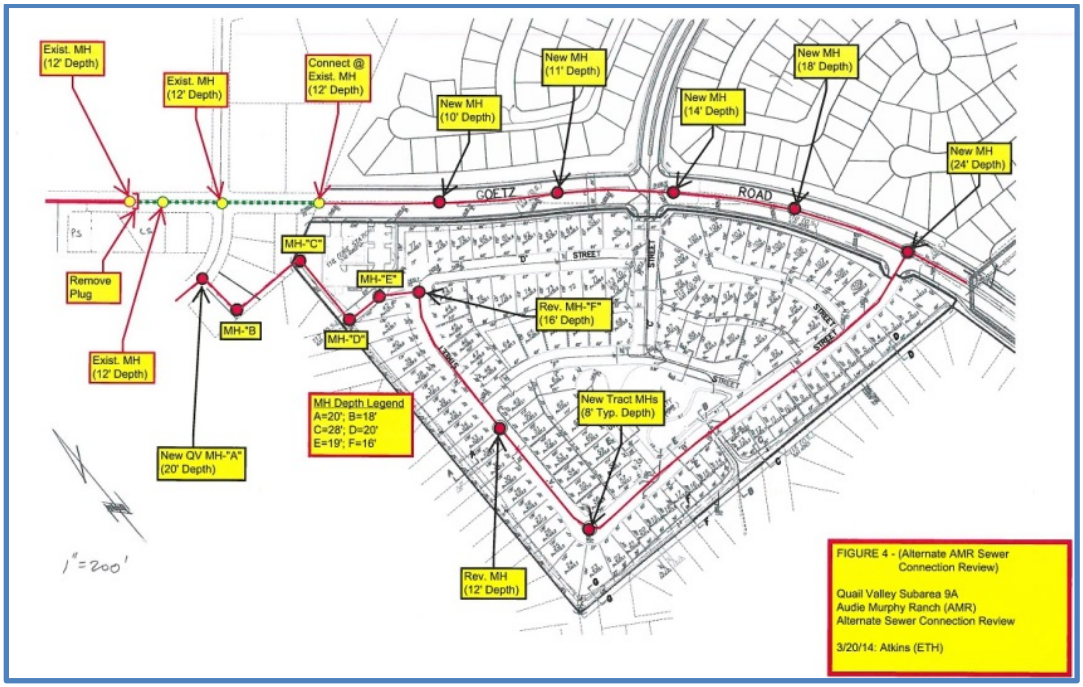

Figure 1.1-4 Alternative Alignment No. 2

EMWD has now determined that the developers of Audie Murphy Ranch will not have its wastewater collection system installed in time to handle the flows from the Quail Valley Sewer Improvements Subarea 9 – Phase 1 Project. It has also determined that Alternative Alignment No. 2 is the preferred alternative method of transporting the upstream flows to the regional wastewater lift station to be constructed in the Audie Murphy Ranch development near the intersection of Audie Murphy Ranch Road and Normandy Road (Figure 1.1-5). However, as shown on Figure 1.1-5, EMWD is still considering two alternative alignments for the "transport" line through PA-1A and PA-1B in the Audie Murphy Ranch development.

The first alternative alignment (Alternative A) would include a new pipeline from Manhole "A" in Vista Way which would be constructed across a vacant property adjacent to Vista Way (APN: 351-084-016) and then along the property boundary of two additional properties (APN: 351-084-017 and 351-084-028) before reaching the northwesterly side of the Audie Murphy Ranch Development. The 8-inch pipeline would be constructed through the proposed fire station property and finally connected to Manhole "F" at "A" Street in the Audie Murphy Ranch Development. The alignment would then follow A Street in a southerly direction to its intersection with B Street. It would then follow B Street in an easterly direction to its intersection with Goetz Road. It would then follow Goetz Road in a southerly direction to its intersection with Audie Murphy Ranch Road. It would then follow Audie Murphy Ranch Road in an easterly and northeasterly direction to the regional lift station to be constructed near the intersection of Audie Murphy Ranch Road and Normandy Road.

The second alternative alignment (Alternative B) would follow the same route from Vista Way to Manhole "F" at "A" Street in the Audie Murphy Ranch Development. It would then follow "D" Street in a southeasterly direction to its intersection with "C" Street and thence in a northeasterly direction along "C" Street to its intersection with Goetz Road. It would then follow Goetz Road in a southerly direction to its intersection with Audie Murphy Ranch Road. It would then follow Audie Murphy Ranch Road in an easterly and northeasterly direction to the regional lift station to be constructed near the intersection of

Audie Murphy Ranch Road and Normandy Road.

The regional lift station would be designed to handle flows from 750 gallons per minute (gpm) to 2,900 gpm. It would include two wet wells both 10 feet in diameter and 30 feet deep. It would also include sealed wet well covers to prevent the escape of odors from the wet well. In addition, it would include a passive air phase odor control system which would be operated as necessary.

Two 10-inch diameter force mains would also be constructed from the regional lift station to an existing collection manhole located in Normandy Road.

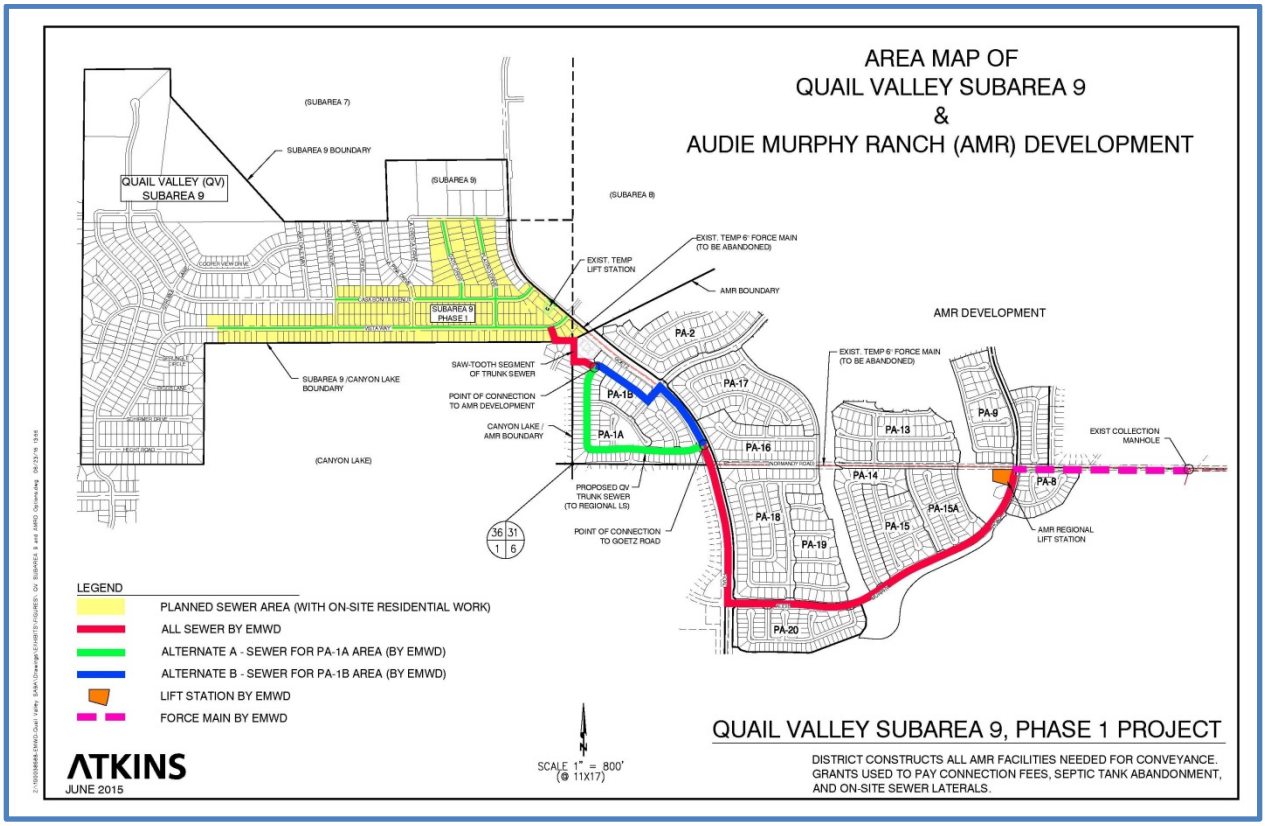

Figure 1.1-5 Quail Valley Subarea 9, Phase 1 Wastewater Project

Due to the change in scope of the Project, EMWD determined that it is necessary to prepare a Subsequent Initial Study and Mitigated Negative Declaration for this Project in accordance with the provisions of §15062 of the State CEQA Guidelines which state:

15162. SUBSEQUENT EIRS AND NEGATIVE DECLARATIONS

(a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the

exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

(b) If changes to a project or its circumstances occur or new information becomes available after adoption of a negative declaration, the lead agency shall prepare a subsequent EIR if required under subdivision (a). Otherwise the lead agency shall determine whether to prepare a subsequent negative declaration, an addendum, or no further documentation.

(c) Once a project has been approved, the lead agency's role in project approval is completed, unless further discretionary approval on that project is required. Information appearing after an approval does not require reopening of that approval. If after the project is approved, any of the conditions described in subdivision (a) occurs, a subsequent EIR or negative declaration shall only be prepared by the public agency which grants the next discretionary approval for the project, if any. In this situation no other responsible agency shall grant an approval for the project until the subsequent EIR has been certified or subsequent negative declaration adopted.

(d) A subsequent EIR or subsequent negative declaration shall be given the same notice and public review as required under Section 15087 or Section 15072. A subsequent EIR or negative declaration shall state where the previous document is available and can be reviewed.

1.2 Subsequent IS&MND

The following Subsequent Initial Study addresses the environmental impacts associated with the Quail Valley Sewer Improvements Project – Subarea 9, Phase I (Project) being implemented by Eastern Municipal Water District (EMWD). This Subsequent Initial Study has been prepared in accordance with the *California Environmental Quality Act of 1970,* as amended, (CEQA), the *State CEQA Guidelines,* and EMWD's Administrative Code Resolution 5111, as amended. EMWD is the Lead Agency for the purposes of CEQA for this project. EMWD will be seeking financial assistance for this project from the Clean Water State Revolving Fund (CWSRF) which is administered by the State Water Resources Control Board's Division of Financial Assistance. Therefore, this document also satisfies the Environmental Review Process Guidelines for State Revolving Fund Loan Applicants.

1.3 California Environmental Quality Act Compliance

The California Environmental Quality Act (California Public Resources Code §21000 *et seq.*: "CEQA"), requires that the environmental impacts of proposed projects be evaluated and that feasible methods to reduce, avoid or eliminate significant adverse impacts of these projects be identified and eliminated. Therefore, to fulfill the purpose and intent of CEQA, EMWD, as the lead agency, has caused this Subsequent Initial Study/Mitigated Negative Declaration (SIS/MND) to be prepared to address the potentially significant adverse environmental impacts associated with implementation of the Project.

1.3.1 Purposes of an Initial Study

The purposes of an Initial Study, as outlined in §15063(c) of the CEQA Guidelines, are:

1) *Provide the Lead Agency with information to use as the basis for deciding whether to prepare an EIR or a Negative Declaration;*

2) *Enable an applicant or Lead Agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a Negative Declaration;*

3) *Assist the preparation of an EIR, if one is required, by:*

   a. *Focusing the EIR on the effects determined to be significant,*
   b. *Identifying the effects determined not to be significant,*
   c. *Explaining the reasons for determining that potentially significant effects would not be significant, and*
   d. *Identifying whether a program EIR, tiering, or another appropriate process can be used for analysis of the project's environmental effects.*

4) *Facilitate environmental assessment early in the design of a project;*

5) *Provide documentation of the factual basis for the finding in a Negative Declaration that a project will not have a significant effect on the environment;*

6) *Eliminate unnecessary EIR's; and*

7) *Determine whether a previously prepared EIR could be used with the project.*

1.3.2 Contents of an Initial Study

The contents of an Initial Study are defined in §15063(d) of the CEQA Guidelines as follows:

1) *A description of the project including the location of the project;*

2) *An identification of the environmental setting;*

3) *An identification of environmental effects by use of a checklist, matrix, or other method, provided that entries on a checklist or other form are briefly explained to indicate that there is some evidence to support the entries. The brief explanation may be either through a narrative or a reference to another information source such as an attached map, photographs, or an earlier EIR or negative declaration. A reference to another document should include, where appropriate, a citation to the page or pages where the information is found;*

4) *A discussion of ways to mitigate the significant effects identified, if any;*

5) *An examination of whether the project would be consistent with existing zoning, plans, and other applicable land use controls;*

6) *The name of the person or persons who prepared or participated in the Initial Study.*

1.3.3 Intended Uses of the Initial Study

The Initial Study will be presented to EMWD's Board of Directors for its use in implementing the California Environmental Quality Act (CEQA). The basic purposes of CEQA as outlined in §15002(a) of the CEQA Guidelines are to:

1) *Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.*

2) *Identify the ways that environmental damage can be avoided or significantly reduced.*

3) *Prevent significant avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.*

4) *Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.*

As pointed out above, one purpose of an Initial Study is:

> Provide the Lead Agency with information to use as the basis for deciding whether to prepare an Environmental Impact Report (EIR) or Negative Declaration.

1.3.4 Lead Agency Decision-Making Process

The Lead Agency (i.e., EMWD) would base its decision on the Project on the findings contained within this Initial Study plus the professional knowledge and judgment of its staff and consultants. During the review process, mitigation measures contained in this document should be evaluated with respect to their effectiveness in reducing impacts to a level of insignificance. Public input, including responsible and trustee agencies, should also be requested and evaluated during the review process.

The approval process for the proposed Project will begin with EMWD's Board of Directors making a decision to prepare a Negative Declaration or an Environmental Impact Report for the Project. Should EMWD decide to prepare a Negative Declaration, based on this Initial Study, it would also determine whether or not it would approve of the Project in accordance with §15074 of the CEQA Guidelines. Should EMWD decide to prepare an Environmental Impact Report for the Project, it would also have to make findings in accordance with §15091 of the CEQA Guidelines and to certify the Final Environmental Impact Report in accordance with §15090 of the CEQA Guidelines.

1.3.5 Approvals for which this Initial Study will be Used

The following agencies would utilize this document in their decision-making process regarding the Project:

State Water Resources Control Board, Division of Financial Assistance

CWSRF Approval

California Regional Water Quality Control Board, Santa Ana Region

General Permit for Storm Water Discharges Associated with Construction Activity

City of Menifee

Encroachment Permit

2 Project Description

EMWD intends to construct a wastewater collection system to serve the properties in the Quail Valley Subarea 9 Phase I area. The proposed sewer Improvement project will include the installation of sewers along Vista Way, Casa Bonita Avenue, Datil Drive, and Platino Drive located within the Phase 1 project boundary. Approximately 1.6 miles of 8-inch diameter collection pipelines will be installed within the public right-of-way and sewer laterals will extend onto private property to service residences. The sewer laterals will connect to sewer sources at the private property eliminating the need for septic tanks.

The majority of pipelines will be installed in the public rights-of-way using conventional open cut construction methods. Based on the geological formations, a portion of the pipeline and sewer laterals may utilize specialized construction methods such as directional drilling or micro tunneling. There will be traffic impacts during construction along the public streets. Proper traffic control measures will be implemented to route the traffic away from the work area and to protect the public. The sewer laterals at private residences will be constructed after obtaining right-of-entry agreements from the property owners. The property owners will be notified well in advance of any construction activity within their private property. All the construction activities will take place during normal working hours of 7:00 am to 5:00 pm, Monday through Friday.

Wastewater will be conveyed from the Quail Valley Sewer Improvements Subarea 9 – Phase 1 Project to the regional lift station near the intersection of Audie Murphy Ranch Road and Normandy Road. At this time, EMWD is considering two alternative alignments for the "transport line".

The first alternative alignment (Alternative A) would include a new 8-inch diameter pipeline from Manhole "A" in Vista Way which would be constructed across a vacant property adjacent to Vista Way (APN: 351-084-016) and then along the property boundary of two additional properties (APN: 351-084-017 and 351-084-028) before reaching the northwesterly side of the Audie Murphy Ranch Development. The 8-inch pipeline would be constructed through the proposed fire station property and finally connected to Manhole "F" at "A" Street in the Audie Murphy Ranch Development. An 18-inch diameter pipeline would be constructed along the rest of the alignment which would follow A Street in a southerly direction to its intersection with B Street. It would then follow B Street in an easterly direction to its intersection with Goetz Road. It would then follow Goetz Road in a southerly direction to its intersection with Audie Murphy Ranch Road. It would then follow Audie Murphy Ranch Road in an easterly and northeasterly direction to the regional lift station to be constructed near the intersection of Audie Murphy Ranch Road and Normandy Road (Figure 2-1).

The second alternative alignment (Alternative B) would follow the same route from Vista Way to Manhole "F" at "A" Street in the Audie Murphy Ranch Development. It would then follow "D" Street in a southeasterly direction to its intersection with "C" Street and thence in a northeasterly direction along "C" Street to its intersection with Goetz Road. It would then follow Goetz Road in a southerly direction to its intersection with Audie Murphy Ranch Road. It would then follow Audie Murphy Ranch Road in an easterly and northeasterly direction to the regional lift station to be constructed near the intersection of Audie Murphy Ranch Road and Normandy Road.

The regional lift station would be designed to handle flows from 750 gallons per minute (gpm) to 2,900 gpm. It would include two wet wells both 10 feet in diameter and 30 feet deep. It would also include sealed wet well covers to prevent the escape of odors from the wet well. In addition, it would include a

passive air phase odor control system which would be operated as necessary.

Two 10-inch diameter force mains would also be constructed from the regional lift station to an existing collection manhole located in Normandy Road.

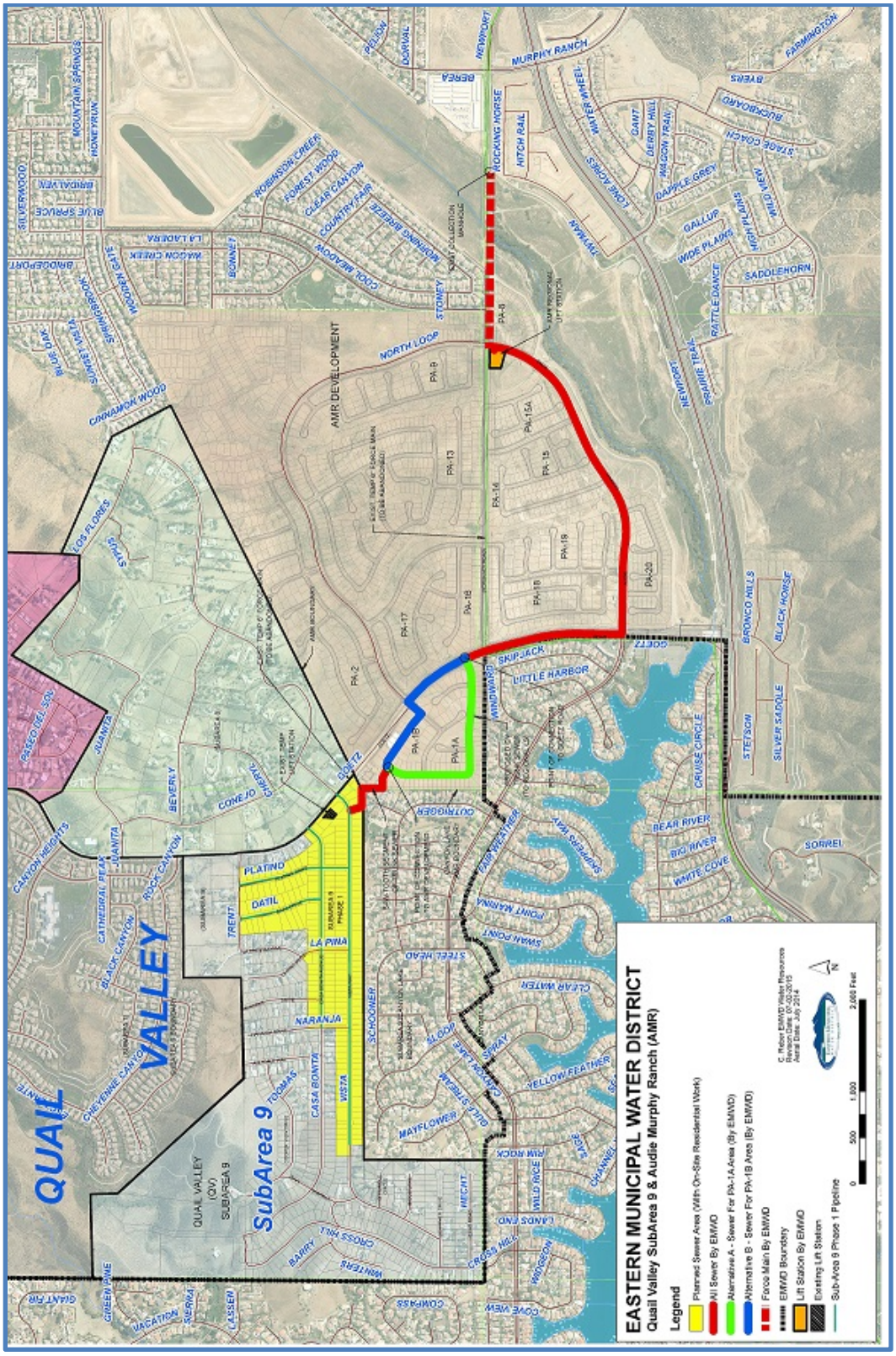

Figure 2-1 Quail Valley Subarea 9 – Phase 1 Wastewater Project

3 Environmental Checklist, Analyses and Mitigation Measures

3.1 Introduction

1. Project Title:	**Quail Valley Sewer Improvements – Subarea 9, Phase I**
2. Lead Agency Name and Address:	Eastern Municipal Water District Post Office Box 8300 Perris, California 92572-8300
3. Contact Person and Phone Number:	Helen Stratton CEQA/NEPA Analyst II 951-928-3777 ext. 4545 Email: strattoh@emwd.org
4. Project Location	Section 36, Township 5 South, Range 4 West, SBB&M Section 31, Township 5 South, Range 3 West, SBB&M Section 6, Township 6 South, Range 3 West, SBB&M Thomas Brothers Maps, Page 867, Grids E2, F2, G2 and G3 City of Menifee, County of Riverside, California
5. Project Sponsor's Name and Address:	Eastern Municipal Water District Post Office Box 8300 Perris, California 92572-8300
6. General Plan Designations:	2.1-5 R (2.1 -5 dwelling units per acre) CR (commercial retail) Audie Murphy Ranch Specific Plan
7. Zoning:	R-1, C-1/CP, and Audie Murphy Ranch Specific Plan
8. Project Description:	Construction, operation and maintenance of a wastewater collection system to serve 215 residential lots (149 developed and 66 vacant) within Quail Valley Subarea 9, Phase I.
9. Surrounding Land Uses and Setting:	Commercial and Multi-Family Residential
10. Other Public Agencies whose Approval is Required:	State Water Resources Control Board, Division of Financial Assistance California Regional Water Quality Control Board, Santa Ana Region City of Menifee

3.2 Environmental Factors Potentially Affected

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

	Aesthetics		Agricultural/Forest Resources		Air Quality & Greenhouse Gases
	Biological Resources		Cultural Resources		Geology/Soils
	Hazards & Hazardous Materials		Hydrology/Water Quality		Land Use/Planning
	Mineral Resources		Noise		Population and Housing
	Public Services		Recreation		Transportation/Traffic
	Utilities/Service Systems		Mandatory Findings of Significance		

3.3 Determination

On the basis of this initial evaluation:

	I find that the proposed project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.
X	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures in the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable legal standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

7/23/2015

Jayne Joy, P.E. Date
Director, Regulatory and Environmental Compliance

3.4 Chapter Organization

This section describes how this chapter of the Subsequent Initial Study/Mitigated Negative Declaration is organized. In this analysis, potential reasonably foreseeable impacts are evaluated with respect to aesthetics, agricultural and forest resources, air quality and greenhouse gases, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, traffic and transportation, and utilities and service systems. Additionally, mandatory findings of significance regarding short-term, long-term, and cumulative impacts are evaluated. Each topic area begins with a listing of the factors identified by State CEQA Guidelines for analysis, followed by a discussion of the environmental setting, the analysis for each factor, and an overall conclusion.

3.4.1 Environmental Setting

Throughout this document and according to the State CEQA Guidelines, the environmental setting is intended to mean the environmental conditions as they exist at the time the environmental analysis is commenced. The environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to gain an understanding of the significant effects of the proposed Project and its alternatives.

3.4.2 Discussion and Mitigation Measures

The Subsequent Initial Study includes an analysis of direct and reasonably foreseeable physical changes in the environment from the proposed Project and feasible mitigation measures that would reduce such impacts to a less than significant level. Thresholds of significance for each potential impact are provided as appropriate.

A "significant effect on the environment" is defined in State CEQA Guidelines Section 15382 as a "substantial or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. A social or economic change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant."

"Environment" is defined in State CEQA Guidelines Section 15360 as "the physical conditions which exist within the area which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance."

The following requirements for evaluating environmental impacts are cited directly from the State CEQA Guidelines Appendix G.

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources cited. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project specific factors as well as general standards.

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

3. A "Less than Significant Impact" applies when the proposed project would not result in a substantial and adverse change in the environment. This impact level does not require mitigation measures.

4. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

3.5 Aesthetics

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect on a scenic vista?				X
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c. Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?				X

3.5.1 Environmental Setting

The Quail Valley Subarea 9, Phase I area is a hilly residential community of small developed residential lots interspersed with vacant lots and numerous rock outcroppings. Parcel configurations were established many years ago. There are 215 residential lots within the Phase I area of which 149 are developed and 66 undeveloped.

Figure 3.5-1 Casa Bonita Way

Figure 3.5-2 Datil Drive

Figure 3.5-3 Platina Drive

Figure 3.5-4 Vista Way

3.5.2 Discussion and Mitigation Measures

Aesthetics. a. *Would the project have a substantial adverse effect on a scenic vista?*

Answer: No Impact.

Discussion: There are no scenic vistas within Quail Valley that would be impacted by implementation of the proposed Project. The pipelines would all be installed underground mostly within public rights-of-way and not alter views of or from the Project area. Therefore, no further analysis or mitigation is required.

Aesthetics. b. *Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.*

Answer: No Impact.

Discussion: There are no officially designated State scenic highways located in the vicinity of Quail Valley. Therefore, the Project will not substantially damage any scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a State scenic highway. Therefore, there are no anticipated impacts and no mitigation is required.

Aesthetics. c. *Would the project substantially degrade the existing visual character or quality of the site and its surroundings?*

Answer: Less than Significant.

Discussion: The underground pipelines would not be visible. Therefore, implementation of the Project would not degrade the existing visual quality of the Project sites and their surroundings and no mitigation is required.

During construction, there would be equipment and workers on the Project sites. The construction period is relatively short at each site; therefore, this would be considered less than significant and no mitigation is required.

Aesthetics. d. *Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?*

Answer: No Impact.

Discussion: The Project would not create a new source of light or glare that would adversely affect day or nighttime views of the area. Therefore, no impacts are anticipated and no mitigation is required.

3.5.3 Conclusion

No significant impacts were identified; therefore, no further analysis or mitigation is required.

3.6 Agricultural and Forest Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project, and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. *Would the Project:*				
a. Convert Prime 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?				X
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c. 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 511104(g))?				X
d. Result in the loss of forest land or conversion of forest land to non-forest uses.				X
e. Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

3.6.1 Environmental Setting

Agricultural Resources

The Quail Valley Subarea 9, Phase I area is a residential development and does not contain Farmland. The Audie Murphy Ranch area which the transport pipeline would be constructed is vacant land which has been designated as residential development within the Audie Murphy Ranch Specific Plan by the County of Riverside and the City of Menifee.

Forest Resources

There are no forest lands or timberlands near the Project area.

3.6.2 Discussion and Mitigation Measures

Agricultural and Forest Resources. a. *Would the project 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?*

Answer: No Impact.

Discussion: As stated previously, there are no Farmlands within the Project area that would be affected by implementation of the project. Therefore, no impacts are anticipated and no further analysis or mitigation is required.

Agricultural and Forest Resources. b. *Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?*

Answer: No Impact.

Discussion: The Quail Valley Subarea 9, Phase I area is presently zoned residential and the Audie Murphy Ranch area is contained within a Specific Plan. Therefore, implementation of the Project would not conflict with existing zoning for agricultural use or a Williamson Act contract. Consequently, there are no impacts anticipated and no mitigation is required.

Agricultural and Forest Resources. c. *Would the project 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))?*

Answer: No Impact.

Discussion: Implementation of 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)) as there are none in the Project area. Therefore, no impacts are anticipated and no mitigation is required.

Agricultural and Forest Resources. d. *Would the project result in the loss of forest land or conversion of forest land to non-forest use?*

Answer: No Impact.

Discussion: Implementation of the Project would not result in the loss of forest land or conversion of forest land to non-forest use as there are no forest lands within the Project area. Therefore, no impacts are anticipated and no mitigation is required.

Agricultural and Forest Resources. e. *Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?*

Answer: No Impact.

Discussion: Implementation of the Project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. Therefore, no impacts are anticipated and no mitigation is required.

3.6.3 Conclusion

No significant impacts were identified; therefore, no further analysis or mitigation is required.

3.7 Air Quality and Greenhouse Gases

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. *Would the Project:*				
a. Conflict with or obstruct implementation of the applicable air quality plan?				X
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
c. Result in 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)?				X
d. Expose sensitive receptors to substantial pollutant concentrations?				X
e. Create objectionable odors affecting a substantial number of people?			X	
f. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance?			X	
g. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emission of greenhouse gases?				X

3.7.1 Environmental Setting

Ambient air quality is affected by both the rate and location of pollutant emissions and by meteorological conditions that influence the local and regional dispersal of pollutants. Atmospheric conditions such as wind speed and direction and air temperature gradients combined with local topography provide the link between air pollutant emissions and air quality.

The proposed Project is within the South Coast Air Basin (SCAB), which incorporates approximately 12,000 square miles, including four counties (i.e., all of Orange County and the urban portions of San Bernardino, Riverside and Los Angeles Counties) including some portions of what used to be the Southeast Desert Air Basin that includes the Beaumont-Banning area. Nearly half of California's population, which generates about one-third of the State's total criteria pollutant emissions, lives within the SCAB.

Planning for the attainment and maintenance of both federal and State air quality standards in the Project area is the responsibility of the South Coast Air Quality Management District (SCAQMD).

The California Air Resources Board (ARB) provides ambient air quality data for most air basins in the State. A summary of the data available for the nearest monitoring stations to the Project area is provided in Tables 3.7-1 and 3.7-2.

Table 3.7-1
Ozone Trends Summary

Year	Days > Standard				1-hr Observations			8-hr Averages				Year Coverage
	State		National		Max	State	Nat'l	State		National		
	1-hr	8-hr	*1-hr*	'08 8-hr		D.V.[1]	D.V.[2]	Max	D.V.[1]	Max	'08 D.V.[2]	
Perris												
2014	16	63	*0*	38	0.117	0.11	*0.109*	0.094	0.094	0.094	0.089	100
2013	17	69	*0*	34	0.108	0.11	*0.116*	0.090	0.095	0.090	0.090	82
2012	24	65	*0*	46	0.111	0.12	*0.122*	0.094	0.102	0.093	0.094	93
2011	44	77	*2*	54	0.125	0.12	*0.123*	0.112	0.110	0.112	0.098	98
2010	42	77	*0*	50	0.122	0.13	*0.126*	0.108	0.115	0.107	0.102	97
2009	53	88	*1*	67	0.125	0.13	*0.135*	0.109	0.117	0.108	0.103	100
2008	65	94	*4*	77	0.142	0.14	*0.142*	0.115	0.123	0.114	0.107	99
2007	66	88	*4*	73	0.138	0.17	*0.152*	0.117	0.123	0.116	0.100	99
2006	77	98	*12*	83	0.169	0.17	*0.152*	0.123	0.123	0.122	0.090	99
2005	0	1	*0*	1	0.088	0.16	*0.136*	0.079	0.122	0.078	0.088	5
Ambient Standard						**0.09**	**--**		**0.07**		**0.075**	

Notes: All concentrations expressed in parts per million (ppm).
The national 1-hr ozone standard was revoked in June 2005 and is no longer in effect. Statistics related to the revoked Standard are shown in *italics* or *italics*.
State exceedances shown in **green**. National exceedances shown in orange.
[1] D.V. = State designation value.
[2] D.V. = National design value.
Source: Air Resources Board 2015 (arb.ca.gov 06/03/2015)

Table 3.7-2
PM_{10} Trends Summary

Year	Est. Days > Std.		Annual Average		3-yr Average		High 24-hr Average		Year Coverage
	Nat'l	State	*Nat'l*	State	*Nat'l*	State	Nat'l	State	
Perris									
2014	0.0	36.4	*35.1*	*33.4*	*32*	33	87.0	82.0	100
2013	0.0	*	*33.6*	*	*30*	28	70.0	67.0	97
2012	0.0	6.1	*26.5*	25.1	*28*	28	62.0	58.0	99
2011	0.0	11.8	*29.2*	27.7	*31*	34	65.0	62.0	99
2010	0.0	0.0	*28.0*	26.6	*31*	34	51.0	48.0	100
2009	0.0	38.5	*34.8*	33.7	*43*	34	80.0	76.0	95
2008	*	*	*29.6*	*	*47*	*	85.0	87.0	84
2007	*	*	*65.4*	*	*50*	37	1212.0	1155.0	82
2006	0.0	*	*44.9*	*	*42*	37	125.0	119.0	84
2005	0.0	110.0	*39.1*	37.1	*41*	37	80.0	75.0	99
Ambient Standard			**--**	**20**			**150**	**50**	

Notes: All concentrations expressed in micrograms per cubic meter ($\mu g/m^3$).
The national annual average PM_{10} standard was revoked in December 2006 and is no longer in effect. Statistics related to the revoked standard are shown in *italics* or **italics**.
State exceedances shown in **green**. National exceedances shown in **orange**.
*There was insufficient (or no) data available to determine the value.
Source: Air Resources Board 2015 (arb.ca.gov 06/03/2015)

The ARB has designated the SCAB as non-attainment for the State ozone standard, the State PM_{10} standard, and the State $PM_{2.5}$ standard. In addition, the U.S. Environmental Protection Agency has

designated the South Coast Air Basin as non-attainment for the federal ozone standard, the federal PM_{10} standard and the federal $PM_{2.5}$ standard.

3.7.2 Discussion and Mitigation Measures

Air Quality. a. *Would the project conflict with or obstruct implementation of the applicable air quality plan?*

Answer: No Impact.

Discussion: A project is deemed inconsistent with air quality plans if it would result in population and/or employment growth that exceeds growth estimates included in applicable air quality management plans [i.e., SCAQMD's 2012 Air Quality Management Plan (AQMP)]. The AQMP is based on general plans from local jurisdictions, which includes the City of Menifee. The AQMP accounts for development that would occur as a result of implementation of the local general plans. The proposed Project is consistent with the AQMP in that it would accommodate development approved in the local General Plans. Therefore, no impacts are anticipated and no mitigation is required.

Air Quality. b. *Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

Answer: Less than Significant.

Discussion: The South Coast Air Quality Management District has suggested threshold criteria for determining significance with respect to construction and operational air quality impacts. Those threshold criteria are shown in Table 3.7-3.

Table 3.7-3
Threshold Criteria for Determining Significance

Pollutant	Threshold Criteria, pounds per day	
	Construction	Operation
Carbon Monoxide (CO)	550	550
Sulfur Dioxide (SO_2)	150	150
Nitrogen Oxides (NO_X)	100	55
Particulates (PM_{10})	150	150
Particulates ($PM_{2.5}$)	55	55
Volatile Organic Compounds (VOC)	75	55
Lead (Pb)	3	3
Toxic Air Contaminants (TACs), Odor and GHG Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million Chronic and Acute Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
GHG	10,000 MT/yr CO_2eq for industrial facilities	

Source: SCAQMD CEQA Handbook, 1993, revised March 2011

These threshold criteria are used in this Initial Study and Mitigated Negative Declaration in determining significance of air quality impacts.

Pipelines

Following are the assumptions utilized in estimating the air emissions from construction equipment for the pipelines associated with the Project:

- Trenching would progress at an average rate of 100 lineal feet per day.

- Approximately 0.05 acres per day would be disturbed during pipeline installation.
- There would be approximately 2 heavy-heavy duty diesel trucks moving supplies to the site and removing asphalt and other waste materials from the site. It is anticipated that each truck would travel approximately 100 miles per day.
- There would be approximately 2 pickup trucks traveling to and from the site by inspectors. Mileage for each pickup would be approximately 100 miles per day.
- Approximately 10 construction workers would be involved in excavation and other pipeline installation activities at the site on the peak day of activities. Mileage for worker commuters would be approximately 20 per day.
- In addition to the truck traffic and worker commute traffic discussed above, the following construction equipment would be on the job site:

Equipment	Number	Horsepower[a]	Load Factor[b]	Hours per Day
Air Compressors	1	106	0.48	4.0
Concrete Saws	1	10	0.73	1.0
Cranes	1	399	0.43	1.0
Excavators	1	168	0.57	6.0
Off Highway Trucks	1	479	0.57	4.0
Pavement Breakers	1	104	0.53	1.0
Pavers	1	100	0.62	1.0
Plate Compactors	1	8	0.43	1.0
Sweeper/Scrubbers	1	91	0.68	1.0
Tractors/Loaders/Backhoes	1	108	0.55	6.0
Water Trucks	1	189	0.50	2.0

Notes:
[a] URBEMIS2007 default values.
[b] Percentage of the engines maximum horsepower rating that the equipment actually operates.

The URBEMIS2007 for Windows Version 9.2 Estimations for Land Use Development Projects was prepared for the SCAQMD by Jones and Stokes Associates during November 2007. This model was used to estimate construction related emissions from off-road heavy construction equipment. Based on a construction start date of January 1, 2016[1], the model generated estimated construction emissions as shown in Table 3.7-4 (detailed model results are contained in Appendix B).

[1] Although construction may not start until after January 1, 2016, an assumed construction start of January 1, 2016 was used in the air quality assessment to provide a "worst-case" scenario. Note: Due to stricter regulatory requirements, improvements in technology and phasing out of older construction equipment, the emission factors are reduced each year.

Table 3.7-4
Estimated Maximum Day Emissions from Off-Road Heavy Construction Equipment - Pipelines

	Pollutant (pounds per day)[a]						
	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Heavy Duty Construction Equipment	1.66	8.07	9.55	0.00	0.09	0.08	1,932
Significance Thresholds[b]	75	550	100	150	150	55	N/A
Localized Thresholds[c]	N/A	750	162	N/A	4	3	N/A

[a] Use of particulate traps reduces PM_{10} and $PM_{2.5}$ by 85% and oxidation catalysts reduces NO_x by 15%.
[b] Construction-related thresholds of significance developed by SCAQMD.
[c] Localized thresholds of significance developed by SCAQMD for a site of less than an acre and a distance to the nearest receptor of 25 meters.

There would also be two pickup trucks utilized by inspectors as well as two heady-duty diesel trucks traveling to and from the job site. Based on the assumption that each vehicle travels 100 miles per day, exhaust emissions would be as shown in Table 3.7-5.

Table 3.7-5
Estimated Maximum Day Emissions from On-Road Vehicles - Pipelines

	Pollutant (pounds per day)						
	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Heavy-Heavy Duty Trucks	0.36	1.53	4.25	0.00	0.21	0.18	842
Passenger Vehicles <8,500 pounds	0.13	1.15	0.11	0.00	0.02	0.01	221
Total	0.49	2.68	4.36	0.0	0.23	0.19	1,063

Vehicles owned by construction workers would be an additional source of air pollutants. An estimate of emissions based on 20 worker vehicles per day of which 100 percent are pickup trucks (gross vehicle weight of 8,500 pounds or less) with an average round trip of 20 miles is presented in Table 3.7-6.

Table 3.7-6
Construction Worker Commute Vehicle Emissions - Pipelines

Pollutant (pounds per day)						
ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2
0.25	2.30	0.22	0.00	0.04	0.02	443

Installation of the pipelines would create fugitive dust emissions. It is estimated that fugitive dust emissions from construction activities on disturbed soil approximate 5 pounds per acre per day (PM_{10}) with no mitigation. However, the application of water as required would reduce the emissions by 61 percent. As stated above, it is anticipated that approximately 0.05 acres would be disturbed each day. Therefore, the resulting PM_{10} emissions would be estimated at 0.10 pounds per day. SCAQMD also estimates that the $PM_{2.5}$ emissions in fugitive dust are equal to 21 percent of the PM_{10} emissions in fugitive dust (SCAQMD, October 2006). Therefore, the $PM_{2.5}$ emissions would equal 0.02 pounds per day.

The total estimated daily emissions from construction are shown in Table 3.7-7.

Table 3.7-7
Total Estimated Maximum Day Construction Emissions - Pipelines

Year Source	Pollutant (pounds per day)[1]						
	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Construction Equipment	1.66	8.07	9.55	0.00	0.09	0.08	1,932
On-Road Vehicles	0.49	2.68	4.36	0.00	0.23	0.19	1,063
Worker Commutes	0.25	2.30	0.22	0.00	0.04	0.02	443
Fugitive Dust	0.00	0.00	0.00	0.00	0.10	0.02	0.00
Total	2.40	13.05	14.13	0.00	0.46	0.31	3,438
Construction-Related Threshold Limits[2]	75	550	100	150	150	55	N/A
Localized Significance Threshold Limits[3]	N/A	750	162	N/A	4	3	N/A

[1] Use of particulate traps reduces PM_{10} and $PM_{2.5}$ by 85% and oxidation catalysts reduces NO_x by 15%.
[2] Construction-related threshold limits developed by SCAQMD to determine significance.
[3] Localized significant thresholds developed by SCAQMD to determine localized significance, based on a work area of up to 1 acre and a 25 meter distance to the nearest receptor.

As shown in Table 3.7-7 the total estimated emissions from installation of the pipelines would not exceed the construction-related threshold limits for significance or the localized thresholds and therefore not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Lift Station

Following are the assumptions utilized in estimating the air emissions from construction equipment for the lift station associated with the Project:

- Approximately 0.6 acre per day would be disturbed during pipeline installation.
- There would be approximately 1 heavy-heavy duty diesel truck moving supplies to the site and removing waste materials from the site. It is anticipated that each truck would travel approximately 100 miles per day.
- There would be approximately 1 pickup truck traveling to and from the site by inspectors. Mileage would be approximately 100 miles per day.
- Approximately 10 construction workers would be involved in construction activities at the site on the peak day of activities. Mileage for worker commuters would be approximately 20 per day.
- In addition to the truck traffic and worker commute traffic discussed above, the following construction equipment would be on the job site:

Equipment	Number	Horsepower[a]	Load Factor[b]	Hours per Day
Air Compressors	1	106	0.48	4.0
Cranes	1	399	0.43	4.0
Off Highway Trucks	1	479	0.57	4.0
Sweeper/Scrubbers	1	91	0.68	1.0
Tractors/Loaders/Backhoes	1	108	0.55	6.0
Water Trucks	1	189	0.50	2.0
Welder	1	45	0.45	4.0

Notes:
[a] URBEMIS2007 default values.
[b] Percentage of the engines maximum horsepower rating that the equipment actually operates.

The URBEMIS2007 for Windows Version 9.2 Estimations for Land Use Development Projects was prepared for the SCAQMD by Jones and Stokes Associates during November 2007. This model was used to estimate construction related emissions from off-road heavy construction equipment. Based on a construction start date of January 1, 2016[2], the model generated estimated construction emissions as shown in Table 3.7-8 (detailed model results are contained in Appendix B).

Table 3.7-8
Estimated Maximum Day Emissions from Off-Road Heavy Construction Equipment – Lift Station

	Pollutant (pounds per day)[a]						
	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Heavy Duty Construction Equipment	1.44	5.96	8.17	0.00	0.07	0.06	1,684
Significance Thresholds[b]	75	550	100	150	150	55	N/A
Localized Thresholds[c]	N/A	750	162	N/A	4	3	N/A

[a] Use of particulate traps reduces PM_{10} and $PM_{2.5}$ by 85% and oxidation catalysts reduces NO_x by 15%.
[b] Construction-related thresholds of significance developed by SCAQMD.
[c] Localized thresholds of significance developed by SCAQMD for a site of less than an acre and a distance to the nearest receptor of 25 meters.

There would also be one pickup truck utilized by inspectors as well as one heady-duty diesel truck traveling to and from the job site. Based on the assumption that each vehicle travels 100 miles per day, exhaust emissions would be as shown in Table 3.7-9.

Table 3.7-9
Estimated Maximum Day Emissions from On-Road Vehicles – Lift Station

	Pollutant (pounds per day)						
	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Heavy-Heavy Duty Trucks	0.16	0.70	7.89	0.00	0.09	0.08	421
Passenger Vehicles <8,500 pounds	0.06	0.58	0.06	0.00	0.01	0.01	111
Total	0.22	1.28	7.95	0.00	0.10	0.09	532

Vehicles owned by construction workers would be an additional source of air pollutants. An estimate of emissions based on 10 worker vehicles per day of which 100 percent are pickup trucks (gross vehicle weight of 8,500 pounds or less) with an average round trip of 20 miles is presented in Table 3.7-10.

Table 3.7-10
Construction Worker Commute Vehicle Emissions – Lift Station

Pollutant (pounds per day)						
ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2
0.13	1.15	0.11	0.00	0.02	0.01	221

Construction of the lift station would create fugitive dust emissions. It is estimated that fugitive dust emissions from construction activities on disturbed soil approximate 5 pounds per acre per day (PM_{10}) with no mitigation. However, the application of water as required would reduce the emissions by 61 percent. As stated above, it is anticipated that approximately 0.6 acre would be disturbed each day. Therefore, the resulting PM_{10} emissions would be estimated at 1.17 pounds per day. SCAQMD also estimates that the $PM_{2.5}$ emissions in fugitive dust are equal to 21 percent of the PM_{10} emissions in

[2] Although construction may not start until after January 1, 2016, an assumed construction start of January 1, 2016 was used in the air quality assessment to provide a "worst-case" scenario. Note: Due to stricter regulatory requirements, improvements in technology and phasing out of older construction equipment, the emission factors are reduced each year.

fugitive dust (SCAQMD, October 2006). Therefore, the $PM_{2.5}$ emissions would equal 0.25 pounds per day.

The total estimated daily emissions from construction are shown in Table 3.7-11.

Table 3.7-11
Total Estimated Maximum Day Construction Emissions – Lift Station

Year Source	Pollutant (pounds per day)[1]						
	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Construction Equipment	1.44	5.96	8.17	0.00	0.07	0.06	1,684
On-Road Vehicles	0.22	1.28	7.95	0.00	0.10	0.09	532
Worker Commutes	0.13	1.15	0.11	0.00	0.02	0.01	221
Fugitive Dust	0.00	0.00	0.00	0.00	1.17	0.25	0.00
Total	1.79	8.39	16.23	0.00	1.36	0.41	2,437
Construction-Related Threshold Limits[2]	75	550	100	150	150	55	N/A
Localized Significance Threshold Limits[3]	N/A	750	162	N/A	4	3	N/A

[1] Use of particulate traps reduces PM_{10} and $PM_{2.5}$ by 85% and oxidation catalysts reduces NO_x by 15%.
[2] Construction-related threshold limits developed by SCAQMD to determine significance.
[3] Localized significant thresholds developed by SCAQMD to determine localized significance, based on a work area of up to 1 acre and a 25 meter distance to the nearest receptor.

As shown in Table 3.7-11 the total estimated emissions from construction of the lift station would not exceed the construction-related threshold limits for significance or the localized thresholds and therefore not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Cumulative Impacts

It is anticipated that construction of the pipelines and the lift station would occur simultaneously. The cumulative emissions of these two activities are shown in Table 3.7-12.

Table 3.7-12
Total Estimated Cumulative Maximum Day Construction Emissions

Year Source	Pollutant (pounds per day)[1]						
	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Pipeline Construction	2.40	13.05	14.13	0.00	0.46	0.31	3,438
Lift Station Construction	1.79	8.39	16.23	0.00	1.36	0.41	2,437
Total	4.19	21.44	30.36	0.00	1.82	0.72	5,875
Construction-Related Threshold Limits[2]	75	550	100	150	150	55	N/A
Localized Significance Threshold Limits[3]	N/A	750	162	N/A	4	3	N/A

[1] Use of particulate traps reduces PM_{10} and $PM_{2.5}$ by 85% and oxidation catalysts reduces NO_x by 15%.
[2] Construction-related threshold limits developed by SCAQMD to determine significance.
[3] Localized significant thresholds developed by SCAQMD to determine localized significance, based on a work area of up to 1 acre and a 25 meter distance to the nearest receptor.

As shown in Table 3.7-12 the total cumulative estimated emissions from construction of Quail Valley Subarea 9, Phase 1 Project would not exceed the construction-related threshold limits for significance or the localized thresholds and therefore not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

However, the ARB has designated the SCAB as non-attainment for the State ozone standard, the State PM_{10} standard, and the State $PM_{2.5}$ standard. In addition, the U.S. Environmental Protection Agency has

designated the SCAB as non-attainment for the federal ozone standard, the federal PM_{10} standard and the federal $PM_{2.5}$ standard. Therefore, every effort should be made to minimize emissions within the SCAB. Consequently, to reduce the emissions as much as possible, EMWD will:

- Appoint a construction relations officer to act as a community liaison concerning on-site construction activities including resolution of issues related to PM_{10} generation.

- In addition, EMWD will add the following best management practices in its contract documents for this project:

  The contractor shall:

  - Utilize electricity from on-site power sources instead of from temporary diesel or gasoline powered generators, when feasible.

  - Require the use of 2010 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export) and if the lead agency determines that 2010 model year or newer diesel trucks cannot be obtained the contractor shall use trucks that meet EPA 2007 model year NO_x emissions requirements.

  - Require that all on-site construction equipment meet EPA Tier 3 or higher emissions standards according to the following:

    - ✓ All construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.

    - ✓ A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided at the time of mobilization of each applicable unit of equipment.

  - Maintain construction equipment engines by keeping them properly tuned and maintained according to manufacturer's specifications.

  - Use alternative fuels or clean and low-sulfur fuel for equipment.

  - Idle trucks in accordance with the Airborne Toxic Control Measure (ACTM) to Limit Diesel Fueled Commercial Motor Vehicle Idling and other applicable laws.

  - Water site and equipment as necessary to control dust.

  - Sweep all streets at least once per day using SCAQMD Rule 1186 certified street sweepers or roadway washing trucks if visible soil materials are carried to adjacent streets.

  - Conduct operations in accordance with SCAQMD Rule 403 requirements.

  - If necessary, wash off trucks leaving the site.

  - Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least two feet of freeboard in accordance with the requirements of California Vehicle Code (CVC) Section 23114.

Toxic Air Contaminants (TACs)

The combustion of diesel fuel produces diesel particulate matter as a byproduct. Diesel particulate matter has been identified by the California Air Resources Board (ARB) as a toxic air contaminant (TAC). While TACs can have long-term and/or short-term effects, diesel TAC has been shown by the ARB to have little or no short-term impact.

The ARB determined that the chronic impact of diesel particulate matter was of more concern than the acute impact in the Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines *(ARB 2000)*. In that document, ARB noted that "Our analysis shows that the potential cancer risk from inhalation is the critical path when comparing cancer and non-cancer risk. In other words, a cancer risk of 10 cases per million from the inhalation of diesel particulate matter (PM) will result from diesel PM concentrations that are much less than the diesel PM or TAC concentrations that would result in chronic or acute non-cancer hazard index values of 1 or greater." Consequently, any analysis of diesel TAC should focus on the long-term, chronic cancer risk posed by diesel emissions. Chronic cancer risk is normally measured by assessing what the risk to an exposed individual from a source of TACs would be if the exposure occurred over 70 years. Diesel emissions related to construction of the proposed Project would only occur over a one year period. Therefore, the impact would be considered less than significant and no further analysis is required.

Greenhouse Gases (GHGs)

In its August 2010 *Proposition 84 & 1E IRWM Guidelines,* the Department of Water Resources stated:

> *In most cases, a GHG emissions analysis for a project should be quantitative. Emissions sources that are commonly applicable to projects include:*
>
> - *Operation of construction equipment.*
> - *Passenger vehicle trips during construction and operation.*
> - *Transportation of construction materials and equipment.*
> - *Transportation of material inputs for O&M.*
> - *Transportation of material outputs or production.*
> - *Generation of electricity used for operation of projects.*
> - *Waste generation and disposal of materials during construction and operation.*

As can be seen by the above analysis, all of these items were considered with the exception of the generation of electricity used for operation of the Project. The Project is a gravity sewer system that would flow into a regional wastewater lift station. Therefore, the operational impacts would be considered less than significant.

Estimated construction duration and CO_2 emissions for the Quail Valley Subarea 9 Phase I Project are presented in Table 3.7-13.

Table 3.7-13
Estimated Carbon Dioxide (CO_2) Emissions from Construction

	Construction Days	Metric Tons/Day	Metric Tons/Year
Pipeline Construction Year 2016	261	1.56	408
Lift Station Construction Year 2016	130	1.11	144
Totals		2.67	552

Based on the information presented in Table 3.7-13, the total carbon dioxide emissions from construction of the Quail Valley Subarea 9, Phase I Project would be approximately 562 MT per year. Therefore, the greenhouse gas emissions from construction would be considered less than significant.

De Minimus Thresholds

A summary comparison of estimated emissions from construction of the Quail Valley Subarea 9, Phase I Project and "de minimus" thresholds is provided in Table 3.7-14.

Table 3.7-14
Comparison of Estimated Emissions from Construction and "De Minimus" Thresholds

	Pollutant (tons per year)					
	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Pipeline Construction	0.31	1.70	1.84	0.00	0.06	0.04
Lift Station Construction	0.12	0.55	1.05	0.00	0.11	0.05
2016 Construction Year	0.43	2.25	2.89	0.00	0.17	0.09
"De Minimus" Thresholds	10	100	10	100	70	100

As can be seen by the data in Table 3.7-14, the estimated emissions from construction are well below the "de minimus" thresholds for the South Coast Air Basin. Therefore, an air quality conformity analysis is not required.

Air Quality. c. *Would the project result in 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)?*

Answer: No Impact.

Discussion: The California Air Resources Board (ARB) has designated the South Coast Air Basin as non-attainment for the State ozone standard, the State PM_{10} standard and the State $PM_{2.5}$ standard. In addition, the Environmental Protection Agency has designated the South Coast Air Basin as non-attainment for the federal ozone standard, the federal PM_{10} standard and the federal $PM_{2.5}$ standard. Implementation of the proposed Project would generate emissions during the construction phase. However, as shown above, these would not exceed the thresholds for significance recommended by SCAQMD Therefore, no impacts are anticipated and no mitigation is required.

Air Quality. d. *Would the project expose sensitive receptors to substantial pollutant concentrations?*

Answer: No Impact.

Discussion: Sensitive receptors include hospitals, schools, day care facilities, and convalescent facilities. None of these occur near the project site. Also as shown in Table 3.7-12, construction emissions from the implementation of the Project are considered less than significant by SCAQMD's threshold criteria for significance. Therefore, no impacts are anticipated and no mitigation is required.

Air Quality. e. *Would the project create objectionable odors affecting a substantial number of people?*

Answer: Less than Significant.

Discussion: The regional lift station to be located within the Audie Murphy Ranch development near the intersection of Audie Murphy Road and Lombard Avenue has to the potential to release objectionable odors to the atmosphere. However, engineering controls would be added such as sealed wet well covers, standby pumps and an emergency generator to reduce the potential for odorous gases to escape the

facility. In addition, the facility will include an active air phase odor control system that would be operated when necessary. Therefore, the potential impacts for a release of odorous gases would be less than significant and no mitigation is required.

Air Quality. f. *Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance?*

Answer: Less than Significant.

Discussion: SCAQMD has suggested significance levels of 10,000 MT per year CO_2 equivalents for industrial projects. Based on the information presented in Table 3.7-13, the total annual CO_2 emissions from construction of the Project facilities would be 552 MT. Therefore, the greenhouse gas emissions from construction would be considered less than significant and no mitigation is required. Operation of the project would not generate CO_2 emissions.

Air Quality. g. *Would the project conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emission of greenhouse gases?*

Answer: No Impact.

Discussion: The Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emission of greenhouse gases. Therefore, no mitigation is required.

3.7.3 Conclusion

No significant impacts were identified; however, best management practices are recommended to be included in the Project specifications.

3.8 Biological Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?		X		
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
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?				X
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
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?				X

3.8.1 Environmental Setting

The biological resources assessment prepared for the May 2010 IS&MND was completed during August 2009. Therefore, the record searches (i.e., U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife were updated (Appendix C).

The results of the record searches indicate the historical presence of numerous special-status plants and animals in the region in and around Subarea 9. However, no special-status species would be impacted by the proposed project. Currently, Subarea 9 of the Quail Valley community is a developed residential subdivision and is almost completely urbanized. The majority of the proposed wastewater collection system would be constructed within the existing network of paved residential roads. No special-status species occur on the existing road network.

The proposed pipeline alignment between the collection system in Vista Way and the point of connection to the Audie Murphy Ranch development would cross three residential properties (one vacant and two developed). Therefore, on July 3, 2014 Biologist Travis McGill conducted a habitat assessment of that portion of the proposed project. He concluded that due to the regime of disturbance from development and agricultural operations, the project site and surrounding properties no longer support native plant

communities and therefore do not provide suitable habitat for sensitive plant and wildlife species to occur in the area.

The proposed pipeline alignment between the connection point to the Audie Murphy Ranch development and the regional lift station crosses a fallow agricultural field that has been disked and dirt roads within the development. Biologist Travis McGill conducted a habitat assessment of that portion of the Project on June 23 and 26, 2015. Again, he concluded that due to the regime of disturbance from development and agricultural operations, the project site and surrounding properties no longer support native plant communities and therefore do not provide suitable habitat for sensitive plant and wildlife species to occur in the area.

A more detailed biological setting is provided in the habitat assessment contained in Appendix C.

3.8.2 Discussion and Mitigation Measures

Biological Resources. a. *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

Answer: Less than Significant with Mitigation Incorporated.

Discussion: No special-status plant or wildlife species were observed on the Project site during the site visits. Although the majority of the Project site has been denuded of vegetation, the Project site has the potential to provide suitable nesting opportunities for ground-nesting species (e.g., killdeer). Additionally, the ornamental, landscaped vegetation associated with the surrounding developments has the potential to provide suitable nesting opportunities within 200 feet of the Project site.

To ensure the continued absence of nesting birds on or immediately adjacent to the Project site, EMWD shall implement the following:

- If ground-disturbing activities or removal of any trees, shrubs, or any other potential nesting habitat are scheduled within the avian nesting season (nesting season generally extend from February 1 - August 31), a pre-construction clearance survey for nesting birds should be conducted within 10 days prior to any ground disturbing activities. The biologist conducting the clearance survey should document a negative survey with a brief letter report indicating that no impacts to active bird nests will occur. If an active avian nest is discovered during the 10-day preconstruction clearance survey, construction activities should stay outside of a 300-foot buffer around the active nest. For raptor species, this buffer is expanded to 500 feet. It is recommended that a biological monitor be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged, normal construction activities can occur.

Based on the results of the habitat assessment, no burrowing owl or evidence of recent or historic use by burrowing owl was observed on the Project site. Focused burrowing owl surveys are not recommended for this site. However, out of an abundance of caution, and to ensure burrowing owl remain absent from the Project site, EMWD shall implement the following:

- A burrowing owl clearance survey shall be conducted prior to any ground disturbing activities in accordance with the CDFW 2012 Staff Report on Burrowing Owl Mitigation. Two pre-construction clearance surveys shall be conducted 14-30 days and 24 hours prior to ground disturbing activities to document the continued absence of burrowing owl from the Project site.

Biological Resources. b. *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

Answer: No Impact.

Discussion: Based on literature searches, analysis of aerial photographs and field studies there is no riparian habitat or other sensitive natural communities at the Project site. Therefore, no impacts are anticipated and no mitigation is required.

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

Answer: No Impact

Discussion: Based on literature searches, analysis of aerial photographs and field studies there are no federally protected wetlands as defined by Section 404 of the Clean Water Act at the Project site. Therefore, no impacts are anticipated and no mitigation is required.

Biological Resources. d. *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Answer: No Impact.

Discussion: Based on literature searches, analysis of aerial photographs and field studies the proposed Project would not interfere with any migratory activities or impact migratory corridors. Therefore, no impacts are anticipated and no mitigation is required.

Biological Resources. e. *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

Answer: No Impact.

Discussion: The proposed Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. No other ordinances are in place that would apply to the proposed Project. Therefore, no impacts are anticipated and no mitigation is required.

Biological Resources. f. *Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?*

Answer: No Impact.

Discussion: Based on literature searches, analysis of aerial photographs and field studies implementation of the proposed 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. Therefore, no impacts are anticipated and no mitigation is required.

3.8.3 Conclusion

Implementation of the above mitigation measures will ensure that the impacts to biological resources will be reduced to a less than significant level and no further environmental review or mitigation is required.

3.9 Cultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				X
b. Cause a substantial adverse change in the significance of an archeological resource as defined in §15064.5?		X		
c. Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?		X		
d. Disturb any human remains, including those interred outside of formal cemeteries?		X		

3.9.1 Environmental Setting

Historical Development

The history of Quail Valley has been closely tied to the development of the adjacent community of Canyon Lake. In the early years this was ranch land and very sparsely populated. The California Southern Railroad built a line in 1882 from Perris to Elsinore along the east side of the San Jacinto River. Later the Santa Fe Railroad bought the line and joined it with its line from San Bernardino. However, the floods of 1884, 1916, and 1927 washed out the tracks, and Santa Fe decided to abandon the line. The Temescal Water Company bought the railroad right-of-way and began construction of a dam across the river for water storage.

The Temescal Water Company of Corona had previously developed water supplies in Ethanac (Romoland) and had installed redwood pipes in open ditches to carry well water by gravity flow 40 miles to Corona. After years of litigation over water rights and the failure of the Ethanac wells, it developed the plan to build a dam at Railroad Canyon. Construction was completed in 1929.

It was soon no secret locally that the reservoir provided excellent fishing. Temescal decided to sell a concession for a fishing resort on the lake. This was purchased by George Evans, the son of the man who had owned most of the land that was now under Railroad Canyon Reservoir. The fish camp was operated until 1968, although the camp was moved once and there was a break when the lake was drained to allow repairs to the floodgates.

The City of Canyon Lake began in 1968 when the Corona Land Company began construction on 5,000 lots around Railroad Canyon Lake. Temescal had bought the lease from the Evans family and formed several subsidiary companies to develop the land as a planned community. This was originally envisioned as a weekend retreat community, but soon became a community largely occupied by full time residents.

Quail Valley developed quickly in response to the success of Canyon Lake. Prior to this it had been a farming/ranching community. Its recent growth led to its inclusion, in October of 2008, with the neighboring communities of Sun City and Menifee as the incorporated City of Menifee. A large subdivision to the north of the project area, which held a large portion of the population of Quail Valley,

was almost entirely unpopulated as recently as 2003, according to aerial photographs. Even the project area, the portion of the town adjacent to Canyon Lake, has seen a very significant increase in population in the last twenty years.

Information Center Records Search

Rincon archaeologist Breana Campbell conducted a search of cultural resource records housed at the California Historical Resources Information System (CHRIS), Eastern Information Center (EIC) located at the University of California, Riverside on June 24, 2015. The search was conducted to identify all previous cultural resources work and previously recorded cultural resources within a 0.5-mile radius of the project alignment and alternatives. The CHRIS search included a review of the NRHP, the CRHR, the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, and the California State Historic Resources Inventory list. The records search also included a review of all available historic USGS 7.5- and 15-minute quadrangle maps.

The EIC records search and review of studies on file with EMWD identified 13 previous studies within a 0.5-mile radius of the project alternatives. Of these, 6 include portions of the project alternatives and 7 are adjacent. A listing of these studies is provided in Table 1 of Rincon Consultants, Inc.'s report included in Appendix D.

The EIC records search identified 14 previously recorded cultural resources within 0.5 mile of the project site. However, no sites have been recorded within the boundaries of the project alternative alignments. A listing of these previously recorded sites is provided in Table 2 of Rincon Consultants, Inc.'s report included in Appendix D.

Native American Contacts

During preparation of the May 2010 Final Initial Study and Mitigated Negative Declaration, the Amendment to the May 2010 Final Initial Study and Mitigated Negative Declaration and the EIR for the Audie Murphy Ranch development, contact was made with the Native American Heritage Commission and several Native American tribes. Based on those consultations, it was determined that the Pechanga Band of Luiseño Indians was the tribe responsible for future coordination activities for this Project.

Therefore, on June 19, 2015, K.S. Dunbar & Associates, Inc., sent an email to Anna Hoover, Cultural Analyst, Pechanga Band of Luiseño Indians explaining the Project as now envisioned as well as a copy of the recommended cultural resources mitigation measures. Subsequently, on July 6, 2015, K.S. Dunbar & Associates, Inc., sent a follow-up email to Anna Hoover. Copies of those emails are provided in Appendix D. To date, Ms. Hoover has not responded to those emails.

Field Surveys

Peak & Associates, Inc. archaeologist, Robert Gerry, surveyed Subarea 9 on September 11, 2009. Most of this area is outside of the present alignment alternatives, but the coverage was thorough. Mr. Gerry found no evidence of prehistoric or historic period cultural activity anywhere in Subarea 9, including along the very western end of the current project alignment alternatives.

Rincon archaeologist Hannah Haas conducted an intensive pedestrian survey of the westernmost 305 meters (ca. 1000 linear feet) of the alignment on July 3, 2014. The cultural resources survey consisted of

walking two transects oriented parallel to the proposed alignment and spaced no greater than 5 meters apart. A 40 meter (130 foot) section was not accessible and could only be viewed through a fence.

The majority of the remainder of the alternatives alignments, within the Audie Murphy Ranch portion of the alignment, was surveyed on January 3, 2013, by Brian F. Smith and Associates (BFSA). This survey used an intensive pedestrian reconnaissance with 5-meter transect intervals. The remaining approximately 1.5 miles at the eastern end of the proposed alignment is within a paved road and pedestrian survey would not reveal any information.

In combination, these three surveys examined all areas of exposed ground surface within the project area for prehistoric artifacts (e.g., chipped stone tools and production debris, stone milling tools, ceramics), historic debris (e.g., metal, glass, ceramics), or soil discoloration that might indicate the presence of a cultural midden. Survey conditions were recorded and digital photographs were taken. Copies of all survey records are on file at EMWD.

3.9.2 Discussion and Mitigation Measures

Cultural Resources. a. *Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?*

Answer: No Impact.

Discussion: Based on several reviews of records maintained by the EIC and previous field inspections, implementation of the Project will have no adverse effect on historic properties as there are none in the immediate area that would be impacted. Therefore, no impacts are anticipated and no mitigation is required.

Cultural Resources. b. *Would the project cause a substantial adverse change in the significance of an archeological resource as defined in §15064.5?*

Answer: Less than Significant with Mitigation Incorporated.

Discussion:

Although there were no archeological resources as defined in §15064.5 of the State CEQA Guidelines identified on the Project site, there is always the possibility of inadvertent discoveries during excavation activities. Therefore, EMWD will adhere to the following:

Mitigation Measures:

- At least 30 days prior to beginning Project construction, EMWD shall contact the Pechanga Band of Luiseño Indians to notify the Luiseño of grading and excavation activities and to coordinate and develop a Cultural Resources Treatment and Monitoring Agreement. The Agreement shall address the treatment of known cultural resources; the designation, responsibilities, and participation of a professional Native American Tribal monitor during grading, excavation and other ground disturbing activities; Project grading and excavation schedule; terms of compensation for the monitor; and treatment and final disposition of any cultural resources, sacred items and human remains discovered on site. The Tribal monitor shall be allowed to monitor all grading, excavation and ground disturbing activities and, with the concurrence of EMWD's Field Engineering Inspector, have the authority to stop or redirect grading and/or excavation activities.

- If inadvertent discoveries of cultural resources are encountered at any time during construction, these materials and their context shall be avoided until a qualified archeologist and representatives from the Pechanga Band of Luiseño Indians have consulted with EMWD regarding appropriate avoidance and mitigation measures for the newly discovered resources. Project personnel shall not collect or retain cultural resources. Prehistoric resources include, but are not limited to: chert or obsidian flakes; projectile points; mortars and pestles; dark, friable soil containing shell and bone; dietary debris; heat-affected rock; or human burials. Historic resources include stone or adobe foundations or walls; structures and remains with square nails; and refuse deposits (glass, metal, wood, ceramics), often found in old wells and privies. Pursuant to California Public Resources Code §21083.2(b) avoidance is the preferred method of preservation for archeological resources.

- All sacred items, should they be encountered within the project site, shall be avoided and preserved as the preferred mitigation, if feasible. All cultural materials that are collected during excavation and other earth disturbing activities on the Project site, with the exception of sacred items, burial goods and human remains which will be addressed in the Treatment Agreement, shall be tribally curated according to the current professional repository standards. The collections and associated records shall be transferred, including title, to the Pechanga Band of Luiseño Indians.

- In addition, EMWD will relinquish ownership of all cultural resources, including sacred items, burial goods and all archeological artifacts that are found on the Project site to the Pechanga Band of Luiseño Indians for proper treatment and disposition.

Cultural Resources. c. *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?*

Answer: Less than Significant with Mitigation Incorporated.

Discussion: It is possible that paleontological resources could be unearthed during excavation activities. Therefore, EMWD will include the following mitigation measures in its standard construction specifications:

Mitigation Measures:

Should construction/development activities uncover paleontological resources, work will be moved to other parts of the Project site and a qualified paleontologist shall be contacted to determine the significance of these resources. If the find is determined to be significant, avoidance or other appropriate measures shall be implemented. Appropriate measures would include that a qualified paleontologist be permitted to recover and evaluate the find(s) in accordance with current standards and guidelines.

Cultural Resources. d. *Would the project disturb any human remains, including those interred outside of formal cemeteries?*

Answer: Less than Significant with Mitigation Incorporated.

Discussion: No human remains, including formal cemeteries were identified within the Project site. However, it is always possible that unmarked burials could be unearthed during excavation activities.

Implementation of the following mitigation measures would reduce this impact to a level of less than significant.

Mitigation Measures:

Consistent with State CEQA Guidelines §15064.5, subdivision (e), in the event of an accidental discovery or recognition of any human remains, the County Coroner shall be notified and construction activities at the affected work site shall be halted. If the remains are found to be Native American, the Native American Heritage Commission (NAHC) shall be notified within 24 hours. The NAHC must immediately notify the Most Likely Descendant(s) under Public Resources Code §5097.98 and the descendants must make recommendations or preference for treatment within 24 hours of being granted access to the site. Guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains in accordance with the provisions of Health and Safety Code §7050.5 and Public Resources Code §5097.98.

3.9.3 Conclusion

Implementation of the above mitigation measures will ensure that the impacts to cultural resources will be reduced to a less than significant level and no further environmental review or mitigation is required.

3.10 Geology and Soils

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. 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.				X
2. Strong seismic ground shaking?			X	
3. Seismic-related ground failure, including liquefaction?				X
4. Landslides?				X
b. Result in substantial soil erosion or the loss of topsoil?			X	
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?		X		
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?				X
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?				X

3.10.1 Environmental Setting

Introduction

The following geologic setting was excerpted from Inland Foundation Engineering, Inc.'s Limited Technical Feasibility Study, Quail Valley Sewer Project and the Preliminary Geotechnical Report, Quail Valley Sewer Improvements Project, Subarea 9, Quail Valley Area, Riverside County, California prepared for PBS&J dated August 2005 and October 28, 2009, respectively.

Regional Geology

The Project area is situated within a natural geomorphic province in southwestern California known as the Peninsula Ranges, which is characterized by steep, elongated ranges and valleys that trend northwesterly. More specifically, the site is situated along the central portion of the Perris Block, an eroded mass of Cretaceous and older crystalline rock. Thin sedimentary and volcanic units mantle the bedrock in a few places with alluvial deposits filling in the lower valley areas. The Perris Block is a structurally stable, internally unfaulted mass of crustal rocks bounded on the west by the Elsinore-Chino

fault zones, on the east by the San Jacinto fault zone, and on the north by the Cucamonga fault zone. On the south, the Perris Block is bounded by a series of sedimentary basins that lie between Temecula and Anza.

Local Geology

The area in which the wastewater collection system is to be installed is underlain by Mesozoic age metasedimentary rock. The materials consist predominately of black fissile phyllite (Mzp) and a small portion of intermixed greywacke and phyllite mapped on the east portion of Subarea 9 west of Goetz Road. The portion of Audie Murphy Ranch which the transport line to the regional lift station is to be located is underlain by old alluvial fan deposits (Qvof) consisting of sands and gravels.

Seismicity

The San Jacinto fault zone, located approximately ten miles northeast of the Project area, is considered one of the most active fault zones in Southern California. The San Jacinto, Claremont, Casa Loma, and Park Hill faults are part of the San Jacinto fault zone. The San Jacinto fault zone's future credible earthquake is magnitude 7.5 on the Richter scale.

The Elsinore fault zone lies approximately ten miles southwest of the Project area. The maximum credible earthquake on the Elsinore fault is estimated to be a magnitude 6.8 on the Richter scale.

Both the Elsinore and San Jacinto fault zones are part of the greater San Andreas fault system. The main branch of the San Andreas fault zone is located approximately thirty miles northeast of the Project site. The maximum credible earthquake on the San Andreas fault is estimated to be a magnitude 8.2 on the Richter scale.

Soils

According to the U.S.D.A.'s Web Soil Survey, soils in the Project area include Lodo rocky loams, Monserate sandy loams and Garretson very fine sandy loams.

3.10.2 Discussion and Mitigation Measures

Geology and Soils. a. 1. *Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving 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.*

Answer: No Impact.

Discussion: The Alquist-Priolo Earthquake Fault Zoning Act identifies special study zones for areas where existing known faults are located. The main purpose of the Act is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act also required the State Geologist to establish regulatory zones (known as Earthquake Fault Zones) around the surface traces of active faults and to issue appropriate maps.

Based on the California Department of Conservation the Project site is not within a fault zone and there are no faults within one-half mile of the site. Therefore, no impacts are anticipated and no mitigation is required.

Geology and Soils. a. 2. *Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?*

Answer: Less than Significant.

Discussion: The potential for strong seismic ground shaking in the Project area is similar to that in surrounding areas. Because the Project consists of facilities that are not intended for human habitation, the Project will not expose people or critical structures to adverse effects resulting from seismic-related ground failure, including liquefaction. In addition, the Project facilities are specifically designed to withstand seismic conditions anticipated to occur at the Project site. Seismic conditions expected to occur in the Project area *(see Seismicity discussion in Section 3.10.1)* can be mitigated by special design using reasonable construction and/or maintenance practices common to the Riverside County area. Therefore, the seismic-related impacts related to strong seismic ground shaking would be less than significant and no further mitigation is required.

Geology and Soils. a. 3. *Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?*

Answer: No Impact.

Discussion: The potential for liquefaction depends upon potential ground movement during seismic events, soil conditions, and depth to groundwater. According to the Riverside County GIS database, the Project site is located in an area mapped as having no potential for liquefaction and the Inland Empire Foundation Engineering, Inc.'s Preliminary Geotechnical Report also indicates the potential for liquefaction as nil. Therefore, no impacts are anticipated and no mitigation is required.

Geology and Soils. a. 4. *Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?*

Answer: No Impact.

Discussion: The pipelines would be installed underground and would not expose people or structures to landslides as a result of construction or operation. Therefore, no further analysis or mitigation is required.

Geology and Soils. b. *Would the project result in substantial soil erosion or the loss of topsoil?*

Answer: Less than Significant.

Discussion: The installation of the underground pipelines would result in the potential for wind and water erosion. However, compliance with the mitigation measures included in the air quality section to control fugitive dust would also control the potential for soil erosion or the loss of top soil (See *Air Quality. b.*). These include:

- Spread soil binders on site, where appropriate, unpaved roads and staging areas.
- Water site and equipment as necessary to control dust.
- Conduct operations in accordance with SCAQMD Rule 403 requirements.

Therefore, the impacts would be less than significant and no further mitigation is required.

Geology and Soils. c. *Would the project 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?*

Answer: Less than Significant with Mitigation Incorporated.

Discussion: Inland Empire Foundation Engineering, Inc.'s Preliminary Geotechnical Report, there is a possibility of encountering groundwater in the alluvium which could result in the destabilization of excavation sidewalls and should be removed from outside the trench. Furthermore, in the constructed condition, groundwater may cause future difficulties if imported granular material placed in the pipe zone acts as a conduit or drain. Due to the likelihood of encountering groundwater within the pipe zone and to mitigate potential impacts to the greatest extent feasible, EMWD shall include the following mitigation measures in its construction specifications for the proposed Project:

- Where pipe bedding is necessary to bring the trench bottom up to grade, a minimum of six (6) inches will be placed to provide uniform and adequate longitudinal support under the pipe.

- In the event groundwater is encountered on Vista Way, placement of clay dams shall be required at 500 foot intervals and any other locations where groundwater is encountered within the pipe zone. Elsewhere, dams shall be placed as directed in the field by the engineer.

- All excavations shall be configured in accordance with the requirements of CalOSHA. Classification of the soil and the shoring and/or slope configuration shall be determined by the contractor prior to excavation on the basis of trench depth and the soil encountered. The contractor shall have a "competent person" on-site for the purposes of assuring safety within and about all construction excavations.

Geology and Soils. d. *Would the project 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?*

Answer: No Impact.

Discussion: The Project site is not located on expansive soil as defined in Table 18-1-B of the Uniform Building Code. According to the United States Department of Agriculture Natural Resources Conservation Service Web Soil Survey, soils at the site consist of silty, sandy loams and are not reported to be significantly expansive. Therefore, no impacts are anticipated and no mitigation is required.

Geology and Soils. e. *Would the project 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?*

Answer: No Impact.

Discussion: The existing soil conditions are incapable of supporting the existing septic systems in the Quail Valley Subarea 9, Phase 1 Project area as supported by the Soil Survey of Western Riverside County that indicates the existing soil series within the Project area have severe limitations for use as a septic tank filter field. The proposed Project consists of the installation of a wastewater collection system for the disposal of wastewater and will be beneficial to the Quail Valley community and Canyon Lake as it will eliminate the failing septic systems within the Project area. Therefore, no impacts are anticipated and no mitigation is required.

3.10.3 Conclusion

Implementation of the above mitigation measures will insure that the impacts to geological and soils are less than significant.

3.11 Hazards and Hazardous Materials

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?		X		
b. Create a significant hazard to the public or the environment through reasonably upset accident conditions involving the release of hazardous materials into the environment?			X	
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d. Be located on a site that 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?				X
e. Be 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, and if so, would the project result in a safety hazard for people residing or working in the project area?				X
f. Be within the vicinity of a private airstrip, and if so, would the project result in a safety hazard for people residing or working in the project area?				X
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
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?				X

3.11.1 Environmental Setting

Hazards

Hazards are defined as natural and man-made conditions that must be respected if life and property are to be protected as growth and development occur. These hazards include seismic and other geologic hazards, fire and flooding. These hazards are explained in more detail in the following paragraphs.

Seismicity

As stated previously, the Project area lies in one of the most seismically active zones in Southern California. Northwest trending faults comprising the San Andreas, San Jacinto, and Elsinore Fault Zones dominate the structural geology of the area. As previously described, the maximum credible earthquakes associated with these Fault Zones are 8.2, 7.5 and 6.8, respectively.

Liquefaction

According to the Riverside County's Land Management Agency's GIS System, the liquefaction potential in the Project area ranges from no potential for liquefaction to low potential for liquefaction.

Slope Instability and Erosion

The Project sites are fairly level; therefore, the potential for erosion is low.

Fire

The Project area is within the City of Menifee; however, the County of Riverside considers it a high fire area and is a State responsibility area.

Flooding

The Project area is not subject to flooding.

Hazardous Materials

Several standard environmental record services are available to determine the potential for recognized environmental conditions in an area. Those databases are briefly described in the following paragraphs.

National Priorities List (NPL)

The National Priorities List (NPL) is a federal database of uncontrolled hazardous waste sites that warrant further investigation to determine if long-term "remedial action" is necessary. There are no NPL sites located in the immediate vicinity of the Project site.

Envirostor

Envirostor is a database maintained and primarily used by the California Department of Toxic Substances Control to determine the location of all hazardous waste sites. There are no active sites listed in the general vicinity of the Project site.

Geotracker

Geotracker is the State Water Resources Control Board's data management system for managing sites that impact groundwater, especially those that require groundwater cleanup (Underground Storage Tanks, Department of Defense Site Cleanup Program) as well as permitted facilities such as operating USTs and land disposal sites. There are no active sites listed in the general vicinity of the Project site.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. In implementing this law, the Environmental Protection Agency (EPA) compiles a list of known hazardous waste sites that are under consideration for the Superfund list. This list is known as the CERCLIS database. There are no CERCLIS sites located in the immediate vicinity of the Project site.

Resource Conservation and Recovery Act (RCRA)

The primary goals of the Resource Conservation and Recovery Act (RCRA) are to protect human health and the environment from the potential hazards of waste disposal, to conserve energy and natural resources, to reduce the amount of waste generated, and to ensure that wastes are managed in an environmentally sound manner. In implementing this law, EPA compiles a list of known hazardous waste generators. There are no known hazardous waste generators within the immediate vicinity of the Project site.

Hazardous Materials Response Plans and Inventory

The Governor's Office of Emergency Services (OES) administers the Hazardous Materials Response Plans and Inventory program (Article 1, Chapter 6.95, Health and Safety Code). As part of this program, OES maintains a database of all hazardous materials spills in the State (RIMS). According to that database, there have not been any hazardous materials spills within the immediate vicinity of the Project site.

Leaking Underground Storage Tank Information System (LUSTIS)

The State Water Resources Control Board (State Water Board) administers the Leaking Underground Storage Tank Information System (LUSTIS). The LUSTIS database includes all reported leaks from underground storage tanks. The LUSTIS database is now reported in the Georacker results.

Site Mitigation Program Property Database (formerly CalSites)

The California Environmental Protection Agency's Department of Toxic Substances Control (DTSC) administers the CalSites program. Information in the CalSites database is preliminary in nature; therefore, most sites listed in the database need additional work to determine if contamination exists. There are no sites in the CalSites database within the immediate vicinity of the Project site.

Hazardous Waste and Substances Sites List (Cortese)

California's Government Code §65962.5 requires the California Department of Toxic Substances Control to develop, at least annually, an updated list of Hazardous Waste and Substances Sites. This list, known as the Cortese List, is a planning document used by the State, local agencies and developers to comply with the California Environmental Quality Act requirements in providing information about the location of hazardous materials release sites. DTSC is responsible for a portion of the information contained in the Cortese List. Other State and local agencies are required to provide additional hazardous materials release information for the Cortese List. The Cortese List is to be submitted to the Secretary of the California Environmental Protection Agency. There are no sites on the Cortese List within the immediate vicinity of the Project site.

Solid Waste Information System (SWIS)

The Solid Waste Information System (SWIS) is a database provided by the California Integrated Waste Management Board which consists of both open as well as closed and inactive solid waste disposal facilities and transfer stations. There are no sites in the SWIS database within the immediate vicinity of the Project site.

3.11.2 Discussion and Mitigation Measures

Hazards and Hazardous Materials. a. *Would the project create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?*

Answer: Less than Significant with Mitigation Incorporated.

Discussion: Implementation of the proposed Project would not create any significant hazards as a result of the routine transport, use, storage, or disposal of hazardous materials. However, construction would include the temporary use and transport of fuels, lubricating fluids, solvents and other hazardous materials. The contractor would be required to adhere to the requirements of a *Health and Safety Plan* that it would develop for the Project pursuant to Chapter 6.95, Division 20 of the Health and Safety Code (§§ 25500—25532). Implementation of the following mitigation measures would reduce these potential impacts to a less-than-significant level:

Mitigation Measures:

To reduce potentially hazardous conditions and minimize the impacts from the handling of potentially hazardous materials, EMWD shall include the following in its construction contract documents:

- The contractor(s) shall prepare a *Health and Safety Plan* in compliance with the requirements of Chapter 6.95, Division 20 of the Health and Safety Code (§§ 25500—25532). The plan shall include measures to be taken in the event of an accidental spill.
- The contractor(s) shall enforce strict on-site handling rules to keep construction and maintenance materials out of receiving waters and storm drains. In addition, the contractor(s) shall store all reserve fuel supplies only within the confines of designated construction staging areas, refuel equipment only within the designated construction staging areas, and regularly inspect all construction equipment for leaks.
- The construction staging area shall be designed to contain contaminants such as oil, grease, and fuel products so that they do not drain towards receiving waters or storm drain inlets.

Hazards and Hazardous Materials. b. *Would the project create a significant hazard to the public or the environment through reasonably upset accident conditions involving the release of hazardous materials into the environment?*

Answer: Less than Significant.

Discussion: Construction equipment used to construct the Project facilities would have the potential to release oils, grease, solvents and other finishing products through accidental spills. However, adherence to the above mitigation measures would result in less-than-significant impacts. Therefore, no further analysis is required.

Hazards and Hazardous Materials. c. *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

Answer: No Impact.

Discussion: The Quail Valley Elementary School is located a little over one-quarter mile north of the most northerly portion of the proposed wastewater collection system. However, as stated above, implementation of the proposed Project would not create any significant hazards as a result of the routine transport, use, storage or disposal of hazardous materials. Additionally, potentially hazardous materials

used during construction would be handled in accordance with the Health and Safety Plan to be prepared for the Project. Therefore, no impacts are anticipated and no mitigation is required.

Hazards and Hazardous Materials. d. *Would the project be located on a site that 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?*

Answer: No Impact.

Discussion: Several standard environmental record services are available to determine the potential for recognized environmental conditions in an area. Those databases include:

- National Priorities List (NPL)
- Envirostor
- Geotracker
- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
- Resource Conservation and Recovery Act (RCRA)
- Hazardous Materials Response Plans and Inventory
- Leaking Underground Storage Tank Information System (LUSTIS)
- Site Mitigation Program Property Database (formerly CalSites)
- Hazardous Waste and Substances Sites List (Cortese)
- Solid Waste Information System (SWIS)

These databases were searched for the presence of hazardous materials sites within the immediate vicinity of the Project site with negative results. Therefore, no impacts are anticipated and no mitigation is required.

Hazards and Hazardous Materials. e. *Would the project be 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, and if so, would the project result in a safety hazard for people residing or working in the project area?*

Answer: No Impact.

Discussion: The Project site is not within an airport land use plan or within two miles of a public use airport. Therefore, no impacts are anticipated and no mitigation is required.

Hazards and Hazardous Materials. f. *Would the project be within the vicinity of a private airstrip, and if so, would the project result in a safety hazard for people residing or working in the project area?*

Answer: No Impact.

Discussion: The Project site is not within the vicinity of a private airstrip. Therefore, no impacts are anticipated and no mitigation is required.

Hazards and Hazardous Materials. g. *Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

Answer: No Impact.

Discussion: Construction of the pipelines would mainly take place in public rights-of-way (i.e., Platino Drive, Datil Drive, Casa Bonita Avenue, Vista Way and Goetz Road). During pipeline installation, traffic in the ongoing construction areas will be restricted to a single lane and will be controlled with signs and flagmen. To further ensure adequate ingress and egress for emergency responders at all times, EMWD shall include the following in its construction specifications for this Project:

Mitigation Measures:

- Traffic control plans shall be prepared by a qualified professional engineer prior to construction.
- Traffic control plans shall consider the ability of alternative routes to carry additional traffic and identify the least disruptive hours of construction site truck access routes and the type and location of warning signs, lights and other traffic control devices. Consideration shall be given to maintaining access to commercial parking lots, private driveways and sidewalks, bikeways and equestrian traffic to the greatest extent possible.
- Traffic control plans shall comply with Part 6 of the California Manual on Uniform Traffic Control Devices and the California Supplement as determined by each affected local agency to minimize any traffic and pedestrian hazards that exist during project construction.
- Encroachment permits for all work within public rights-of-way shall be obtained from each affected local agency prior to commencement of any construction. EMWD shall comply with all traffic control requirements of the affected local agencies.
- Working hours and lane closures shall be as specified by the affected local agency.
- Public streets shall be restored to a condition mutually agreed to between EMWD and the local jurisdictions prior to construction.

Hazards and Hazardous Materials. h. *Would the project 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?*

Answer: No Impact.

Discussion: The Project would be located in an area identified as a high fire area by the County of Riverside. However, the Project consists primarily of pipelines that would underground and a regional lift station within the Audie Murphy Ranch development. Neither the pipelines or the lift station would expose people or structures to wildland fires. Therefore, no impacts are anticipated and no mitigation is required.

3.11.3 Conclusion

Implementation of the above mitigation measures will ensure that the impacts associated with hazards and hazardous materials are reduced to a less than significant level and no further environmental review or mitigation is required.

3.12 Hydrology and Water Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements?		X		
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)?				X
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in substantial erosion or siltation on- or off-site?			X	
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?			X	
e. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			X	
f. Otherwise substantially degrade water quality?		X		
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?				X
h. Place within a 100-year flood hazard area structures that would impede or redirect flood flows?				X
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?				X
j. Be Inundated by seiche, tsunami, or mudflow?				X

3.12.1 Environmental Setting

The Project area is within the San Jacinto River Watershed which is governed by the California Regional Water Quality Control Board, Santa Ana Region. Canyon Lake, a potable water supply reservoir for Elsinore Valley Municipal Water District (EVMWD), is located west and south of the proposed project. Surface runoff from the project area migrates generally in a southerly or southwesterly direction to Canyon Lake. Specifically, the East Bay and Bass Cove portions of the lake receive the majority of surface flow from the project area.

3.12.2 Discussion and Mitigation Measures

Hydrology and Water Quality. a. *Would the project violate any water quality standards or waste discharge requirements?*

Answer: Less than Significant with Mitigation Incorporated.

Discussion: In the short-term, implementation of the proposed project would result in construction activities that could disturb up to several acres of land and could have the potential to contribute to pollutants in Canyon Lake offsite and potentially impact the water quality of Canyon Lake. Generally, during site grading and excavation activities, bare soil would be exposed to wind and water erosion. If precautions are not taken to contain sediments, construction activities could produce sediment laden storm runoff. In addition to increased erosion potential, hazardous materials associated with construction equipment could adversely affect water quality if spilled or stored improperly. (See Section 3.11 for a full discussion and mitigation measures associated with hazardous materials.) The following mitigation measures would reduce these potential impacts to a level of less than significant.

Mitigation Measures:

EMWD shall require contractors to implement a program of best management practices (BMP's) and best available technologies to reduce potential impacts to water quality that may result from construction activities. To reduce or eliminate construction-related water quality impacts before the onset of construction activities, EMWD would obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Construction Permits. Construction activities would comply with the conditions of these permits that include preparation of storm water pollution prevention plans, implementation of BMP's, and monitoring to insure impacts to water quality are minimized. As part of this process, multiple BMP's should be implemented to provide effective erosion and sediment control. These BMP's should be selected to achieve maximum sediment removal and represent the best available technology that is economically achievable. BMP's to be implemented as part of this mitigation measure may include, but not be limited to, the following:

- Temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other groundcover shall be employed for disturbed areas.

- Storm drain inlets on the site and in downstream offsite areas shall be protected from sediment with the use of BMP's acceptable to EMWD, local jurisdictions and the California Regional Water Quality Control Board, Santa Ana Region.

- Dirt and debris shall be swept from paved streets in the construction zone on a regular basis, particularly before predicted rainfall events.

- No disturbed surfaces shall be left without erosion control measures in place between October 15 and April 15. EMWD shall file a Notice of Intent with the Regional Board and require the preparation of a pollution prevention plan prior to commencement of construction. EMWD shall routinely inspect the construction site to verify that the BMP's specified in the pollution prevention plan are properly installed and maintained. EMWD shall immediately notify the contractor if there were a noncompliance issue and require immediate compliance.

- Controls on construction site dewatering shall be implemented. If possible, water generated as a result of construction site dewatering shall be discharged onsite so that there will be no discharge to downstream Canyon Lake. If discharge to surface water were unavoidable, EMWD shall obtain coverage under the NPDES General Dewatering Permit prior to commencement of construction. The provisions of this permit are sufficiently protective of water quality to ensure that impacts to surface waters will remain below significance thresholds. During dewatering activities, all permit conditions shall be followed. EMWD shall routinely inspect the construction site to verify that all permit measures are properly implemented. EMWD shall notify the contractor of any noncompliance and require immediate compliance.

In the long-term, the proposed project will benefit Canyon Lake water quality as it will eliminate the polluted septic effluent in Subarea 9, Phase 1 that mounds under the existing leach fields, and surfaces or migrates along the bedrock interface surfacing at some downstream point, resulting in both environmental and health issues. No long-term impacts are anticipated and no long-term mitigation is required.

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

Answer: No Impact.

Discussion: The proposed project is a wastewater collection system and does not include any facilities to extract groundwater. It will not result in the use of groundwater and thus will not substantially deplete groundwater supplies or interfere with groundwater recharge. Project implementation would be a benefit to groundwater as it would eliminate the current septic system groundwater pollution problem in Subarea 9, Phase 1. Therefore, no impacts are anticipated and no mitigation is required.

Hydrology and Water Quality. c. *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in substantial erosion or siltation on- or off-site?*

Answer: Less than Significant.

Discussion: The proposed project pipelines will be located underground primarily within the street rights-of-way and will not affect existing drainage patterns. The proposed lift station will occupy a site of approximately one-half acre or less and only a small portion of the site will be impervious upon completion of construction. As such, the amount of increased runoff from the lift station site will be minimal and will not result in substantial erosion or siltation on or off-site. The potential temporary impacts to existing drainage courses during construction will be reduced to less than significant with implementation of mitigation measures presented in *Hydrology and Water Quality. a.* above. No additional mitigation is required.

Hydrology and Water Quality. d. *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?*

Answer: Less than Significant.

Discussion: The proposed project pipelines will be located underground primarily within the street rights-of-way and will not affect existing drainage patterns. The proposed lift station will occupy a site of approximately one-half acre or less and only a small portion of the site will be impervious upon completion of construction. As such, the amount of increased runoff from the lift station site will be minimal and will not result in substantial flooding on or off-site. The potential temporary impacts to existing drainage courses during construction will be reduced to less than significant with implementation of mitigation measures presented in *Hydrology and Water Quality. a.* above. No additional mitigation is required. Implementation of the Project would include the addition of some impervious areas (e.g., roof tops, pavement, etc.); however, the existing storm drainage system in that area is sufficient to handle this minor increased runoff and not result in substantial flooding on- or off-site. Therefore, no impacts are anticipated and no further analysis or mitigation is required.

Hydrology and Water Quality. e. *Would the project create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?*

Answer: Less than Significant.

Discussion: As shown above in the "Discussion" under c and d, the Project does not include features that would create or contribute substantial sources of runoff or polluted runoff which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff. Therefore, no impacts are anticipated and no mitigation is required.

Hydrology and Water Quality. f. *Would the project otherwise substantially degrade water quality?*

Answer: Less than Significant with Mitigation Incorporated..

Discussion: As shown above in the Discussion under a, the Project does have the potential to degrade water quality during construction. However, the mitigation measures included in that discussion would reduce those impacts to a level of less than significant. Therefore, no further analysis or mitigation is required.

Hydrology and Water Quality. g. *Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?*

Answer: No Impact.

Discussion: The Project does not include housing. Therefore, no impacts are anticipated and no further analysis or mitigation is required.

Hydrology and Water Quality. h. *Would the project place within a 100-year flood hazard area structures that would impede or redirect flood flows?*

Answer: No Impact.

Discussion: The Project would not include the placement of structures with a floodplain that would impede or redirect flood flows. Consequently, no impacts are anticipated and no further analysis or mitigation is required.

Hydrology and Water Quality. i. *Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?*

Answer: No Impact.

Discussion: The Project does not include the construction of levees or dams. Therefore, no impacts are anticipated and no further analyses or mitigation is required.

Hydrology and Water Quality. j. *Would the project be inundated by seiche, tsunami, or mudflow?*

Answer: No Impact.

Discussion: There are no water bodies in the Project area that would produce seiches, tsunamis or mudflows. Therefore, no impacts are anticipated and no further analysis or mitigation is required.

3.12.3 Conclusion

Implementation of the above mitigation measures will ensure that the hydrology and water quality related impacts are reduced to a less than significant level and no further analysis or mitigation is required.

3.13 Land Use and Planning

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?				X
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

3.13.1 Environmental Setting

The Quail Valley Subarea 9, Phase 1 area includes 215 residential lots within the City of Menifee. 149 of these lots have been developed. The proposed wastewater collection system pipelines would be installed within public rights-of-way. The transport pipeline would be constructed within existing public rights-of-way or within the rights-of-way of future streets within the Audie Murphy Ranch development.

3.13.2 Discussion and Mitigation Measures

Land Use and Planning. a. *Would the project physically divide an established community?*

Answer: No Impact.

Discussion: The proposed pipelines would be constructed underground mostly within public rights-of-way. The regional lift station would be constructed on a vacant parcel of land within the Audie Murphy Ranch that is dedicated to this use in Specific Plan 209. Therefore, construction of the Project would not physically divide an established community. Therefore, no impacts are anticipated and no further analysis or mitigation is required.

Land Use and Planning. b. *Would the project 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?*

Answer: No Impact.

Discussion: The proposed pipelines would be mostly constructed within public rights-of-way which are not subject to local zoning. The regional lift station would be constructed on a parcel of land within the Audie Murphy Ranch development that has been dedicated to this use in Specific Plan 209. Therefore, no impacts are anticipated and no further analysis or mitigation is required.

Land Use and Planning. c. *Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?*

Answer: No Impact.

Discussion: The Project site is located within the fee area of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). However, it is not within a cell or cell group. In addition, EMWD is not a signatory to the MSHCP and the provisions of the MSHCP do not apply. The Project will not conflict with the MSHCP as discussed in the previous biological section. Therefore, no impacts are anticipated and no mitigation is required.

3.13.3 Conclusion

No impacts are anticipated; therefore, no further analysis or mitigation is required.

3.14 Mineral Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known resource that would be of value to the region and the residents of the state?				X
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

3.14.1 Environmental Setting

There are no mineral resources within the greater Project area.

3.14.2 Discussion and Mitigation Measures

Mineral Resources. a. *Would the project result in the loss of availability of a known resource that would be of value to the region and the residents of the state?*

Answer: No Impact.

Discussion: There are no known mineral resources in the Project area that would be of value to the region and the residents of the State. Therefore, no impacts are anticipated and no mitigation is required.

Mineral Resources. b. *Would the project 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?*

Answer: No Impact.

Discussion: There are no locally-important mineral resource recovery sites delineated on the applicable local general plans, specific plan or other land use plan in the Project area. Therefore, no impacts are anticipated and no mitigation is required.

3.14.3 Conclusion

No impacts are anticipated; therefore, no further analysis or mitigation is required.

3.15 Noise

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				X
b. Expose persons to or generate excessive groundbourne vibration or groundbourne noise levels?		X		
c. Result in a substantial permanent increase in ambient noise levels above levels existing without the project?			X	
d. Result in a substantial temporary or periodic increase in noise levels in the project vicinity above levels existing without the project?		X		
e. Be 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, and if so, would the project expose people residing or working in the project area to excessive noise levels?				X
f. Be located within the vicinity of a private airstrip, and if so, would the project expose people residing or working in the project area to excessive noise levels?				X

3.15.1 Environmental Setting

The ambient noise level of a region is the total noise generated within the specific environment and is usually composed of sounds emanating from natural and manmade sources. Noise levels monitored in a region tend to have wide spatial and temporal variation due to the great diversity of contributing sources. This is especially true for the greater Project area with its blend of agricultural, commercial and residential land uses.

Characterization of the Project area noise levels is difficult due to the lack of actual field measurements. Very little noise measurement data are available for the Project area in general. However, typical noise levels for areas like the Project area are in the range of 45 to 55 dB(A).

Generally, the noise levels in the Project area are affected by natural and manmade sources. However, the sound levels are more strongly influenced by human rather than natural sound sources. Within the Project area, the major sources of noise include vehicular traffic and aircraft flyovers.

3.15.2 Discussion and Mitigation Measures

Noise. a. *Would the project expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Answer: No Impact.

Discussion: The City of Menifee adopted its Noise Control Regulations on October 1, 2014. Section 9.09.020 contains the following exemptions to the regulations:

Sound emanating from the following sources are exempt from the provisions of this chapter:

(A) Facilities owned or operated by or for a governmental agency.

(B) Capital improvements projects of a governmental agency.

Therefore, activities at the Project site would be exempt from the provisions of the City's Noise Control Regulations and consequently no impacts are anticipated and no further analysis or mitigation is required.

Noise. b. *Would the project expose persons to or generate excessive groundbourne vibration or groundbourne noise levels?*

Answer: Less than Significant with Mitigation Incorporated.

Discussion: Construction activities associated with the Project could result in some minor amount of ground vibration. Vibration from construction activity is typically below the threshold of perception when the activity is more than 50 feet from receivers. However, some residents adjacent to the proposed wastewater collection system will be closer than 50 feet from the construction activity. Also, according to Inland Foundation Engineering, Inc.'s Limited Geotechnical Feasibility Study, it is anticipated that bedrock may be difficult to excavate below a depth of five to ten feet. Therefore, blasting may be required along portions of the collection system

Using explosives to break rock generates air- and ground-borne vibrations which could have detrimental effects on nearby residents and structures. Over the years, however, techniques have been developed that allow blasting to be conducted in relatively close proximity to residential development without causing even cosmetic damage to adjacent structures and still allow for effective rock breaking. *(Illingworth & Rodkin, Inc., July 25, 2003).*

Although almost never a problem for modern blasting procedures, some blast energy does escape into the atmosphere in the form of an air-borne sound wave. The sound waves associated with a blast are at very low frequencies, below the audible range *(Illingworth & Rodkin, Inc., July 25, 2003).*

In order to minimize impacts related to blasting to the greatest extent feasible, EMWD shall notify all affected homeowners of the possible inconvenience as soon as a firm construction schedule is known. In addition, EMWD shall include the following in its construction specifications for this Project:

- Any blasting shall be done by a licensed blasting contractor.
- Each blast shall be monitored and recorded with an approved seismic monitor outside of the closest residence to the blast.
- Residents shall be notified well in advance of the blasts.
- The blasting plan, including calculations, shall be submitted to the City of Menifee for review and approval prior to the first blast.
- EMWD's consultant shall include additional specification language to mitigate air-borne sound waves.

Noise. c. *Would the project result in a substantial permanent increase in ambient noise levels above levels existing without the project?*

Answer: Less than Significant.

Discussion: Although the Project facilities are exempt from the City of Menifee's Noise Ordinance, the regional lift station would be designed to comply with all local ordinances. Therefore, implementation of the Project would not result in a substantial permanent increase in ambient noise levels above levels existing without the Project. Consequently, noise impacts would be less than significant and no further analysis or mitigation is required.

Noise. d. *Would the project result in a substantial temporary or periodic increase in noise levels in the project vicinity above levels existing without the project?*

Answer: Less than Significant with Mitigation Incorporated.

Discussion: The analysis of noise impacts resulting from any project must consider both the construction and operational phases. However, due to the nature of this Project, very little additional noise would be associated with the operational phase. Therefore, the following noise analysis concentrates on the construction phase of the Project.

Operation of equipment used during construction would temporarily increase noise levels to well in excess of ambient noise levels. The construction noise would vary with the particular construction stage in progress due to the different pieces of construction equipment being used.

Table 3.15-1 lists equipment expected to be used during construction and identifies the number of pieces of equipment typically used, their utilization factor, and their reference sound level at a distance of 50 feet.

Table 3.15-1
Construction Equipment List and Reference Sound Levels

Equipment	Number Required	Horsepower Rating	Utilization Factor	Nominal Noise Level, Leq at 50 feet dB(A)
Pipeline Construction				
Air Compressor	1	106	0.50	78
Concrete Saw	1	10	0.12	78
Crane	1	399	0.50	81
Excavator	1	188	0.75	81
Off-Highway Trucks	2	479	0.50	84
Pavement Breaker	1	104	0.12	86
Paver	1	100	0.12	77
Plate Compactor	1	8	0.12	83
Sweeper	1	91	0.12	82
Tractor/Loader/Backhoe	2	108	0.38	78
Water Truck	1	189	0..25	82
Pickups	2	N/A	1.00	72
On-Road Trucks	2	225	1.00	82

	Number Required	Equipment	Utilization Factor	Nominal Noise Level, Leq at 50 feet dB(A)
Lift Station Construction				
Air Compressor	1	106	0.50	78
Crane	1	399	0.50	81
Off-Highway Trucks	1	479	0.50	84
Sweeper	1	91	0.12	82
Tractor/Loader/Backhoe	2	108	0.38	78
Water Truck	1	189	0..25	82
Welder	1	45	0.50	74
Pickups	1	N/A	1.00	72
On-Road Trucks	1	225	1.00	82

As shown above, noise associated with construction could be locally significant during the construction period. However, the exact degree of impact on the surrounding community would depend on the type of equipment being used at any one time, the distance from the equipment, and the hours of operation. It is anticipated that noise levels associated with construction would range from 72 to 84 dB(A) within 50 feet of the equipment being used.

Governmental agencies' projects are exempted from noise regulations in the City of Menifee. However, EMWD will abide by the following best management practices to lessen the noise impacts during construction to the surrounding residential area.

- EMWD shall establish a noise complaint response program and shall respond to any noise complaints received for this Project by measuring noise levels at the affected receptor site. If the noise level exceeds an Ldn (day-night average level) of 65 dBA exterior or and Ldn of 45 dBA interior at the receptor, EMWD will implement adequate measures (which may include portable sound attenuation walls, use of quieter equipment, shift of construction schedule to avoid the presence of sensitive receptors, housing mechanical equipment, etc.) to reduce noise levels to the greatest extent feasible.

- EMWD shall include the following in its construction specifications for this Project:

  - Construction shall be limited to the hours of 7:00 a.m. to 5:00 p.m. on Monday through Friday, and as necessary to comply with any local ordinances.

  - All equipment used during construction shall be muffled and maintained in good operating condition. All internal combustion engines shall be fitted with well-maintained mufflers in accordance with manufacturers' recommendations.

  - Shut off idling equipment when not in use.

Incorporation of the best management practices shown above would ensure that any potential impacts are reduced to a level that is less than significant and no further environmental review or mitigation is required.

Noise. e. *Would the project be 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, and if so, would the project expose people residing or working in the project area to excessive noise levels?*

Answer: No Impact.

Discussion: The Project site is not located within an airport land use plan or within two miles of a public airport or public use airport. Therefore, no impacts are anticipated and no mitigation is required.

Noise. f. *Would the project be located within the vicinity of a private airstrip, and if so, would the project expose people residing or working in the project area to excessive noise levels?*

Answer: No Impact.

Discussion: The Project site is not within the immediate vicinity of a private airstrip. Therefore, no impacts are anticipated and no mitigation is required.

3.15.3 Conclusion

Implementation of the above mitigation measures will ensure that the noise impacts are reduced to a less than significant level and no further environmental review or mitigation is required.

3.16 Population and Housing

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

3.16.1 Environmental Setting

The 2010 population and number of housing units in U.S. Postal Zip Code 92587 (Quail Valley) are 1.639 and 539, respectively (www.usa.com 6/17/2015).

3.16.2 Discussion and Mitigation Measures

Population and Housing. a. *Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

Answer*: No Impact.*

Discussion: The proposed wastewater collection system would serve 214 single family residential lots of which 45 are presently undeveloped. Therefore, it could be construed that this Project would allow an additional 120 residents to move into the Quail Valley area. However, any growth accommodated by the Project would be within the projected population estimates in the City of Menifee's General Plan. Therefore, no impacts are anticipated and no mitigation is required.

Population and Housing. b. *Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*

Answer: No Impact.

Discussion: Implementation of the Project would not displace existing housing because the new facilities would be located within public rights-of-way or within a lot designated for use as a regional wastewater lift station. Therefore, no impacts are anticipated and no further analysis or mitigation is required.

Population and Housing. c. *Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

Answer: No Impact.

Discussion: As discussed above, implementation of the Project would not displace substantial numbers of existing housing and therefore would not displace substantial numbers of people. Therefore, no impacts are anticipated and no further analysis or mitigation is required.

3.16.3 Conclusion

There were no significant impacts identified; therefore, no further analysis or mitigation is required.

3.17 Public Services

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. 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 any of the public services:				
1. Fire Protection?				X
2. Police Protection?				X
3. Schools?				X
4. Parks?				X
5. Other Public Facilities?				X

3.17.1 Environmental Setting

Public services in the Project area are provided by the following entities:

- Police Protection: City of Menifee Police Department
Riverside County Sheriff's Department
- Fire Protection: City of Menifee Police Department
Riverside County Fire Department
- Schools: Perris Unified High School District
Menifee Union School District

3.17.2 Discussion and Mitigation Measures

Public Services. a.1. *Would the project 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 services****?*

Answer: No Impact.

Discussion: Implementation of the Project would not result in the need for additional fire protection services because the majority of the Project is underground pipelines. The regional lift station would be a negligible expansion of operations for which fire protection services would be required. Therefore, no impacts are anticipated and no mitigation is required.

Public Services. a.2. *Would the project 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 services****?*

Answer: No Impact.

Discussion: Implementation of the Project would not result in the need for additional police protection services because the Project involves a negligible expansion of operations for which police services would be required. Additional police protection services (e.g., equipment, sworn officers) would not be required. Therefore, no impacts are anticipated and no mitigation is required.

Public Services. a.3. *Would the project 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****?*

Answer: No Impact.

Discussion: Implementation of the Project would not result in a need for additional schools because the Project does not include the development of residential uses beyond that included in the City of Menifee's General Plan.. Therefore, no impacts are anticipated and no mitigation is required.

Public Services. a.4. *Would the project 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****?*

Answer: No Impact.

Discussion: Implementation of the Project would not result in a need for additional park facilities because the Project does not include the development of uses beyond that included in the City of Menifee's General Plan. Therefore, no impacts are anticipated and no mitigation is required.

Public Services. a.5. *Would the project 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 services****?*

Answer: No Impact.

Discussion: Implementation of the Project would not result in a need for expansions to other public services. Therefore, no impacts are anticipated and no mitigation is required.

3.17.3 Conclusion

There were no significant impacts identified; therefore, no further analysis or mitigation is required.

3.18 Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. 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?				X
b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				X

3.18.1 Environmental Setting

No recreational facilities exist in the immediate Project area. Those parks that do exist adjacent to Quail Valley Subarea 9 are part of the gated community of Canyon Lake and are only accessible to Canyon Lake residents.

3.18.2 Discussion and Mitigation Measures

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

Answer: No Impact.

Discussion: The proposed Project would not increase the use or demand for park or recreational facilities because the Project does not include the development of uses that would place demands on these facilities, such as residential dwellings or office employment beyond that included in the City of Menifee's General Plan. Therefore, no impacts are anticipated and no further analysis or mitigation is required.

Recreation. b. *Would the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?*

Answer: No Impact.

Discussion: The Project does not include recreational facilities. Therefore, no impacts are anticipated and no further analysis or mitigation is required.

3.18.3 Conclusion

No significant impacts were identified; therefore, no further analysis or mitigation is required.

3.19 Transportation/Traffic

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 relative components of the circulation system, including intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?				X
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?		X		
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?				X
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e. Result in inadequate emergency access?				X
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?				X

3.19.1 Environmental Setting

Regional access to the Project area is provided by State Highways 15 and 215. The California Department of Transportation's (Caltrans) latest traffic counts (2013) for these State highways near the Project site are shown in Table 3.19-1.

Table 3.19-1
Selected Traffic Counts by Caltrans
(2013)

Location	Southbound			Northbound		
	Peak Hour	Peak Month	AADT[1]	Peak Hour	Peak Month	AADT[1]
Highway 15						
Railroad Canyon Road	8,600	114,000	110,000	9,200	123,000	119,000
Highway 215						
Newport Road	6,700	88,000	85,100	6,300	83,000	80,000

[1] AADT = Average Annual Daily Traffic
Source: Caltrans 2014, www.dot.ca.gov (6/18/2015)

The City of Menifee also collects traffic data on its streets within the Project area. During the 2012 surveys, the ADT on Goetz Road north of Newport Road was 10,200. At the same time, the ADT on Newport Road west of Goetz Road was 20,600 and east of Goetz Road it was 18,000.

3.19.2 Discussion and Mitigation Measures

Transportation/Traffic. a. *Would the project 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?*

Answer: No Impact.

Discussion: The Project will result in an increase in traffic during construction as a result of construction vehicles and equipment; however, said increase will be less than significant and short-term. Operation and maintenance activities at the Project site are expected to generate approximately one daily vehicle trip to the site. For the reasons stated above, the Project will not result in an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system. Therefore, no impacts are anticipated and no mitigation is required.

Transportation/Traffic. b. *Would the project conflict with an applicable congestion management program, including, but not limited to, level of service standards established by the county congestion management agency for designated roads or highways?*

Answer: Less than Significant with Mitigation Incorporated.

Discussion: The proposed Project would not conflict with an applicable congestion management program, including, but not limited to, level of service standards established by the county congestion management agency for designated roads or highways.

However, as discussed in the section on Hazards, during construction of the pipelines it will be necessary to close at least one lane of traffic on the affect streets. Mitigation measures presented in that section will reduce the traffic impacts to less than significant.

Transportation/Traffic. c. *Would the project 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?*

Answer: No Impact.

Discussion: Implementation of the Project would not result in a change in air traffic patterns. Therefore, no impacts are anticipated and no further analysis or mitigation is required.

Transportation/Traffic. d. *Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

Answer: No Impact.

Discussion: Implementation of the Project would not substantially increase other hazards due to a design feature or incompatible uses. Therefore, no impacts are anticipated and no further analysis or mitigation is required.

Transportation/Traffic. e. *Would the project result in inadequate emergency access?*

Answer: No Impact.

Discussion: Implementation of the Project would not result in inadequate emergency access as explained in the Hazards section. Therefore, no impacts are anticipated and no further analysis or mitigation is required.

Transportation/Traffic. f. *Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?*

Answer: No Impact.

Discussion: Implementation of 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. Therefore, no impacts are anticipated and no further analysis or mitigation is required.

3.19.3 Conclusion

Implementation of the mitigation measures presented in the Hazards section would ensure that the impacts to traffic were reduced to a level of less than significant.

3.20 Utilities and Service Systems

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				x
b. Require or result in the construction of new water or wastewater treatment facilities, the construction of which could cause significant environmental effects?				x
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				x
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				x
e. Result in a determination by the wastewater treatment provider that serves or may serve the project's projected demand in addition to the provider's existing communities?				x
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			x	
g. Comply with federal, state, and local statutes and regulations related to solid waste?				x

3.20.1 Environmental Setting

Several entities provide utilities and service systems within the Project area. These are:

- Water — Eastern Municipal Water District
- Wastewater — Eastern Municipal Water District
- Electricity — Southern California Edison
- Telephone — Verizon
- Natural Gas — The Gas Company

3.20.2 Discussion and Mitigation Measures

Utilities and Service Systems. a. *Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*

Answer: No Impact.

Discussion: The Project will provide a wastewater collection system to serve the Quail Valley Subarea 9, Phase 1 area. It will not generate wastewater in excess of that envisioned by the growth allowed in the City of Menifee's General Plan for the area. EMWD's Perris Valley Regional Water Reclamation Facility has sufficient capacity to handle this small increase in wastewater flow. Therefore, no impacts are anticipated and no further analysis or mitigation is required.

Utilities and Service Systems. b. *Would the project require or result in the construction of new water or wastewater treatment facilities, the construction of which could cause significant environmental effects?*

Answer: No Impact.

Discussion: Implementation of the Project would not require or result in the construction of new water or wastewater treatment facilities. Therefore, no impacts are anticipated and no further analysis or mitigation is required.

Utilities and Service Systems. c. *Would the project 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?*

Answer: No Impact.

Discussion: Implementation of the Project would not require the construction of new storm water drainage facilities. Therefore, no impacts are anticipated and no further analysis or mitigation is required.

Utilities and Service Systems. d. *Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

Answer: No Impact.

Discussion: Water needed during Project construction and operation activities is available from EMWD's existing water and recycled water supplies. Therefore, no impacts are anticipated and no further analysis or mitigation is required.

Utilities and Service Systems. e. *Would the project result in a determination by the wastewater treatment provider that serves or may serve the project area that it has adequate capacity to serve the projected demand in addition to the provider's existing communities?*

Answer: No Impact.

Discussion: As previously stated, the Project would have no effect on wastewater treatment capacity. Therefore, no impacts are anticipated and no further analysis or mitigation is required.

Utilities and Service Systems. f. *Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*

Answer: Less than Significant.

Discussion: Operation of the Project would not generate solid waste. However, during construction of the required facilities, construction debris (e.g., excavated soil, and building materials) would be generated. The excavated soil could be utilized as fill material and the amount of other construction debris would be minimal. Therefore, this would be considered a less than significant impact on Riverside County's ability to handle the solid waste. Therefore, no further analysis or mitigation is required.

Utilities and Service Systems. g. *Would the project comply with federal, state, and local statutes and regulations related to solid waste?*

Answer: No Impact.

Discussion: The Project would comply with all federal, state and local statutes and regulations related to solid waste. Therefore, no impacts are anticipated and no mitigation is required.

3.20.3 Conclusion

No significant impacts were identified; therefore, no further analysis or mitigation is required.

3.21 Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)		X		
c. Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?		X		

3.21.1 Discussion and Mitigation Measures

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

Answer: Less than Significant with Mitigation Incorporated.

Discussion: Compliance with the mitigation measures included in Sections 3.4 through 3.19 above will ensure that implementation of the proposed Project does not have the potential to significantly degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory.

Mandatory Findings of Significance. b. *Would the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)*

Answer: Less than Significant with Mitigation Incorporated.

Discussion: Compliance with the mitigation measures included in Sections 3.4 through 3.19 above will ensure that implementation of the proposed Project does not have impacts that are individually limited, but cumulatively considerable.

Mandatory Findings of Significance. c. *Would the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?*

Answer: Less than Significant with Mitigation Incorporated.

Discussion: Compliance with the mitigation measures included in Sections 3.4 through 3.19 above will ensure that implementation of the proposed Project does not have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly.

3.21.2 Conclusion

All potential significant impacts associated with the proposed Project can be mitigated to a less than significant level. Therefore, no further environmental review or mitigation is required.

4 Persons and Organizations Consulted

On July 24, 2015, EMWD circulated the Subsequent Initial Study and Mitigated Negative Declaration to those in the following list:

4.1 Federal Agencies

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James J. Fletcher, Superintendent
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4.2 State Agencies

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4.3 Regional Agencies

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4.4 County Agencies

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4.5 City Agencies

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4.6 Interested Entities

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4.7 Utilities

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Verizon Legal Process Compliance
Custodian of Record
Attention: CEQA Review
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4.8 School Districts

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Menifee Union School District
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Jonathan Greenberg, Superintendent
Perris Union High School
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Perris, California 92570

4.9 Potentially Affected Property Owners

On July 24, 2015, EMWD also mailed a Notice of Intent to Adopt a Subsequent Initial Study and Mitigated Negative Declaration to all affected property owners.

5 Report Authors/Contributors

5.1 Report Authors

This Subsequent Initial Study and Mitigated Negative Declaration was prepared under contract to Eastern Municipal Water District by:

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6 References

Air Resources Board. 2015. www.arb.ca.gov, 6/03/2015.

Air Resources Board. 2000. Risk *Guidance for the Permitting of New Stationary Diesel-Fueled Engines.*

Brian F. Smith and Associates, Inc. 2013. *An Updated Phase 1 Cultural Resources Assessment for Tentative Tract Maps 36484 and 36485, Audie Murphy Ranch, City of Menifee, County of Riverside, USGS Romoland Quadrangle: 311.2 acres.* August 16.

California Department of Transportation. 2010. *List of Scenic Highways in California*. www.dot.ca.gov, 3/25/2014.

California Department of Transportation. 2015. Traffic Counts. www.dot.ca.gov, 6/18/2015

California Department of Transportation. 1980. Traffic Manual.

California Department of Toxic Substances Control. 2015. www.dtsc.ca.gov. 6/10/2015.

California Department of Water Resources. 2010. *Guidelines, Proposition 84 & Proposition 1E, Integrated Regional Water Management.* August.

California Geological Survey. 2015. Alquist-Priolo. www.consvr.ca.gov. 6/10/2015.

California Geological Survey, 2015. Probabilistic Ground Motion Map. www.consvr.ca.gov. 6/10/2015.

California Geological Survey. 2015. Seismic Hazards Map. www.conservation.ca.gov. 6/10/2015.

City of Menifee. 2014. General Plan. 6/03/2015.

City of Menifee. 2014. *Addendum No. 6 to EIR No. 436 for SP 2012-033, CZ 2012-094,TTM 36484, TTM 3645, Audie Murphy Ranch Specific Plan No. 209 (SCH No. 2001101080.* January 13.

County of Riverside. 2015. www3.tlma.co.riverside.ca.us. 06/08/2015.

Eastern Municipal Water District. 2010. *Final Initial Study and Mitigated Negative Declaration, Quail Valley Sewer Improvements Subarea 9.* May

Environmental Protection Agency. 2015. www.epa.gov. 6/10/2015.

Jones and Stokes. 2007. *URBEMIS2007 for Windows Version 9.2 for Land Use Developments*. South Coast Air Quality Management District. November.

K.S. Dunbar & Associates, Inc., 2014. *Addendum to the May 2010 Final Initial Study and Mitigated Negative Declaration, Quail Valley Sewer Improvements, Subarea 9 (SCH No. 2010031113* prepared for Eastern Municipal Water District. July.

Rincon Consultants, Inc., 2015. *Eastern Municipal Water District, Quail Valley Sewer Improvements Subarea 9, Phase 1 .* Prepared for K.S. Dunbar & Associates, Inc., June.

Riverside County Board of Supervisors, *Riverside General Plan*, adopted October 7, 2003.

SCAQMD. 2006. *Final Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds.* October.

SCAQMD. 2012. *Air Quality Management Plan.*

SCAQMD. 1999. *CEQA Air Quality Handbook*. Revised March 2011. www.aqmd.gov. 5/24/2014

SCAQMD. 2008. Localized Significance Thresholds. July. www.aqmd.gov. 5/24/2014

SCAQMD. 2008. *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold.* October.

State of California. *Title 24, California Code of Regulations, Part 6, Section 132, Building Standards.*

State Water Resources Control Board. 2015. www.waterboards.ca.gov. 6/10/2015.

Thomas Brothers. 2008. The Thomas Guide San Bernardino and Riverside Counties.

Uniform Building Code. 1994.

U.S. Department of Agriculture, Soil Conservation Service. 2015. General Soil Map Western Riverside Area, California. www.usda.gov. 6/10/2015.

www.usa.com . 6/17/2015.

7 Acronyms and Abbreviations

AAM	annual arithmetic mean
ADOE	Archaeological Determinations of Eligibility
AFY	acre-feet per annum
AGM	annual geometric mean
AQMP	Air Quality Management Plan
ARB	Air Resources Board
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
Caltrans	California Department of Transportation
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CH_4	methane
CNDDB	California Natural Diversity Data Base
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CRWQCB, SAR	California Regional Water Quality Control Board, Santa Ana Region
dB(A)	decibels on the A-scale
DFW	California Department of Fish and Wildlife
DEIR	Draft Environmental Impact Report
DTSC	Department of Toxic Substances Control

DWR	Department of Water Resources
EA	Environmental Assessment
EIR	Environmental Impact Report
EMWD	Eastern Municipal Water District
EPA	U.S. Environmental Protection Agency
EPDC	expected peak day concentration
ESA	Endangered Species Act
g	acceleration due to gravity
GHG	greenhouse gases
GIS	Geographic Information System
gpm	gallons per minute
GWP	global warming potential
HDP	Historic Property Directory
kW	kilowatts
KSD&A	K.S. Dunbar & Associates, Inc.
Ldn	day-night average sound level
Leq	noise equivalent
LUSTIS	Leaking Underground Storage Tank Information System
MBTA	Migratory Bird Treaty Act
mg	million gallons
mgd	million gallons per day
MMRP	Mitigation Monitoring and Reporting Program
MSHCP	Western Riverside County Multiple Species Habitat Conservation Plan
MT	metric tons
MW	megawatts
MWD	The Metropolitan Water District of Southern California
MWh	megawatt hours
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission

NDDB	Natural Diversity Data Base
NO	nitrogen oxide
NO_2	nitrogen dioxide
NO_x	oxides of nitrogen
NPL	National Priorities List
O_3	ozone
OES	Office of Emergency Services
OHP	Office of Historic Preservation
Pb	lead
Pga	peak ground acceleration
PM	particulate matter
PM_{10}	particulate matter (less than 10 microns in diameter)
$PM_{2.5}$	particulate matter (less than 2.5 microns in diameter)
ppb	parts per billion
ppm	parts per million
RCRA	Resource Conservation and Recovery Act
RCFCWCD	Riverside County Flood Control and Water Conservation District
RO	reverse osmosis
ROG	reactive organic gases also called VOC (volatile organic compounds)
Sa	spectral acceleration
SAAQS	State Ambient Air Quality Standards
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SIP	State Implementation Plan
SO_2	sulfur dioxide
SO_x	oxides of sulfur
State Water Board	State Water Resources Control Board
SWIS	Solid Waste Information System
TOG	total organic gases

UCR	University of California, Riverside
USF&WS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Service
$\mu g/m^3$	micrograms per cubic meter

Appendix A

Mitigated Negative Declaration

MITIGATED NEGATIVE DECLARATION

California Environmental Quality Act
Mitigated Negative Declaration (Article VI – CEQA Guidelines)

Date: July 2015 (Draft)

Project Title: Quail Valley Sewer Improvements Subarea 9, Phase 1

Project Location: Section 36, Township 5 South, Range 4 West, SBB&M
Section 31, Township 5 South, Range 3 West, SBB&M
Section 6, Township 6 South, Range 3 West, SBB&M
Thomas Brothers Maps, Page 867, Grids E2, F2, G2 and G3
City of Menifee, County of Riverside, California

Project Description: EMWD intends to construct a wastewater collection system to serve the properties in the Quail Valley Subarea 9 Phase I area. The proposed sewer Improvement project will include the installation of sewers along Vista Way, Casa Bonita Avenue, Datil Drive, and Platino Drive located within the Phase 1 project boundary. Approximately 1.6 miles of 8-inch diameter collection pipelines will be installed within the public right-of-way and sewer laterals will extend onto private property to service residences. The sewer laterals will connect to sewer sources at the private property eliminating the need for septic tanks.

The majority of pipelines will be installed in the public rights-of-way using conventional open cut construction methods. Based on the geological formations, a portion of the pipeline and sewer laterals may utilize specialized construction methods such as directional drilling or micro tunneling. There will be traffic impacts during construction along the public streets. Proper traffic control measures will be implemented to route the traffic away from the work area and to protect the public. The sewer laterals at private residences will be constructed after obtaining right-of-entry agreements from the property owners. The property owners will be notified well in advance of any construction activity within their private property. All the construction activities will take place during normal working hours of 7:00 am to 5:00 pm. Wastewater will be conveyed from the Quail Valley Sewer Improvements Subarea 9 – Phase 1 Project to the regional lift station near the intersection of Audie Murphy Ranch Road and Normandy Road. At this time, EMWD is considering two alternative alignments for the “transport line”.

The first alternative alignment (Alternative A) would include a new 8-inch diameter pipeline from Manhole “A” in Vista Way which would be constructed across a vacant property adjacent to Vista Way (APN: 351-084-016) and then along the property boundary of two additional properties (APN: 351-084-017 and 351-084-028) before reaching the northwesterly side of the Audie Murphy Ranch Development. The 8-inch pipeline would be constructed through the proposed fire station property and finally connected to Manhole “F” at “A” Street in the Audie Murphy Ranch Development. An 18-inch diameter pipeline would then follow the alignment along A Street in a southerly direction to its intersection with B Street. It would then follow B Street in an easterly direction to its intersection with Goetz Road. It would then follow Goetz Road in a southerly direction to its intersection with Audie Murphy Ranch Road. It would then follow Audie Murphy Ranch Road in an easterly and northeasterly direction to the regional lift station to be constructed near the intersection of Audie Murphy Ranch Road and Normandy Road (Figure-1).

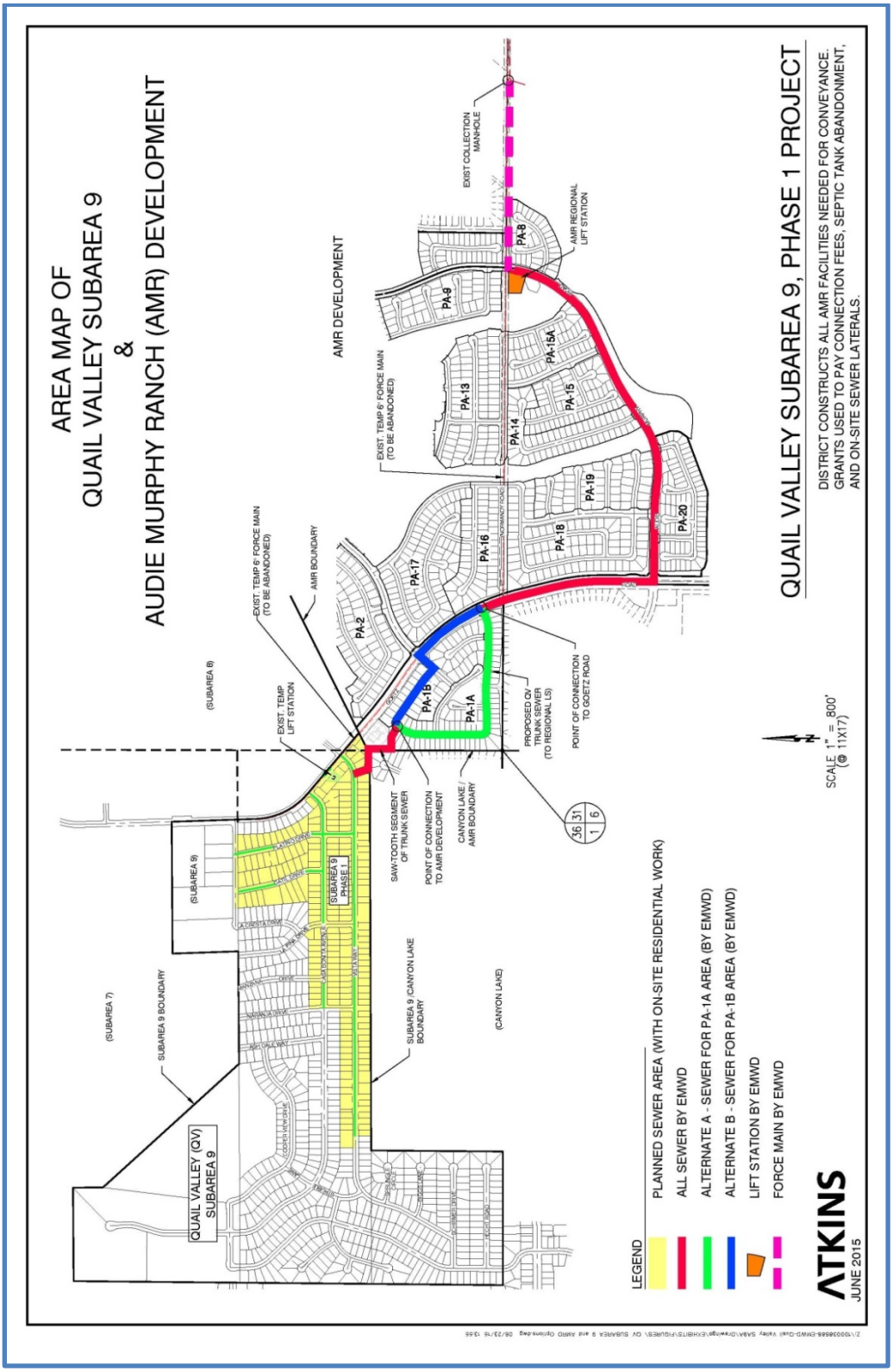

Figure 1 Quail Valley Sewer Improvements Subarea 9, Phase 1

The second alternative alignment (Alternative B) would follow the same route from Vista Way to Manhole "F" at "A" Street in the Audie Murphy Ranch Development. It would then follow "D" Street in a southeasterly direction to its intersection with "C" Street and thence in a northeasterly direction along "C" Street to its intersection with Goetz Road. It would then follow Goetz Road in a southerly direction to its intersection with Audie Murphy Ranch Road. It would then follow Audie Murphy Ranch Road in an easterly and northeasterly direction to the regional lift station to be constructed near the intersection of Audie Murphy Ranch Road and Normandy Road.

The regional lift station would be designed to handle flows from 750 gallons per minute (gpm) to 2,900 gpm. It would include two wet wells each 10 feet in diameter and 30 feet deep. It would include engineering controls such as sealed wet well covers, standby pumps and an emergency generator to reduce the potential of releasing odorous gases from the facility. The facility would also include an active air phase odor control system which would be operated as necessary.

Two 10-inch diameter force mains would also be constructed from the regional lift station to an existing collection manhole located in Normandy Road.

Project Sponsor: Eastern Municipal Water District
Post Office Box 8300
Perris, California 92572-8300

Findings: On the basis of the attached Initial Study:

	I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DELCARATION** will be prepared.
X	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the applicant. A **MITIGATED NEGATIVE DECLARATION** will be prepared.
	I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.
	I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant if not mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but must analyze only the effects that remain to be addressed.
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier **EIR** or **NEGATIVE DECLARATION** pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier **EIR** or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Jayne Joy, P.E., Director, Environmental and Regulatory Compliance — Date 7/23/2015

Mitigation Measures: The following mitigation measures are included in this Mitigated Negative Declaration to avoid or mitigate significant environmental effects to a point where clearly no significant effect on the environment would occur.

Air Quality

EMWD will:

- Appoint a construction relations officer to act as a community liaison concerning on-site construction activities including resolution of issues related to PM_{10} generation.

- Add the following best management practices in its contract documents for this project:

The contractor shall:
:

- Utilize electricity from on-site power sources instead of from temporary diesel or gasoline powered generators, when feasible.

- Require the use of 2010 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export) and if the lead agency determines that 2010 model year or newer diesel trucks cannot be obtained the contractor shall use trucks that meet EPA 2007 model year NO_x emissions requirements.

- Require that all on-site construction equipment meet EPA Tier 3 or higher emissions standards according to the following:

  - ✓ All construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.

  - ✓ A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided at the time of mobilization of each applicable unit of equipment.

- Maintain construction equipment engines by keeping them properly tuned and maintained according to manufacturer's specifications.

- Use alternative fuels or clean and low-sulfur fuel for equipment.

- Idle trucks in accordance with the Airborne Toxic Control Measure (ACTM) to Limit Diesel Fueled Commercial Motor Vehicle Idling and other applicable laws.

- Water site and equipment as necessary to control dust.

- Sweep all streets at least once per day using SCAQMD Rule 1186 certified street sweepers or roadway washing trucks if visible soil materials are carried to adjacent streets.

- Conduct operations in accordance with SCAQMD Rule 403 requirements.

- If necessary, wash off trucks leaving the site.

- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least two feet of freeboard in accordance with the requirements of California Vehicle Code (CVC) Section 23114.

Biological Resources

To insure that there are no impacts to nesting birds or the burrowing owl, EMWD will implement the following:

- A pre-construction clearance survey for nesting birds shall be conducted within 3 days prior to any ground disturbing activities. The biologist conducting the clearance survey should document a negative survey with a brief letter report indicating that no impacts to active bird nests will occur. If an active avian nest is discovered during the 3-day preconstruction clearance survey, construction activities shall stay outside of a 300-foot buffer around the active nest. For raptor species, this buffer shall be expanded to 500-feet. It is recommended that a biological monitor be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged, normal construction activities can occur.

- A burrowing owl clearance survey shall be conducted prior to any ground disturbing activities in accordance with the CDFW 2012 Staff Report on Burrowing Owl Mitigation. Two pre-construction clearance surveys shall be conducted 14-30 days and 24 hours prior to ground disturbing activities to document the continued absence of burrowing owl from the Project site.

Cultural Resources

Although there were no archeological resources as defined in §15064.5 of the State CEQA Guidelines identified within the immediate Project area, there is always a possibility that buried cultural resources that were not previously identified could be unearthed during excavation activities. Therefore, EMWD will adhere to the following:

- At least 30 days prior to beginning Project construction, EMWD shall contact the Pechanga Band of Luiseño Indians to notify the Luiseño of grading and excavation activities and to coordinate and develop a Cultural Resources Treatment and Monitoring Agreement. The Agreement shall address the treatment of known cultural resources; the designation, responsibilities, and participation of a professional Native American Tribal monitor during grading, excavation and other ground disturbing activities; Project grading and excavation schedule; terms of compensation for the monitor; and treatment and final disposition of any cultural resources, sacred items and human remains discovered on site. The Tribal monitor shall be allowed to monitor all grading, excavation and ground disturbing activities and, with the concurrence of EMWD's Field Engineering Inspector, have the authority to stop or redirect grading and/or excavation activities.

- If inadvertent discoveries of cultural resources are encountered at any time during construction, these materials and their context shall be avoided until a qualified archeologist and a representative from the Pechanga Tribe of Luiseño Indians have consulted with EMWD regarding appropriate avoidance and mitigation measures for the newly discovered resources. Construction personnel shall not collect or retain cultural resources. Prehistoric resources include, but are not limited to: chert or obsidian flakes; projectile points; mortars and pestles; dark, friable soil containing shell and bone; dietary debris; heat-affected rock; or human burials. Historic resources include stone or adobe foundations or walls; structures and remains with square nails; and refuse deposits (glass, metal, wood, ceramics), often found in old wells and privies. Pursuant to California

Public Resources Code §21083.2(b) avoidance is the preferred method of preservation for archeological resources.

- All sacred sites, should they be encountered within the Project sites, shall be avoided and preserved as the preferred mitigation, if feasible.

- In addition, EMWD will relinquish ownership of all cultural resources, including sacred items, burial goods and all archeological artifacts that are found on the Project sites to the Pechanga Tribe of Luiseño Indians for proper treatment and disposition.

- If paleontological resources (e.g., fossils) are encountered at any time during construction of the Project, construction personnel shall avoid altering these materials and their context until a qualified paleontologist has evaluated the situation. Project personnel shall not collect or retain paleontological resources.

- Consistent with State CEQA Guidelines §15064.5, subdivision (e), in the event of an accidental discovery or recognition of any human remains, the County Coroner shall be notified and construction activities at the affected work site shall be halted. If the remains are found to be Native American, the Native American Heritage Commission shall be notified within 24 hours. The NAHC must immediately notify the Most Likely Descendant(s) under Public Resources Code §5097.98 and the descendants must make recommendations or preference for treatment within 48 hours of being granted access to the site. Guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains in accordance with the provisions of Health and Safety Code §7050.5 and Public Resources Code §5097.98.

Geology and Soils

Due to the likelihood of encountering groundwater within the pipe zone and to mitigate potential impacts to the greatest extent feasible, EMWD shall include the following mitigation measures in its construction specifications for the proposed Project:

- Where pipe bedding is necessary to bring the trench bottom up to grade, a minimum of six (6) inches will be placed to provide uniform and adequate longitudinal support under the pipe.

- In the event groundwater is encountered on Vista Way, placement of clay dams shall be required at 500 foot intervals and any other locations where groundwater is encountered within the pipe zone. Elsewhere, dams shall be placed as directed in the field by the engineer.

- All excavations shall be configured in accordance with the requirements of CalOSHA. Classification of the soil and the shoring and/or slope configuration shall be determined by the contractor prior to excavation on the basis of trench depth and the soil encountered. The contractor shall have a “competent person” on-site for the purposes of assuring safety within and about all construction excavations.

Hazards and Hazardous Materials

To reduce potentially hazardous conditions and minimize the impacts from the handling of potentially hazardous materials, EMWD will include the following in its construction contract documents:

- The contractor(s) shall prepare a *Health and Safety Plan* in compliance with the requirements of Chapter 6.95, Division 20 of the Health and Safety Code (§§ 25500—25532).The plan shall include measures to be taken in the event of an accidental spill.
- The contractor(s) shall enforce strict on-site handling rules to keep construction and maintenance materials out of receiving waters and storm drains. In addition, the contractor(s) shall store all reserve fuel supplies only within the confines of a designated construction staging area, refuel equipment only within the designated construction staging area, and regularly inspect all construction equipment for leaks.
- The construction staging area shall be designed to contain contaminants such as oil, grease, and fuel products so that they do not drain towards receiving waters or storm drain inlets.

To further ensure adequate ingress and egress for emergency responders at all time, EMWD shall include the following in its construction specifications for this Project:

- Traffic control plans shall be prepared by a qualified professional engineer prior to construction.
- Traffic control plans shall consider the ability of alternative routes to carry additional traffic and identify the least disruptive hours of construction site truck access routes and the type and location of warning signs, lights and other traffic control devices. Consideration shall be given to maintaining access to commercial parking lots, private driveways and sidewalks, bikeways and equestrian traffic to the greatest extent possible.
- Traffic control plans shall comply with Part 6 of the California Manual on Uniform Traffic Control Devices and the California Supplement as determined by each affected local agency to minimize any traffic and pedestrian hazards that exist during project construction.
- Encroachment permits for all work within public rights-of-way shall be obtained from each affected local agency prior to commencement of any construction. EMWD shall comply with all traffic control requirements of the affected local agencies.
- Working hours and lane closures shall be as specified by the affected local agency.
- Public streets shall be restored to a condition mutually agreed to between EMWD and the local jurisdictions prior to construction.

Hydrology and Water Quality

EMWD will require contractors to implement a program of best management practices (BMP's) and best available technologies to reduce potential impacts to water quality that may result from construction activities. To reduce or eliminate construction-related water quality impacts before the onset of construction activities, EMWD would obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Construction Permit. Construction activities would comply with the conditions of this permit that include preparation of a storm water pollution prevention plan, implementation of BMP's, and monitoring to insure impacts to water quality are minimized. As part of this process, multiple BMP's would be implemented to provide effective erosion and sediment control. These BMP's would be selected to achieve maximum sediment removal and represent the best available technology that is

economically achievable. BMP's to be implemented as part of this mitigation measure may include, but are not limited to, the following:

- Temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other groundcover shall be employed for disturbed areas.

- Storm drain inlets on the site and in downstream offsite areas shall be protected from sediment with the use of BMP's acceptable to EMWD, local jurisdictions and the California Regional Water Quality Control Board, Santa Ana Region.

- Dirt and debris shall be swept from paved streets in the construction zone on a regular basis, particularly before predicted rainfall events.

- No disturbed surfaces shall be left without erosion control measures in place between October 15 and April 15. EMWD shall file the appropriate notice with the Regional Board and require the preparation of a pollution prevention plan prior to commencement of construction. EMWD shall routinely inspect the construction site to verify that the BMP's specified in the pollution prevention plan are properly installed and maintained. EMWD shall immediately notify the contractor if there was a noncompliance issue and require immediate compliance.

- Controls on construction site dewatering shall be implemented. If possible, water generated as a result of construction site dewatering shall be discharged onsite so that there will be no discharge to downstream Canyon Lake. If discharge to surface water were unavoidable, EMWD shall obtain coverage under the NPDES General Dewatering Permit prior to commencement of construction. The provisions of this permit are sufficiently protective of water quality to ensure that impacts to surface waters will remain below significance thresholds. During dewatering activities, all permit conditions shall be followed. EMWD shall routinely inspect the construction site to verify that all permit measures are properly implemented. EMWD shall notify the contractor of any noncompliance and require immediate compliance.

Noise

In order to minimize impacts related to blasting to the greatest extent feasible, EMWD shall notify all affected homeowners of the possible inconvenience as soon as a firm construction schedule is known. In addition, EMWD shall include the following in its construction specifications for this Project:

- Any blasting shall be done by a licensed blasting contractor.

- Each blast shall be monitored and recorded with an approved seismic monitor outside of the closest residence to the blast.

- Residents shall be notified well in advance of the blasts.

- The blasting plan, including calculations, shall be submitted to the City of Menifee for review and approval prior to the first blast.

- EMWD's consultant shall include additional specification language to mitigate air-borne sound waves.

EMWD will include the following in its construction contract documents:

- All equipment used during construction shall be muffled and maintained in good operating condition. All internal combustion engines should be fitted with well-maintained mufflers in accordance with manufacturer's recommendations.

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Urbemis 2007 Version 9.2.4

Detail Report for Summer Construction Unmitigated Emissions (Pounds/Day)

File Name: C:\Users\Owner\AppData\Roaming\Urbemis\Version9a\Projects\EMWD Quail Valley Subarea 9 Phase I.urb924

Project Name: Quail Valley Pipelines

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
Time Slice 1/1/2016-12/30/2016 Active Days: 261	**1.66**	**11.24**	**8.07**	**0.00**	**0.00**	**0.60**	**0.60**	**0.00**	**0.55**	**0.55**	**1,931.65**
Building 01/01/2016-12/31/2016	1.66	11.24	8.07	0.00	0.00	0.60	0.60	0.00	0.55	0.55	1,931.65
Building Off Road Diesel	1.66	11.24	8.07	0.00	0.00	0.60	0.60	0.00	0.55	0.55	1,931.65
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase Assumptions

Phase: Building Construction 1/1/2016 - 12/31/2016 -

Off-Road Equipment:

1 Air Compressors (106 hp) operating at a 0.48 load factor for 4 hours per day

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 1 hours per day

1 Cranes (399 hp) operating at a 0.43 load factor for 1 hours per day

1 Excavators (168 hp) operating at a 0.57 load factor for 6 hours per day

1 Off Highway Trucks (479 hp) operating at a 0.57 load factor for 4 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 1 hours per day

1 Paving Equipment (104 hp) operating at a 0.53 load factor for 1 hours per day

1 Plate Compactors (8 hp) operating at a 0.43 load factor for 1 hours per day

1 Sweepers/Scrubbers (91 hp) operating at a 0.68 load factor for 1 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 2 hours per day

6/18/2015 11:45:42 AM

Urbemis 2007 Version 9.2.4

Detail Report for Winter Construction Unmitigated Emissions (Pounds/Day)

File Name:

Project Name: Quail Valley Lift Station

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Winter Pounds Per Day, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
Time Slice 1/1/2016-6/30/2016 Active Days: 130	**1.44**	**9.61**	**5.96**	**0.00**	**0.00**	**0.47**	**0.47**	**0.00**	**0.43**	**0.43**	**1,683.52**
Building 01/01/2016-06/30/2016	1.44	9.61	5.96	0.00	0.00	0.47	0.47	0.00	0.43	0.43	1,683.52
Building Off Road Diesel	1.44	9.61	5.96	0.00	0.00	0.47	0.47	0.00	0.43	0.43	1,683.52
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase Assumptions

Phase: Building Construction 1/1/2016 - 6/30/2016 - Default Building Construction Description

Off-Road Equipment:

1 Air Compressors (106 hp) operating at a 0.48 load factor for 4 hours per day

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

1 Off Highway Trucks (479 hp) operating at a 0.57 load factor for 4 hours per day

1 Sweepers/Scrubbers (91 hp) operating at a 0.68 load factor for 1 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 4 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 1 hours per day

Appendix C

Biological Resources

Supporting Information

FIELD SURVEY OF EASTERN MUNICIPAL WATER DISTRICT'S QUAIL VALLEY SUBAREA 9, PHASE 1 PROJECT FOR SPECIAL-STATUS FLORA AND FAUNA

Prepared For:
K.S. Dunbar & Associates, Inc.
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Temecula, California 92590

Prepared By:
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Consulting Biologist
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5 July 2015

FIELD SURVEY OF EASTERN MUNICIPAL WATER DISTRICT'S QUAIL VALLEY SUBAREA 9, PHASE 1 PROJECT FOR SPECIAL-STATUS FLORA AND FAUNA

INTRODUCTION

This report presents the results of a field survey of the Quail Valley Subarea 9 Phase 1 area for state and federal special-status flora, fauna, and sensitive habitats.

Project Description

Eastern Municipal Water District (EMWD) intends to construct a wastewater collection system to serve the properties in the Quail Valley Subarea 9 Phase I area. The proposed sewer improvement project will include the installation of sewers along Vista Way, Casa Bonita Avenue, Datil Drive, and Platino Drive located within the Phase 1 project boundary. Approximately 1.6 miles of 8-inch diameter collection pipelines will be installed within the public right-of-way and sewer laterals will extend onto private property to service residences. The sewer laterals will connect to sewer sources at the private property eliminating the need for septic tanks. The majority of pipelines will be installed in the public rights-of-way using conventional open cut construction methods.

Wastewater will be conveyed from the Quail Valley Sewer Improvements Subarea 9 – Phase 1 Project to the regional lift station near the intersection of Audie Murphy Ranch Road and Normandy Road. At this time, EMWD is considering two alternative alignments for the "transport line".

The first alternative alignment (Alternative A) would include a new pipeline from Manhole "A" in Vista Way which would be constructed across a vacant property adjacent to Vista Way (APN: 351-084-016) and then along the property boundary of two additional properties (APN: 351-084-017 and 351-084-028) before reaching the northwesterly side of the Audie Murphy Ranch Development. The 8-inch pipeline would be constructed through the proposed fire station property and finally connected to Manhole "F" at "A" Street in the Audie Murphy Ranch Development. The alignment would then follow A Street in a southerly direction to its intersection with B Street. It would then follow B Street in an easterly direction to its intersection with Goetz Road. It would then follow Goetz Road in a southerly direction to its intersection with Audie Murphy Road. It would then follow Audie Murphy Ranch Road in an easterly and northeasterly direction to the regional lift station to be constructed near the intersection of Audie Murphy Ranch Road and Normandy Road (Figure 1[1]). From the regional lift station the water would be transported via a force main constructed along Normandy

[1] Figure 1 provided by EMWD.

Road to the existing collection manhole at the intersection of Normandy Road and Rocking Horse Road.

The second alternative alignment (Alternative B) would follow the same route from Vista Way to Manhole "F" at "A" Street in the Audie Murphy Ranch Development. It would then follow "D" Street in a southeasterly direction to its intersection with "C" Street and thence in a northeasterly direction along "C" Street to its intersection with Goetz Road. It would then follow Goetz Road in a southerly direction to its intersection with Audie Murphy Ranch Road. It would then follow Audie Murphy Ranch Road in an easterly and northeasterly direction to the regional lift station to be constructed near the intersection of Audie Murphy Ranch Road and Normandy Road (Figure 1).

A force main would also be constructed from the regional lift station to an existing collection manhole located in Normandy Road.

Project Setting Overview

The project is located in the southwestern portion of Riverside County, along the west edge of Menifee Valley, southwest of Sun City, and two miles west of Interstate 215. The subject property covers portions of Sections 4, 5, and 31 in Townships 5 and 6 South, Range 3 West of the San Bernardino Base and Meridian, on the *Romoland* 7.5-minute U.S.G.S. quadrangle.

As noted previously, the project area is located on the edge of the Menifee Valley which is part of the greater San Jacinto Plains. The San Jacinto Plains consist of broad, nearly flat valleys dotted with bedrock-covered hills that extend from the Temecula area on the south to Riverside on the north, and from the San Jacinto Mountains on the east to the Santa Ana Mountains on the west. The project area is bordered on the south/southeast by Salt Creek, an intermittent tributary of the San Jacinto River which drains into Lake Elsinore. Elevations within the project area range from approximately 1,400 to 1,500 feet above mean sea level (AMSL). The project area has been previously used for livestock grazing and farming and has been highly disturbed by these activities.

The project area is located within the Peninsular Range Geologic Province of southern California. Soils consist of sandy and silty loams formed from decomposed granodiorite, which in turn was formed from erosion of the Mesozoic-age granitic outcroppings. Much of the project area is characterized by flat to gently sloping soils within Menifee Valley.

Much of the valley floor is currently used for agricultural land, home sites, and residential development. Before development the natural vegetation was likely dominated by winter annual grasses, forbs, and shrubs with coastal sage scrub on the hilly portions of the area. Very little vegetation remains within the project area due to disturbance over the years. Annual rainfall averages 10 to 16 inches with the annual temperature averaging 58 to 64 degrees Farenheit. Prehistorically, a wide range of native wildlife species occupied the greater project area (Miles and Gouday 1997)

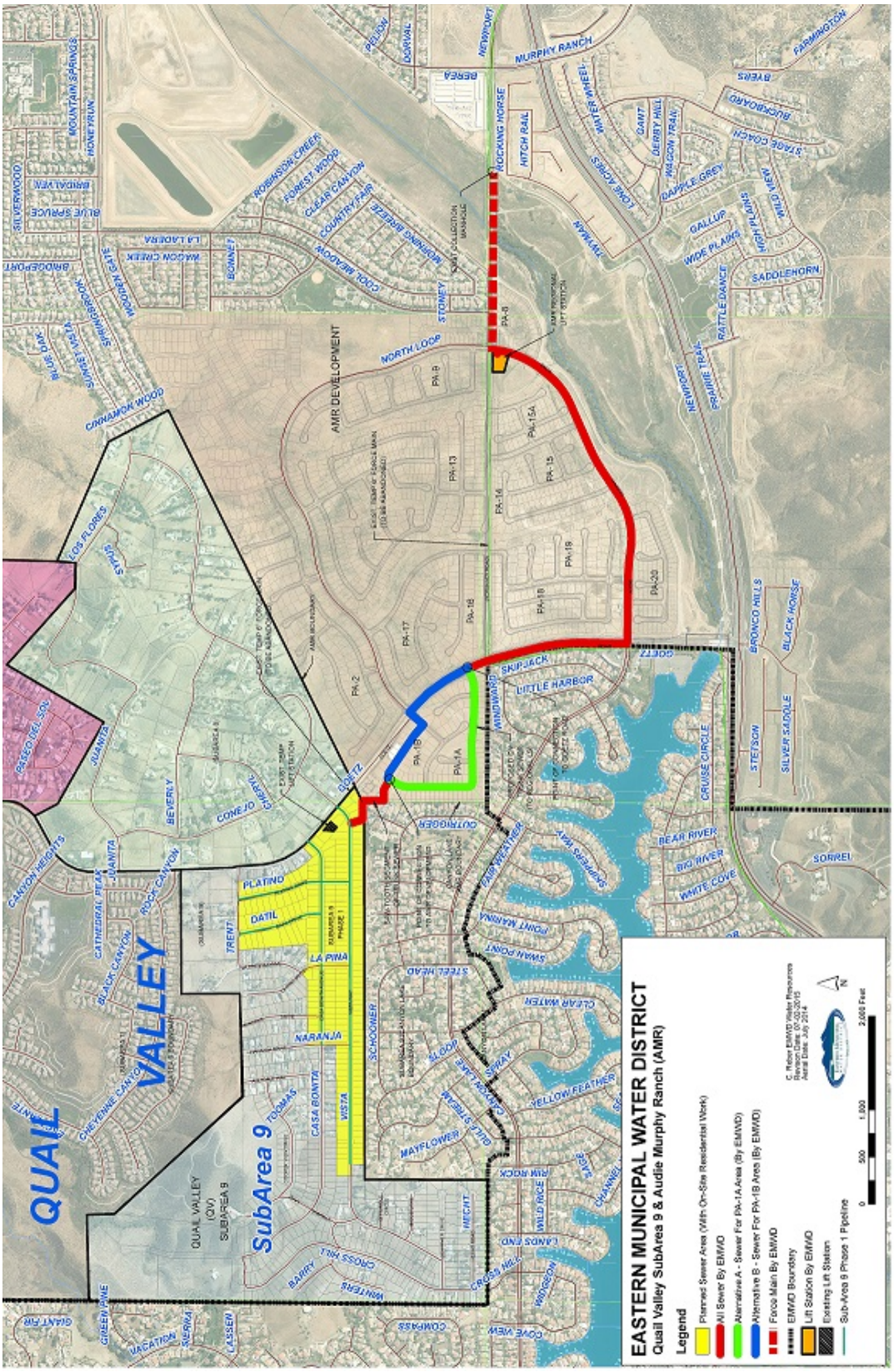


Figure1. Map illustrating the project area and the two transport line alternatives.

FIELD SURVEY

The portions of the project area have been surveyed for special-status flora and fauna on several occasions in recent years and the current survey was intended to update and confirm previous biological surveys for special-status species. Prior surveys include:

- Audie Murphy Ranch EIR No. 436 Biological Resources Chapter (circa 2006);
- Quail Valley Sewer Improvements, Subarea 9 Special-status Species Survey (2010); and
- Quail Valley Sewer Improvements, Subarea 9 Special-status Species and Habitat Assessment (2014).

Previous surveys did not report the occurrence of any special-status flora or fauna within the survey boundaries of those documents.

Prior to conducting the current field survey, lists of potential special-status plants and animals and their habitats were developed based on occurrence records from the region surrounding project pipeline alignments and lift station site derived from the California Department of Fish and Wildlife's California Natural Diversity Data Base (CNDDB; accessed 19 June 2015). Figure 2 illustrates the occurrence records for special-status species within two miles around the proposed infrastructure elements. Appendix A contains a list of the occurrence records illustrated on the figure. The target species of flora and fauna are listed in Tables 1 and 2 included at the end of this report. Observations for wetlands, trees used by birds for nesting, watercourses, and other sensitive habitats were included in the survey protocol.

A pedestrian field survey was conducted by biologist Travis J. McGill on 23 and 26 June 2015. The survey included the sewer pipeline alignments and lift station site for both alternatives. Field notes and site photographs were taken at selected locations.

SURVEY RESULTS

Alternatives A and B

Alternatives A and B have a common alignment from Manhole A at Vista Way in the Quail Valley Subdivision (labeled the 'Saw-tooth Segment of Trunk Sewer' on Figure 1) to the site of the future fire station (labeled the 'Point of Connection to AMR Development' on Figure 1) to be located at the point of connection to the Audie Murphy Ranch (AMR Development) (see Figure 1). The alignments traverse a vacant lot in the subdivision supporting ruderal plants, for example, turkey mullein (*Eremocarpus setigerus*) and Russian thistle (*Salsola* spp.) (Photograph 1),[2] before entering the open field that is completely denuded of all vegetation due to soil discing (Photograph 2).

[2] All photographs courtesy of Travis J. McGill.

Photograph 1. Looking south from Vista Way across the vacant parcel.

Photograph 2. Open, disced field typical of the first ‘Saw-tooth Segment’ of Alternatives 1 and 2.

Alternative A

From the location of the future fire station at the end of the 'Saw-tooth Segment' of the alignment, Alternative A heads due south through PA-1B Area and PA-1A Area before turning east to Goetz Road (Photograph 2). This pipeline segment is devoid of vegetation.

At the south end of this segment the pipeline turns east to Goetz Road near the intersection with Normandy Road (Photograph 3). Within this eastward-traversing segment the pipeline crosses a highly modified ephemeral drainage (Photograph 4). Scattered black willow (*Salix nigra*) and arroyo willow (*S. lasiolepis*) can be seen in the photograph. Other plants associated with the drainage were Russian thistle, salt cedar (*Tamarix* spp.), and Jimson weed (*Datura* spp.). The drainage exits the project area into a 48-inch culvert at the south boundary of the project area. Except for the sparse vegetation associated with the ephemeral drainage, the pipeline alignment is devoid of vegetation due to soil discing as can be seen in Photograph 3.

Photograph 3. View from Goetz Road looking west along the proposed alignment of Alternative A.

Photograph 4. The drainage feature on the southern boundary of the proposed alignment west of Goetz Road where riparian vegetation was observed.

Alternatives A and B

Once Alternative A reaches Goetz Road it shares the same alignment with Alternative B until the project terminus at the AMR Regional Lift Station at Normandy Road (Figure 1). The pipeline will be buried in the right-of-way of Goetz Road until it reaches the eastward-trending Audie Murphy Road, currently a dirt road that continues east/northeast to the AMR Regional Lift Station at Normandy Road (Figure 1). Photographs 5 and 6 illustrate the developed characteristics of Goetz Road.

Photograph 5. View from the intersection of Normandy Road and Goetz Road looking south along Goetz Road.

Photograph 6. View at the intersection of Canyon Lake Drive and Goetz Road.

At the intersection of Canyon Lake Drive and Goetz Road, Canyon Lake Drive ends and Audie Murphy Road begins (currently a dirt road). This road is oriented east/northeast somewhat parrallel to Salt Creek (Figure 1). Audie Murphy Road terminates at Normandy Road where the AMR Regional Lift Station is proposed to be located (Figure 1). Tyical views of the alignment are provided by Photographs 7 and 8.

Photograph 7. View from the middle of the pipeline alignment along Audie Murphy Road looking west/southwest. Salt Creek is to the left side of the photograph where the riparian vegetation is seen.

The photographs illustrate an alignment that is devoid of vegetation and other habitat features used by special-status flora and fauna. It was along the Audie Murphy Road alignment that biologist Travis McGill heard vocalizations by the least Bell's vireo (*Vireo bellii pusillus*) at three separate sites along the Salt Creek channel within 500 feet of the pipeline alignment. In addition, a single smooth tarplant (*Centromadia pungens* spp. *laevis*) was recorded approximately 100 feet to the south of the pipeline alignment at an elevation of approximately 1405 feet in an existing water detention basin not proposed for development. This plant (Photograph 9) would not be impacted by construction and operation of the project.

Once the pipeline reaches the AMR Regional Lift Station at the intersection of Audie Murphy Road and Normandy Road, water will be transported in a force main constructed in the right-of-way of Normandy Road easterly approximately 1,500 feet to the existing

collection manhole at the intersection of Normandy Road and Rocking Horse Road (Photograph 10). Construction will be along a paved road.

Photograph 8. View looking west along Audie Murphy Road toward the intersection of Canyon Lake Drive and Goetz Road. Salt Creek is to the left side of the photograph.

Photograph 9. Smooth tarplant observed in a basin approximately 100 feet south of the proposed pipeline alignment along Audie Murphy Road.

Photograph 10. View from the eastern end of the project force main alignment looking west towards Audie Murphy Road. The riparian corridor on the left side of the photo is outside of the project footprint.

Alternative B

While Alternatives A and B are substantially identical for most of their respective alignments, Alternative B differs near the beginning of the pipeline alignment in how it reaches Goetz Road from the site of the future fire station (Figure 1). From the site of the fire station Alternative B crosses a nearly flat agricultural field to Goetz Road (Photograph 11). As can be seen in the photograph the alignment is completely disced and devoid of vegetation and any habitat characteristics desirable for special-status flora and fauna.

Photograph 11. View from the northern boundary of the project site along the Alternative B alignment west of Goetz Road looking south across the disked field.

Summary of Field Survey

No special-status flora, fauna, or sensitive habitats were observed along the various pipeline alignments or at either of the two lift station sites. Construction of the pipelines within existing road rights-of-way and construction of the lift station at a disturbed and managed site precludes the occurrence of special-status species and sensitive habitats. One ephemeral drainage was noted and would be crossed by the Alternative A pipeline alignment (Photograph 4). The jurisdictional status of this drainage is not evaluated herein. No wetlands, nesting trees, or other sensitive habitats were found to occur within the areas potentially disturbed by the proposed project.

Two special-status species were reported within the greater project area, but not directly within the alternative pipeline alignments. First, the least Bell's vireo was heard at three locations along Salt Creek, approximately 500 feet to the south of the Audie Murphy Road alignment. Second, a single smooth tarplant was located approximately 100 feet to the south of the Audie Murphy Road alignment. Neither the vireo nor the tarplant would be impacted by pipeline construction. Tables 1 and 2 summarize the likelihood of occurrence of special-status flora and fauna likely to be impacted by the proposed project. Field notes of flora and fauna observed during the field surveys are kept on file.

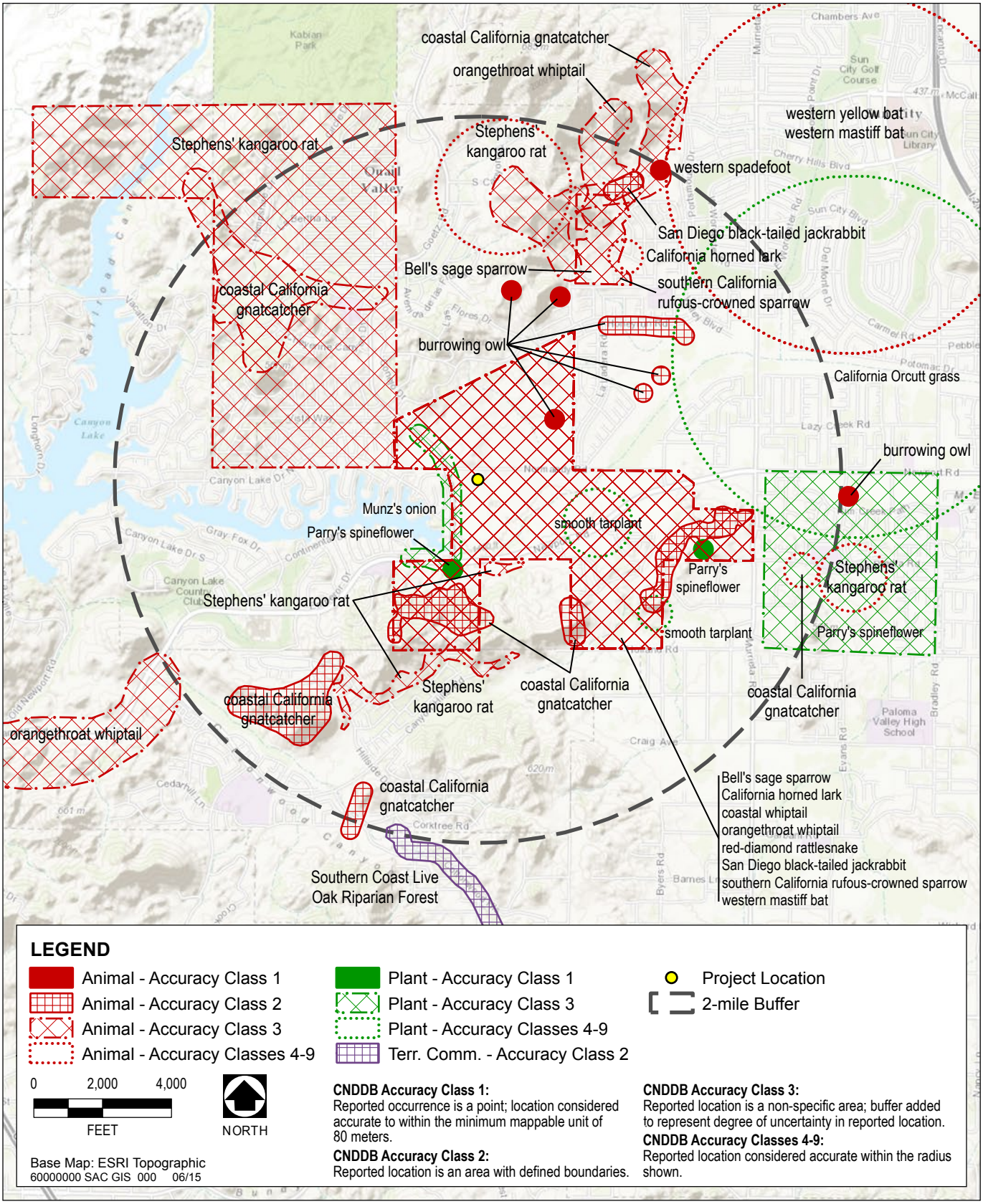
This field survey and report conclude that due to the highly disturbed condition of the current project area, no special-status flora or fauna are likely to be impacted by construction of either alternative alignment of the proposed project.

Reference Cited

Miles, S. R. and C. B. Gouday (compilers). 1997. Ecological Subregions of California. U.S. Department of Agriculture, Forest Service, Pacific Southwest Region, San Francisco, California.

Appendix A

CNDDB Search Results



Source: CNDDB 2015

Special-status Species and Natural Community Occurrences within 2-mile Search Radius of the Project Site

Table 1. Special-status plants known to occur within a two-mile radius of the project site based on California Natural Diversity Data Base records (accessed 19 June 2015).

Family *Scientific Name* Common Name	Listing Status			Growth Form	Community Association	Habitat Association	Wetland Classification	Bloom Period	Likelihood of Occurrence on the Project Site
	Federal	State	CNPS						
Class Liliopsida (Monocots)									
Alliaceae (Onion Family) *Allium munzii* Munz's onion	FE	ST	1B.1	Perennial Herb (bulb)	CalFlora: Chaparral, Foothill Woodland, Pinyon-Juniper Woodland, Valley Grassland Jepson: Coastal Sage Scrub	Grassy openings	UPL	Mar-May	Presumed absent. No suitable habitat present.
Poaceae (Grass Family) *Orcuttia californica* California Orcutt grass	FE	SE	1B.1	Annual Herb	Valley Grassland, Freshwater Wetland, Wetland-Riparian	Vernal pools	OBL	Apr-Aug	Presumed absent. No suitable habitat present.
Class Magnoliopsida (Dicots)									
Asteraceae (Sunflower Family) *Centromadia pungens* ssp. *laevis* Smooth tarplant	NL	NL	1B.1	Annual Herb	Shadscale Scrub, Alkali Sink, Valley Grassland	Open, poorly drained flats, depressions, waterway banks and beds, grassland, disturbed sites	FAC-UPL	Apr-Sep	Present. A single plant was observed south of and outside of the proposed project footprint within a detention basin.
Polygonaceae (Buckwheat Family) *Chorizanthe parryi* var. *parryi* Parry's spineflower	NL	NL	1B.1	Annual Herb	Chaparral, Coastal Sage Scrub	Openings, sand	UPL	Apr-Jun	Presumed absent. No suitable habitat present.

Notes:
Listing Status: FE = Federally listed as endangered; ST = State listed as threatened; SE = Stated listed as endangered; NL = Not listed under the federal and/or state endangered species acts.
CNPS Ranking: 1B.1 = Plants are rare, threatened, or endangered in California and elsewhere; seriously threatened in California.
Wetland Classification (Lichvar et al. 2014): OBL = Obligate wetland species; FAC = Facultative wetland species; UPL = Upland non-wetland species.

Table 2. Special-status animals known to occur within a two-mile radius of the project site based on California Natural Diversity Data Base records (accessed 19 June 2015).					
Family ***Scientific Name*** **Common Name**	**Listing Status**			**Typical Community/Habitat Preference/Other**	**Likelihood of Occurrence on the Project Site**
	Federal	**State**	**CDFW**		
Class Amphibia (Amphibians)					
Scaphiopodidae (Spadefoot Family) *Spea hammondii* Western spadefoot	NL	NL	SSC	Grassland, scrub and chaparral, oak woodlands, coastal sage scrub, typically nocturnal and limited to the wet season, summer storms, or during evenings with elevated substrate moisture levels.	Low. The project site provides marginally suitable habitat.
Class Reptilia (Reptiles)					
Teidae (Whiptail Family) *Aspidoscelis tigris stejnegeri* Coastal tiger whiptail	NL	NL	None	Hot and open areas with sparse foliage in chaparral, woodland, and riparian areas.	Low. The project site provides marginally suitable habitat.
Aspidoscelis hypeythra Orange-throated whiptail	NL	NL	SSC	Semi-arid brushy areas typically with loose soil and rocks, including washes, streamsides, rocky hillsides, and coastal chaparral.	Presumed absent. No suitable habitat.
Viperidae (Viper Family) *Crotalus ruber* Red diamond rattlesnake	NL	NL	SSC	Scrub, coastal chaparral, oak and pine woodlands, rocky grassland, cultivated areas	Presumed absent. No suitable habitat.
Class Aves (Birds)					
Alaudidae (Lark Family) *Eromophila alpestris actia* California horned lark	NL	NL	WL	Open country with sparse herbaceous vegetation or widely scatted low shrubs.	Present. The project site and immediately surrounding area provides suitable habitat

Emberizidae (Sparrow Family) *Aimophila ruficeps canescens* Southern California rufous-crowned sparrow	NL	NL	WL	Open shrubby habitat on rocky, xeric slopes in sparsely vegetation scrubland on hillsides and canyons in coastal sage scrub, serpentine chaparral.	Presumed absent. No suitable habitat.
Artemisiospixa belli belli Bell's sage sparrow	NL	NL	WL	Coastal sage and chaparral dominated by chamise and/or California sagebrush.	Presumed absent. No suitable habitat.
Sylvidae (Gnatcatcher Family) *Polioptila californica californica* California gnatcatcher	FT	NL	SSC	Coastal sage scrub	Presumed absent. No suitable habitat.
Strigidae (Owl Family) *Athene cunicularia* Burrowing owl	NL	NL	SSC	Ground squirrel burrows in open habitat such as grasslands, rangelands, agricultural areas and deserts	Moderate. The project site provides open habitat that provides line-of-site opportunities favored by burrowing owl. Additionally, several suitable burrows were observed within 500 feet of the project site have to the potential to support burrowing owl.
Class Mammalia (Mammals)					
Heteromyidae *Dipodomys stephensi* Stephens' kangaroo rat	FT	ST	-	Grassland, coastal sage scrub with sparse cover.	Presumed absent. No suitable habitat.
Leporidae (Rabbit and Hare Family) *Lepus californicus bennettii* San Diego black-tailed jackrabbit	NL	NL	SSC	Open areas or semi-open country, typically grasslands, agricultural fields or sparse coastal scrub.	Moderate. Although heavily disturbed, the project site has the potential to provide suitable habitat.

Molossidae *Eumops perotis californicus* Western mastiff bat	NL	NL	SSC	Chaparral, coastal and desert scrub, coniferous and deciduous forest, and woodland, roosting in crevices in rocky canyons and cliffs, trees, tunnels.	Presumed absent. No suitable habitat.
Vespertilionidae *Lasiurus xanthinus* Western yellow bat	NL	NL	SSC	Savannahs, secluded woodlands, agricultural areas, residential areas, often roosting in trees.	Presumed absent. No suitable habitat.

Notes:
Listing Status: FT = Federally listed as threatened; NL = Not listed under the federal and/or state endangered species acts; SSC = California Species of Special Concern; WL = Watch List.
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Appendix D

Cultural Resources

Supporting Information

K.S. Dunbar and Associates, Inc.

Quail Valley Sewer Improvements Subarea 9, Phase 1

Cultural Resources Study

U.S.G.S. *Elsinore and Romoland* quadrangles

Prepared for:
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45375 Vista Del Mar
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Prepared by:
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Kyle Brudvik, M.A., RPA, Breana Campbell, B.A.,
Hannah Hass, B.A., and Kevin Hunt, B.A.

July 1, 2015

Keywords:
Romoland, CA quadrangle;
Riverside County;
intensive pedestrian survey;
Audie Murphy Ranch

rincon

Environmental Scientists Planners Engineers

Brudvik, K., B. Campbell, H. Hass, and K. Hunt
2015 *Cultural Resources Study for the Quail Valley Sewer Improvements Subarea 9, Phase 1 Project, Riverside County, California*. Rincon Consultants Project No. 14-00588. Report on file at the Eastern Information Center, Riverside, California.

EXECUTIVE SUMMARY

K.S. Dunbar & Associates retained Rincon Consultants to conduct a cultural resources study for the Quail Valley Sewer Improvements Subarea 9, Phase 1 Project, bounded by the City of Canyon Lake to the south and west and Audie Murphy Road to the east in Riverside County, California. The proposed project is subject to the California Environmental Quality Act statutes and guidelines and Section 106 of the National Historic Preservation Act. This cultural resources study includes a records search, an intensive pedestrian survey of the project alignment, synthesis of previous studies of the alignment, and preparation of this report.

No cultural resources were identified within the project alignment as a result of the records search, Native American scoping, pedestrian survey, or analysis of previous studies. Based on these results, no further cultural resources work is recommended for the proposed project. The following measures are recommended in the case of unanticipated discoveries.

EMWD STANDARD MITIGATION MEASURES

Any ground-disturbing work within the project alignment could inadvertently encounter historic or prehistoric cultural resources. In addition, paleontological resources might possibly be encountered, though this would be anticipated to only happen in Pleistocene deposits with a primary context. If cultural or paleontological resources are encountered during construction-related activities, a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for prehistoric archaeology (NPS 1983) or paleontologist meeting the Society for Vertebrate Paleontology's standards should be consulted.

The following standard Eastern Municipal Water District (EMWD) mitigation measures for cultural resources are recommended for the proposed project, listed corresponding to the State CEQA Guidelines Appendix G Environmental Checklist Form. Adherence to these measures will ensure that if any cultural or paleontological resources are encountered, they can be dealt with properly, according to established law.

Cultural Resources. a. *Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?*

Based on several reviews of records maintained by the Eastern Information Center (EIC) and previous field inspections, implementation of the Project will have no adverse effect on historic properties as there are none in the immediate area that would be impacted. Therefore, no impacts are anticipated and no mitigation is required.

Answer: No Impact.

Cultural Resources. b. *Would the project cause a substantial adverse change in the significance of an archeological resource as defined in §15064.5?*

Although no archeological resources as defined in §15064.5 of the State CEQA Guidelines were identified on the Project site, there is always the possibility of inadvertent discoveries during excavation activities. Therefore, EMWD will adhere to the following:

- At least 30 days prior to beginning Project construction, EMWD shall contact the Pechanga Band of Luiseño Indians (Luiseño) to notify the Luiseño of grading and excavation activities and to coordinate and develop a Cultural Resources Treatment and Monitoring Agreement. The Agreement shall address the treatment of known cultural resources; the designation, responsibilities, and participation of a professional Native American Tribal monitor during grading, excavation and other ground disturbing activities; Project grading and excavation schedule; terms of compensation for the monitor; and treatment and final disposition of any cultural resources, sacred items and human remains discovered on site. The Tribal monitor shall be allowed to monitor all grading, excavation and ground disturbing activities and, with the concurrence of EMWD's Field Engineering Inspector, have the authority to stop or redirect grading and/or excavation activities.

- If inadvertent discoveries of cultural resources are encountered at any time during construction, these materials and their context shall be avoided until a qualified archeologist and representative from the Pechanga Band of Luiseño Indians have consulted with EMWD regarding appropriate avoidance and mitigation measures for the newly discovered resources. Project personnel shall not collect or retain cultural resources. Prehistoric resources include, but are not limited to: chert or obsidian flakes; projectile points; mortars and pestles; dark, friable soil containing shell and bone; dietary debris; heat-affected rock; or human burials. Historic resources include stone or adobe foundations or walls; structures and remains with square nails; and refuse deposits (glass, metal, wood, ceramics), often found in old wells and privies. Pursuant to California Public Resources Code §21083.2(b) avoidance is the preferred method of preservation for archeological resources.

- All sacred items, should they be encountered within the project site, shall be avoided and preserved as the preferred mitigation, if feasible. All cultural materials that are collected during excavation and other earth disturbing activities on the Project site, with the exception of sacred items, burial goods and human remains which will be addressed in the Treatment Agreement, shall be tribally curated according to the current professional repository standards. The collections and associated records shall be transferred, including title, to the Pechanga Band of Luiseño Indians.

- In addition, EMWD will relinquish ownership of all cultural resources, including sacred items, burial goods and all archeological artifacts that are found on the Project site to the Luiseño for proper treatment and disposition.

Answer: Less than Significant with Mitigation Incorporated.

Cultural Resources. c. *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?*

It is possible that paleontological resources could be unearthed during excavation activities. Therefore, EMWD will include the following mitigation measures in its standard construction specifications:

- Should construction/development activities uncover paleontological resources, work will be moved to other parts of the Project site and a qualified paleontologist shall be contacted to determine the significance of these resources. If the find is determined to be significant, avoidance or other appropriate measures shall be implemented. Appropriate measures would include that a qualified paleontologist be permitted to recover and evaluate the find(s) in accordance with current standards and guidelines.

Answer: Less than Significant with Mitigation Incorporated.

Cultural Resources. d. *Would the project disturb any human remains, including those interred outside of formal cemeteries?*

No human remains, including formal cemeteries were identified within the Project site. However, it is always possible that unmarked burials could be unearthed during excavation activities. Implementation of the following mitigation measures would reduce this impact to a level of less than significant.

- Consistent with State CEQA Guidelines §15064.5, subdivision (e), in the event of an accidental discovery or recognition of any human remains, the County Coroner shall be notified and construction activities at the affected work site shall be halted. If the remains are found to be Native American, the Native American Heritage Commission (NAHC) shall be notified within 24 hours. The NAHC must immediately notify the Most Likely Descendant(s) under Public Resources Code §5097.98 and the descendants must make recommendations or preference for treatment within 24 hours of being granted access to the site. Guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains in accordance with the provisions of Health and Safety Code §7050.5 and Public Resources Code §5097.98.

Implementation of the above mitigation measures will ensure that the impacts to cultural resources will be reduced to a less than significant level and no further environmental review or mitigation is required.

Answer: Less than Significant with Mitigation Incorporated.

Quail Valley Subarea 9, Phase 1 Project

Table of Contents

Figures

Tables

1.0 INTRODUCTION

K.S. Dunbar & Associates retained Rincon Consultants (Rincon) to conduct a cultural resources study for the Quail Valley Sewer Improvements Subarea 9, Phase 1 Project, bounded by the City of Canyon Lake to the south and west and Audie Murphy Road to the east, in the City of Menifee, Riverside County, California. The proposed project is subject to the California Environmental Quality Act (CEQA) statutes and guidelines and Section 106 of the National Historic Preservation Act (NHPA). This cultural resources study includes a records search, an intensive pedestrian survey of the project alignment, synthesis of previous studies of the property, and preparation of this report.

1.1 PROJECT DESCRIPTION

EMWD intends to construct a wastewater collection system to serve the properties in the Quail Valley Subarea 9 Phase 1 area. The proposed sewer improvement project will include the installation of sewers along Vista Way, Casa Bonita Avenue, Datil Drive, and Platino Drive located within the Phase 1 project boundary (Figure 1). Approximately 1.6 miles of 8-inch diameter collection pipelines will be installed within the public right-of-way within the Subarea 9 Phase I area and sewer laterals will extend onto private property to service residences. The sewer laterals will connect to sewer sources at the private property, eliminating the need for septic tanks.

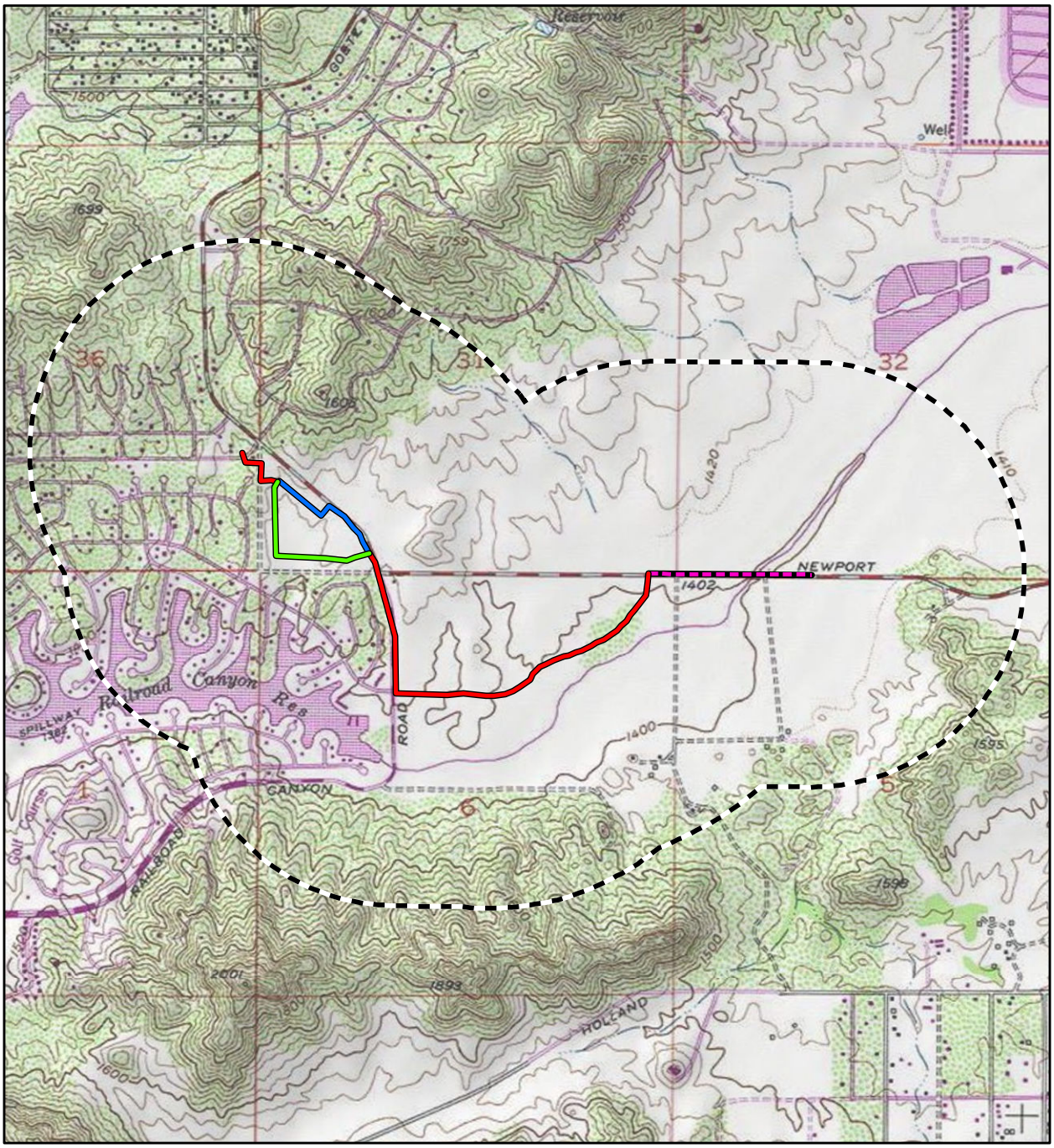
The majority of pipelines will be installed in the public rights-of-way using conventional open cut construction methods. Based on the geological formations, a portion of the pipeline and sewer laterals may utilize specialized construction methods such as directional drilling or micro tunneling. The sewer laterals at private residences will be constructed after obtaining right-of-entry agreements from the property owners. The property owners will be notified in advance of any construction activity within their private property. All the construction activities will occur during normal working hours of 7:00 am to 5:00 pm, Monday through Friday.

Wastewater will be conveyed from the Quail Valley Sewer Improvements Subarea 9 Phase 1 Project to the regional lift station near the intersection of Audie Murphy Ranch Road and Normandy Road. At this time, EMWD is considering two alternative alignments (A and B) for the "transport line". Alternatives are shown on Figure 1.

The first alternative alignment (Alternative A) would include a new pipeline from Manhole "A" in Vista Way, which would be constructed across a vacant property adjacent to Vista Way (APN: 351-084-016) and then along the property boundary of two additional properties (APN: 351-084-017 and 351-084-028). The 8-inch pipeline would be constructed through the proposed fire station property and finally connected to Manhole "F" at "A" Street. The alignment would then follow A Street in a southerly direction to its intersection with B Street. It would then follow B Street in an easterly direction to its intersection with Goetz Road. It would then follow Goetz Road in a southerly direction to its intersection with Audie Murphy Ranch Road. It would then follow Audie Murphy Ranch Road in an easterly and northeasterly direction to the regional lift station to be constructed near the intersection of Audie Murphy Ranch Road and Normandy Road.

The second alternative alignment (Alternative B) would follow the same route from Vista Way to Manhole "F" at "A" Street. It would then follow "D" Street in a southeasterly direction to its intersection with "C" Street and thence in a northeasterly direction along "C" Street to its intersection with Goetz Road. It would then follow Goetz Road in a southerly direction to its intersection with Audie Murphy Ranch Road. It would then follow Audie Murphy Ranch Road in an easterly and northeasterly direction to the regional lift station to be constructed near the intersection of Audie Murphy Ranch Road and Normandy Road.

The overall sewer improvements project has been deemed necessary as failing septic tanks in Quail Valley have resulted in groundwater pollution in the community and downstream in Canyon Lake. Canyon Lake is a source of drinking water for the City of Canyon Lake. As a safety measure, the Regional Water Quality Board and the County of Riverside each enacted separate moratoriums on septic tanks in Quail Valley in 2006. This moratorium will remain in effect until, minimally, sewer service, not septic tanks, is provided to Subareas 9 and 4 (to the north of Subarea 9).



Imagery provided by ESRI and its licensors, 2015. USGS Topo, Copyright:© 2015 National Geographic Society, i-cubed, Romoland Quadrangle.
The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

All Sewer By EMWD
Force Mainby EMWD
Alternate A - Sewer For PA-1A Area (By EMWD)
Alternate B - Sewer For PA-1B Area (By EMWD)
One-Half Mile Buffer

N

0 1,000 2,000 Feet

0 250 500 Meters

1:24,000

Project Location

Figure 1

1.2 REGULATORY SETTING

1.2.1 Federal

Cultural resources are considered during federal undertakings chiefly under Section 106 of the NHPA of 1966 (as amended) through one of its implementing regulations, 36 CFR 800 (Protection of Historic Properties), as well as the National Environmental Policy Act (NEPA). Properties of traditional religious and cultural importance to Native Americans are considered under Section 101(d)(6)(A) of NHPA. Other federal laws include the Archaeological and Historic Preservation Act of 1974, the American Indian Religious Freedom Act (AIRFA) of 1978, the Archaeological Resources Protection Act (ARPA) of 1979, and the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990, among others.

Section 106 of the NHPA (16 United States Code [USC] 470f) requires federal agencies to take into account the effects of their undertakings on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places (NRHP) and to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings (36 CFR 800.1). Under Section 106, the significance of any adversely affected cultural resource is assessed and mitigation measures are proposed to reduce any impacts to an acceptable level. Significant cultural resources are those resources that are listed in or are eligible for listing in the NRHP per the criteria listed below (36 CFR 60.4).

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and that:

A. Are associated with events that have made a significant contribution to the broad patterns of our history; or
B. Are associated with the lives of persons significant in our past; or
C. Embody the distinctive characteristics of a type, period, or method of installation, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D. Have yielded, or may be likely to yield, information important in prehistory or history.

1.2.2 State

CEQA requires a lead agency determine whether a project may have a significant effect on historical resources (Public Resources Code [PRC], Section 21084.1). A *historical resource* is a resource listed in, or determined to be eligible for listing, in the California Register of Historical Resources (CRHR), a resource included in a local register of historical resources or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be *historically significant* (State CEQA Guidelines, Section 15064.5[a][1-3]).

A resource shall be considered *historically significant* if it meets any of the following criteria:

1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2) Is associated with the lives of persons important in our past;
3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4) Has yielded, or may be likely to yield, information important in prehistory or history.

In addition, if it can be demonstrated that a project will cause damage to a *unique archaeological resource*, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC, Section 21083.2[a], [b], and PRC, Section 21083.2(g) defines a *unique archaeological resource* as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
2) Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

1.2.3 Local

The City of Menifee General Plan includes cultural resource regulations in its Open Space/Conservation Element under the *Goal 5: Paleontological and Cultural Resources* sections:

Goals:

- OSC-5: Archaeological, historical, and cultural resources are protected and integrated into the city's built environment.

Policies:

- OCS-5.1: Preserve and protect archaeological and historic resources and cultural sites, places, districts, structures, landforms, objects and native burial sites, traditional cultural landscapes and other features, consistent with state law and any laws, regulations or policies which may be adopted by the city to implement this goal and associated policies.
- OCS-5.2: Work with local schools, organizations, appropriate Native American tribes with ancestral territories located within the city and other agencies to educate the public about the rich archaeological, historic, and cultural resources found in the city.
- OCS-5.3: Preserve sacred sites identified in consultation with the appropriate Native American tribes whose ancestral territories are within the city, such as Native American burial locations, by avoiding activities that would negatively impact the sites, while maintaining the confidentiality of the location and nature of the sacred site.

- OCS-5.4: Establish clear and responsible policies and best practices to identify, evaluate, and protect previously unknown archaeological, historic, and cultural resources, following applicable CEQA and NEPA procedures and in consultation with the appropriate Native American tribes who have ancestral lands within the city.
- OCS-5.5: Develop clear policies regarding the preservation and avoidance of cultural resources located within the city, in consultation with the appropriate Native American tribes who have ancestral lands within the city.
- OCS-5.6: Develop strong government-to-government relationships and consultation protocols with the appropriate Native American tribes with ancestral territories within the city in order to ensure better identification, protection and preservation of cultural resources, while also developing appropriate educational programs, with tribal participation, for Menifee residents.

1.3 AREA OF POTENTIAL EFFECTS

The area of potential effects (APE) of an undertaking is defined in 36 CFR 800.16(d) as the "geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties if any such property exists." The current undertaking does not fall within the boundaries of a historic property listed in either the NRHP or CRHR. The area of direct impact under the current proposed undertaking is limited to an approximately 3.6 mile long linear alignment, with alternatives, along which no cultural resources have been previously recorded.

1.4 PERSONNEL

Rincon archaeologist Kyle Brudvik, M.A., Registered Professional Archaeologist (RPA), was the primary author of this report. Mr. Brudvik meets the Secretary of the Interior's *Professional Qualification Standards* for prehistoric and historic archaeology (NPS 1983). Rincon archaeologist Hannah Haas, B.A., conducted a cultural resources survey of the western portion of the project alignment, and wrote an earlier technical memorandum from which the current report draws. Rincon archaeologist Breana Campbell, B.A., conducted the records search at the Eastern Information Center. Rincon Cultural Resources Program Manager Kevin Hunt, B.A., managed this cultural resources study and provided program-level oversight. Rincon GIS Analyst Doug Carriero prepared the figures. Rincon Vice President Duane Vander Pluym, D. Env., reviewed this report for quality control.

2.0 ENVIRONMENTAL SETTING

The project site is located within the corporate limits of the City of Menifee, on the edge of the Menifee Valley. The valley is one of several small valleys on the San Jacinto Plains, a broad area that extends from Temecula on the south to Riverside on the north. The project vicinity comprises valley and hill topographic features with outcrops of Mesozoic metasandstone and greywacke dotting the landscape, especially in the northern part of the Audie Murphy Ranch (AMR), through which the project alignment alternatives pass. Much of the AMR is underlain by early to middle Pleistocene alluvial fan deposits, generated from the eroding Mesozoic metasedimentaries to the north. These fan deposits are chiefly sand and gravel and support grasses, shrubs, and low trees. The whole area was previously used for livestock grazing and farming.

3.0 CULTURAL SETTING

3.1 PREHISTORY

During the twentieth century, many archaeologists developed chronological sequences to explain prehistoric cultural changes within all or portions of southern California (c.f., Jones and Klar 2007; Moratto 1984). Wallace (1955, 1978) devised a prehistoric chronology for the southern California coastal region based on early studies and focused on data synthesis that included four horizons: Early Man, Milling Stone, Intermediate, and Late Prehistoric. Though initially lacking the chronological precision of absolute dates (Moratto 1984:159), Wallace's (1955) synthesis has been modified and improved using thousands of radiocarbon dates obtained by southern California researchers over recent decades (Byrd and Raab 2007:217; Koerper and Drover 1983; Koerper et al. 2002; Mason and Peterson 1994). The prehistoric chronological sequence for southern California presented below is a composite based on Wallace (1955) and Warren (1968) as well as later studies, including Koerper and Drover (1983).

3.1.1 Early Man Horizon (ca. 10,000–6,000 B.C.)

Numerous pre-8000 B.C. sites have been identified along the mainland coast and Channel Islands of southern California (c.f., Erlandson 1991; Johnson et al. 2002; Jones and Klar 2007; Moratto 1984; Rick et al. 2001:609). The Arlington Springs site on Santa Rosa Island (CA-SRI-173) produced human femurs dated to approximately 13,000 years ago (Arnold et al. 2004; Johnson et al. 2002; Orr 1962, 1968; Reeder et al. 2008). On nearby San Miguel Island, human occupation at Daisy Cave (CA-SMI-261) has been dated to nearly 13,000 years ago and included basketry greater than 12,000 years old, the earliest on the Pacific Coast (Arnold et al. 2004).

Although few Clovis or Folsom style fluted points have been found in southern California (e.g., Dillon 2002; Erlandson et al. 1987), Early Man Horizon sites are generally associated with a greater emphasis on hunting than later horizons. Recent data indicate that the Early Man economy was a mixture of hunting and gathering, including a significant focus on aquatic resources in coastal areas (e.g., Jones et al. 2002) and on inland late Pleistocene lakeshores (Moratto 1984). A warm and dry 3,000-year period called the Altithermal began around 6000

B.C. The conditions of the Altithermal are likely responsible for the change in human subsistence patterns at this time, including a greater emphasis on plant foods and small game.

3.1.2 Milling Stone Horizon (6,000–3,000 B.C.)

Wallace (1955:219) defined the Milling Stone Horizon as "marked by extensive use of milling stones and mullers, a general lack of well-made projectile points, and burials with rock cairns." The dominance of such artifact types indicate a subsistence strategy oriented around collecting plant foods and small animals. A broad spectrum of food resources were consumed including small and large terrestrial mammals, sea mammals, birds, shellfish and other littoral and estuarine species, near-shore fishes, yucca, agave, and seeds and other plant products (Kowta 1969; Reinman 1964). Variability in artifact collections over time and from the coast to inland sites indicates that Milling Stone Horizon subsistence strategies adapted to environmental conditions (Byrd and Raab 2007:220). Lithic artifacts associated with Milling Stone Horizon sites are dominated by locally available tool stone and in addition to ground stone tools, such as manos and metates, chopping, scraping, and cutting tools, are very common. Kowta (1969) attributes the presence of numerous scraper-plane tools in Milling Stone Horizon collections to the processing of agave or yucca for food or fiber. The mortar and pestle, associated with acorns or other foods processed through pounding, were first used during the Milling Stone Horizon and increased dramatically in later periods (Wallace 1955, 1978; Warren 1968).

Two types of artifacts that are considered diagnostic of the Milling Stone period are the cogged stone and discoidal, most of which have been found within sites dating between 4,000 and 1,000 B.C. (Moratto 1984:149), though possibly as far back as 5,500 B.C. (Couch et al. 2009). The cogged stone is a ground stone object that has gear-like teeth on the perimeter and is produced from a variety of materials. The function of cogged stones is unknown, but many scholars have postulated ritualistic or ceremonial uses (c.f., Dixon 1968:64-65; Eberhart 1961:367) based on the materials used and their location near to burials and other established ceremonial artifacts as compared to typical habitation debris. Similar to cogged stones, discoidals are found in the archaeological record subsequent to the introduction of the cogged stone. Cogged stones and discoidals were often purposefully buried, or "cached." They are most common in sites along the coastal drainages from southern Ventura County southward and are particularly abundant at some Orange County sites, although a few specimens have been found inland as far east as Cajon Pass (Dixon 1968:63; Moratto 1984:149). Discoidals and cogged stones have been found together at some Orange County sites, such as CA-ORA-83/86/144 (Van Bueren et al. 1989:772) and Los Cerritos Ranch (Dixon 1975). Cogged stones have been collected in Riverside County and their distribution appears to center on the Santa Ana River basin (Eberhart 1961), 20 miles to the north of the City of Menifee.

3.1.3 Intermediate Horizon (3,000 B.C.–A.D. 500)

Wallace's Intermediate Horizon dates from approximately 3,000 B.C.-A.D. 500 and is characterized by a shift toward a hunting and maritime subsistence strategy, as well as greater use of plant foods. During the Intermediate Horizon, a noticeable trend occurred toward greater adaptation to local resources including a broad variety of fish, land mammal, and sea mammal remains along the coast. Tool kits for hunting, fishing, and processing food and materials reflect

this increased diversity, with flake scrapers, drills, various projectile points, and shell fishhooks being manufactured.

Mortars and pestles became more common during this transitional period, gradually replacing manos and metates as the dominant milling equipment. Many archaeologists believe this change in milling stones signals a change from the processing and consuming of hard seed resources to the increasing reliance on acorn (e.g., Glassow et al. 1988; True 1993). Mortuary practices during the Intermediate typically included fully flexed burials oriented toward the north or west (Warren 1968:2-3).

3.1.4 Late Prehistoric Horizon (A.D. 500–Historic Contact)

During Wallace's (1955, 1978) Late Prehistoric Horizon the diversity of plant food resources and land and sea mammal hunting increased even further than during the Intermediate Horizon. More classes of artifacts were observed during this period and high quality exotic lithic materials were used for small finely worked projectile points associated with the bow and arrow. Steatite containers were made for cooking and storage and an increased use of asphalt for waterproofing is noted. More artistic artifacts were recovered from Late Prehistoric sites and cremation became a common mortuary custom. Larger, more permanent villages supported an increased population size and social structure (Wallace 1955:223).

Warren (1968) attributes this dramatic change in material culture, burial practices, and subsistence focus to the westward migration of desert people he called the Takic, or Numic, Tradition in Los Angeles, Orange, and western Riverside counties. This Takic Tradition was formerly referred to as the "Shoshonean wedge" (Warren 1968), but this nomenclature is no longer used as it leads to confusion with ethnohistoric and modern Shoshonean groups (Heizer 1978:5; Shipley 1978:88, 90). Modern Luiseño are generally considered by archaeologists to be descendants of these prehistoric Uto-Aztecan, Takic-speaking populations that settled in western Riverside County and along the California coast during the Late Prehistoric Horizon.

3.2 ETHNOGRAPHIC OVERVIEW

The project alignment is situated within a region historically occupied by a Native American group known as the Cahuilla, though near the boundary with the Juaneño and Luiseño (Bean 1978, Kroeber 1925). The term Cahuilla likely derived from the native word *káwiya,* meaning "master" or "boss" (Bean 1978:575). Traditional Cahuilla ethnographic territory extended west to east from the present-day City of Riverside to the central portion of the Salton Sea in the Colorado Desert, and south to north from the San Jacinto Valley to the San Bernardino Mountains.

The Cahuilla, like their neighbors to west, the Luiseño and Juaneño, and the Cupeño to the south, are speakers of a Cupan language. Cupan languages are part of the Takic linguistic subfamily of the Uto-Aztecan language family. It is thought that the Cahuilla migrated to southern California approximately 2,000 to 3,000 years ago, most likely from the southern Sierra Nevada mountain ranges of east-central California with other Takic speaking social groups (Moratto 1984:559).

Cahuilla social organization was hierarchical and contained three primary levels (Bean 1978:580). The highest level was the cultural nationality, encompassing everyone speaking a common language. The next level included the two patrimoieties of the Wildcats (*tuktum*) and the Coyotes (*'istam*). Every clan of the Cahuilla fell into one or the other of these moieties. The lowest level consisted of the numerous political-ritual-corporate units called sibs, or a patrilineal clan (Bean 1978:580).

Cahuilla villages were usually located in canyons or on alluvial fans near a source of accessible water. Each lineage group maintained their own houses (*kish*) and granaries, and constructed ramadas for work and cooking. Sweat houses and song houses (for non-religious music) were also often present. Each community also had a separate house for the lineage or clan leader. A ceremonial house, or *kíš ?ámnawet*, associated with the clan leader was where major religious ceremonies were held. Houses and ancillary structures were often spaced apart, and a "village" could extend over a mile or two. Each lineage had ownership rights to various resource collecting locations, "including food collecting, hunting, and other areas. Individuals also owned specific areas or resources, e.g., plant foods, hunting areas, mineral collecting places, or sacred spots used only by shamans, healers and the like" (Bean 1990:2).

The Cahuilla hunted a variety of game, including mountain sheep, cottontail, jackrabbit, mice, and wood rats, as well as predators such as mountain lion, coyote, wolf, bobcat, and fox. Various birds were also consumed, including quail, duck, and dove, plus various types of reptiles, amphibians, and insects. A wide variety of tools and implements were employed by the Cahuilla to gather and collect food resources. For the hunt, these included the bow and arrow, traps, nets, slings and blinds for hunting land mammals and birds, and nets for fishing. Rabbits and hares were commonly brought down by the throwing stick; however when communal hunts were organized for these animals, the Cahuilla often utilized clubs and very large nets.

Foodstuffs were processed using a variety of tools, including portable stone mortars, bedrock mortars and pestles, basket hopper mortars, manos and metates, bedrock grinding slicks, hammerstones and anvils, and many others. Food was consumed from a number of woven and carved wood vessels and pottery vessels. The ground meal and unprocessed hard seeds were stored in large finely woven baskets, and the unprocessed mesquite beans were stored in large granaries woven of willow branches and raised off the ground on platforms to keep it from vermin. Pottery vessels were made by the Cahuilla, and also traded from the Yuman-speaking groups across the Colorado River and to the south.

The Cahuilla had adopted limited agricultural practices by the time Euro-Americans traveled into their territory. Bean (1978:578) has suggested that their "proto-agricultural techniques and a marginal agriculture" consisting of beans, squash and corn may have been adopted from the Colorado River groups to the east. Certainly by the time of the first Romero Expedition in 1823-24, they were observed growing corn, pumpkins, and beans in small gardens localized around springs in the Thermal area of the Coachella Valley (Bean and Mason 1962:104). The introduction of European plants such as barley and other grain crops suggest an interaction with the missions or local Mexican rancheros. Despite the increasing use and diversity of crops, no evidence indicates that this small-scale agriculture was anything more than a supplement to Cahuilla subsistence, and it apparently did not alter social organization.

By 1819, several Spanish mission outposts, known as *assistencias*, were established near Cahuilla territory at San Bernardino and San Jacinto. Cahuilla interaction with Europeans at this time was not as intense as it was for native groups living along the coast. This was likely due to the local topography and lack of water, which made the area less attractive to colonists. By the 1820s, however, European interaction increased as mission ranchos were established in the region and local Cahuilla were employed to work on them.

The Bradshaw Trail was established in 1862 and was the first major east-west stage and freight route through the Coachella Valley. Traversing the San Gorgonio Pass, the trail connected gold mines on the Colorado River with the coast. Bradshaw based his trail on the Cocomaricopa Trail, with maps and guidance provided by local Native Americans. Journals by early travelers along the Bradshaw Trail told of encountering Cahuilla villages and walk-in wells during their journey through the Coachella Valley. The continued influx of immigrants into the region introduced the Cahuilla to European diseases. The single worst recorded event was a smallpox epidemic in 1862-63. By 1891, only 1,160 Cahuilla remained within what was left of their territory, down from an aboriginal population of 6,000–10,000 (Bean 1978:583-584). By 1974, approximately 900 people claimed Cahuilla descent, most of who resided on reservations.

Between 1875 and 1891, the United States established ten reservations for the Cahuilla within their traditional territory. These reservations include: Agua Caliente, Augustine, Cabazon, Cahuilla, Los Coyotes, Morongo, Ramona, Santa Rosa, Soboba, and Torres-Martinez (Bean 1978:585). Four of the reservations are shared with other groups, including the Chemehuevi, Cupeño, and Serrano. The Soboba Reservation, which includes people of both Luiseño and Cahuilla descent, is closest to the project site.

3.3 HISTORIC OVERVIEW

Post-European contact history for the state of California is generally divided into three periods: the Spanish Period (1769–1822), the Mexican Period (1822–1848), and the American Period (1848–present).

3.3.1 Spanish Period (1769–1822)

Spanish exploration of was then known as Alta (upper) California began when Juan Rodriguez Cabrillo led the first European expedition into the region in 1542. For more than 200 years after his initial expedition, Spanish, Portuguese, British, and Russian explorers sailed the Alta California coast and made limited inland expeditions, but they did not establish permanent settlements (Bean 1968; Rolle 2003). Spanish entry into what was to become Riverside County did not occur until 1774 when Juan Bautista de Anza led an expedition from Sonora, Mexico to Monterey in northern California (Lech 1998).

In 1769, Gaspar de Portolá and Franciscan Father Junipero Serra established the first Spanish settlement at Mission San Diego de Alcalá. This was the first of 21 missions erected by the Spanish between 1769 and 1823. The establishment of the missions marks the first sustained occupation of Alta California by the Spanish. In addition to the missions four presidios and three pueblos (towns) were established throughout the state (State Lands Commission 1982).

During this period, Spain also deeded ranchos to prominent citizens and soldiers, though very few in comparison to the subsequent Mexican Period. To manage and expand their herds of cattle on these large ranchos, colonists enlisted the labor of the surrounding Native American population (Engelhardt 1927a). The missions were responsible for administrating to the local Indians as well as converting the population to Christianity (Engelhardt 1927b). The influx of European settlers brought the local Native American population in contact with European diseases which they had no immunity against, resulting in catastrophic reduction in native populations throughout the state (McCawley 1996).

3.3.2 Mexican Period (1822–1848)

The Mexican Period commenced when news of the success of the Mexican War of Independence (1810-1821) reached California in 1822. This period saw the federalization of mission lands in California with the passage of the Secularization Act of 1833. This Act enabled Mexican governors in California to distribute former mission lands to individuals in the form land grants. Successive Mexican governors made more than 700 land grants between 1822 and 1846, putting most of the state's lands into private ownership for the first time (Shumway 2007). About 15 land grants (ranchos) were located in Riverside County. Rancho La Laguna included the area of Audie Murphy Ranch and lands in the Menifee Valley, Railroad Canyon, and Lake Elsinore areas (Caughey 1970, cited in BFSA 2013).

3.3.3 American Period (1848–Present)

The American Period officially began with the signing of the Treaty of Guadalupe Hidalgo in 1848, in which the United States agreed to pay Mexico $15 million for ceded territory, including California, Nevada, Utah, and parts of Colorado, Arizona, New Mexico, and Wyoming, and pay an additional $3.25 million to settle American citizens claims against Mexico. Settlement of southern California continued dramatically in the early American Period. Many ranchos in the county were sold or otherwise acquired by Americans, and most were subdivided into agricultural parcels or towns.

The discovery of gold in northern California in 1848 led to the California Gold Rush, despite the first California gold being previously discovered in southern California at Placerita Canyon in 1842 (Guinn 1977; Workman 1935:26). Southern California remained dominated by cattle ranches in the early American period, though droughts and increasing population resulted in farming and more urban professions increasingly supplanting ranching through the late nineteenth century. In 1850, California was admitted into the United States and by 1853, the population of California exceeded 300,000. Thousands of settlers and immigrants continued to move into the state, particularly after completion of the transcontinental railroad in 1869.

The Audie Murphy Ranch property was settled in at least 1885 by James B. Ferrell. Following Ferrell's death in 1903, the title passed to his wife Sarah. She later sold the ranch in 1909. Audie L. Murphy, a World War II hero and movie star, bought the ranch in 1957 and later sold it to Bob Hope in 1963. Though they owned the ranch a brief six years, the Murphy name is the one now linked with the property.

Riverside County was formed in 1893 from portions of San Bernardino and San Diego Counties (Lech 2004). Early settlers in the Menifee area were focused on mining and agriculture. The area retained much of its rural character, but has seen population growth since the late 20th century with founding of the communities of Sun City, Menifee Lakes, and Quail Valley. In 2008, the communities of Menifee, Sun City, Quail Valley, and a portion of Romoland voted to incorporate into one city under the name of Menifee (City of Menifee 2015). Today Menifee largely serves as a bedroom community for those working in Riverside, Los Angeles, and San Diego counties.

4.0 BACKGROUND RESEARCH

4.1 CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

Rincon archaeologist Breana Campbell conducted a search of cultural resource records housed at the California Historical Resources Information System (CHRIS), Eastern Information Center (EIC) located at the University of California, Riverside on June 24, 2015. The search was conducted to identify all previous cultural resources work and previously recorded cultural resources within a 0.5-mile radius of the project alignment and alternatives. The CHRIS search included a review of the NRHP, the CRHR, the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, and the California State Historic Resources Inventory list. The records search also included a review of all available historic USGS 7.5- and 15-minute quadrangle maps.

4.1.1 Previous Studies

The EIC records search and review of studies on file with EMWD identified 13 previous studies within a 0.5-mile radius of the project alternatives (Table 1). Of these, 6 include portions of the project alternatives and 7 are adjacent.

Table 1
Previous Studies Within 0.5-Mile Radius of the Project Alternatives

EIC Report No.	Author	Year	Study	Relationship to Project Alignment and Alternatives
RI-01971	Peter, Kevin J.	1985	Cultural Resources Investigation: Audie Murphy Ranch, Riverside County, California	Inside
RI-02184	McCarthy, Daniel E.	1987	An Archaeological Assessment of Tentative Parcel 22745, Located South of Sun City in Western Riverside County, California	Outside
RI-02745	Brown, Robert	1990	Archaeological Survey of the Canyon Heights Project: A 275 Acre Property in the Quail Valley Area of Riverside County, California	Outside
RI-02847	Brown, Joan	1990	Cultural Resources Reconnaissance of the 130 Acre Morrell Project Riverside County, California	Outside
RI-03691	Keller, Jean	1993	A Phase I Archaeological Assessment of Public Use Permit 747: 1.0 Acre of Land Near Sun City, Riverside County, California, USGS Romoland, California Quadrangle, 7.5' Series	Outside
RI-04222	Chandler, Evelyn N. and Valerie M. Hallett	1999	Phase I Archaeological Survey of 7 Acres in Sun City, Riverside County, California	Outside
RI-04268	Love, Bruce and Michael Hogan	2000	Identification and Evaluation of Historic Properties: AT&T Wireless Site C908, Near the City of Canyon Lake, Riverside County, California	Outside

Table 1
Previous Studies Within 0.5-Mile Radius of the Project Alternatives

EIC Report No.	Author	Year	Study	Relationship to Project Alignment and Alternatives
RI-04700	Beer, Robert M.	2002	Archaeological Resource Assessment for the Audie Murphy Ranch Environmental Impact Report	Inside
RI-04878	Dice, Michael and Leslie Nay Irish	2001	A Phase I Archaeological Resources Survey of Specific Plan 272, The Canyon Heights Project, A 272.71-Acre Residential Project Located in Quail Valley, County of Riverside, California	Outside
RI-08179	Smith, Brian F., Johnna Buysse, James Clifford, Shannon Gilbert, and Larry Pierson	2007	Archaeological Investigations at Audie Murphy Ranch: A Study of Archaic and Late Prehistoric Occupation Sites Along Salt Creek, Western Riverside County	Inside
N/A*	Peak & Associates, Inc.	2009	Cultural Resources Assessment: Quail Valley Sewer Improvements, Sub-Area 9, Riverside County, California	Inside
RI-09154	Brian F. Smith & Associates, Inc.	2013	An Updated Phase I Cultural Resources Assessment for Tentative Tract Maps 36484 and 36484, Audie Murphy Ranch, City of Menifee, County of Riverside	Inside
N/A*	Rincon Consultants, Inc.	2014	Quail Valley Subarea Nine Project: Cultural Resources Study	Inside

Source: Eastern Information Center, June 2015
* Reports provided by Eastern Municipal Water District. Not yet on file at EIC.

4.1.2 Previously Recorded Sites

The EIC records search identified 14 previously recorded cultural resources within 0.5 mile of the project site (Table 2). No sites have been recorded within the boundaries of the project alternative alignments.

Table 2
Previously Recorded Cultural Resources Within 0.5-mile Radius of the Project Alternatives

Resource Designation	Description	NRHP/CRHR Eligibility Status	Recorded/Updated By and Year	Relationship to Project Alternatives
CA-RIV-1031	Lithic scatters, bedrock milling features, rock shelters, rock art, and cupules.	Probably destroyed	1976, I. Eastvold 1985, Bissell 2002, Buysse et al.	Outside
Temporary number SRS-719-1(I)	Two large quartzite decortication flakes lying 14 meters apart. Possibly CA-RIV-8819	Presumed not eligible	1985, Singer et al.	Outside
CA-RIV-1034a	Prehistoric camp. Dense lithic scatter, 39 bedrock milling features, two rock shelters, one rock ring.	Unknown	2007, Smith et al.	Outside
CA-RIV-3937/H	Historic ranch house location with prehistoric component.	Insufficient data	2007, Smith et al.	Outside
CA-RIV-3938	Remains of a possible home site and a historic concrete structure foundation.	Insufficient data	2005, PCR Services Corporation 1990, Brown	Outside
CA-RIV-6256	Occupation site with pictograph panels, rockshelters, hearths, middens, mortars, milling slicks, and debitage distributed over 170 acres on both sides of a stream and between its upper tributaries.	Probably destroyed	1985, Kevin Peter	Outside
CA-RIV-6262/H	Location of 1890s ranch house with prehistoric component.	Insufficient data	1985, Bissell	Outside
CA-RIV-6870	Two bedrock milling features; no artifacts or other cultural features.	Insufficient data	2002, Buysse et al.	Outside
CA-RIV-6872	Seven bedrock milling features and a sparse lithic scatter (one mano fragment).	Insufficient data	2002, Buysse et al.	Outside

Table 2
Previously Recorded Cultural Resources Within 0.5-mile Radius of the Project Alternatives

Resource Designation	Description	NRHP/CRHR Eligibility Status	Recorded/Updated By and Year	Relationship to Project Alternatives
CA-RIV-6875	A dense scatter of surface artifacts and a significant subsurface deposit of lithic material. No prehistoric features.	Probably destroyed	2002, Buysse et al.	Outside
CA-RIV-6876	A scatter of surface artifacts with no associated subsurface deposit.	Presumed ineligible	2002, Buysse et al.	Outside
CA-RIV-8255	One bedrock milling feature containing 21 slicks.	Insufficient data	2005, Smith et al.	Outside
CA-RIV-8256	Two bedrock milling features containing 7 slicks.	Insufficient data	2007, Smith et al.	Outside
CA-RIV-8258	Lithic scatter with a small amount of ground stone tools.	Insufficient data	2007, Smith et al.	Outside

Source: Eastern Information Center, June 2015

4.2 NATIVE AMERICAN HERITAGE COMMISSION

Multiple searches of the Native American Heritage Commission's (NAHC) Sacred Lands File (SLF) have been conducted that included all or segments of the project alignment and vicinity. The most recent of these was by Rincon Consultants in 2014. None of these SLF searches were positive for previously recorded cultural resources within their respective alignments or project areas, including those that encompass the entirety of the current project alignment and alternatives. EMWD understands that the project alignment is within an area that both the Soboba Band of Luiseno Indians and Pechanga Band of Luiseño Indians (Pechanga) consider part of their ancestral lands. However, during the consultation process, it was determined that the Pechanga Band of Luiseño Indians was the Tribe responsible for coordination activities on this Project. As such, EMWD will implement its standard cultural resources mitigation measures that include involvement by the Pechanga.

5.0 FIELDWORK

5.1 SURVEY METHODS

Rincon archaeologist Hannah Haas conducted an intensive pedestrian survey of the westernmost 305 meters (ca. 1000 linear feet) of the alignment on July 3, 2014. The cultural resources survey consisted of walking two transects oriented parallel to the proposed alignment and spaced no greater than 5 meters apart. A 40 meter (130 foot) section was not accessible and could only be viewed through a fence.

Peak & Associates, Inc. archaeologist, Robert Gerry, surveyed Subarea 9 on September 11, 2009. Most of this area is outside of the present alignment alternatives, but the coverage was thorough. Mr. Gerry found no evidence of prehistoric or historic period cultural activity anywhere in Subarea 9, including along the very western end of the current project alignment alternatives.

The majority of the remainder of the alignment alternatives, within the Audie Murphy Ranch portion of the alignment, were surveyed on January 3, 2013, by Brian F. Smith and Associates (BFSA). This survey used an intensive pedestrian reconnaissance with 5-meter transect intervals.

In combination, these three surveys examined all areas of exposed ground surface within the project area for prehistoric artifacts (e.g., chipped stone tools and production debris, stone milling tools, ceramics), historic debris (e.g., metal, glass, ceramics), or soil discoloration that might indicate the presence of a cultural midden. Survey conditions were recorded and digital photographs were taken. Copies of all survey records are on file at EMWD.

6.0 FINDINGS

Multiple cultural resources surveys did not identify any cultural resources within the proposed alignment (see Table 2, above). In addition, records searches at the EIC and SLF searches at the NAHC conducted over the past decade by several firms, including Peak & Associates, Inc., BFSA, and Rincon, did not identify any previously recorded cultural resources or any cultural resources important to Native Americans within the project alignment or alternatives. Therefore, the proposed project will not affect any known cultural resources. Rincon recommends no further cultural resources work within the approximately 3.6-mile alignment. However, the standard mitigation measures listed below are recommended in the case of unanticipated discoveries.

7.0 RECOMMENDATIONS

Any ground-disturbing work within the project alignment could inadvertently encounter historic or prehistoric cultural resources. In addition, paleontological resources might possibly be encountered, though would only happen in Pleistocene deposits with a primary context. If cultural or paleontological resources are encountered during construction-related activities, a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for prehistoric archaeology (NPS 1983) should be consulted.

The following standard EMWD mitigation measures for cultural resources are recommended for the proposed project. Adherence to these measures will ensure that if any cultural or paleontological resources are encountered, they can be dealt with properly, according to established law.

Cultural Resources. a. *Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?*

Based on several reviews of records maintained by the EIC and previous field inspections, implementation of the Project will have no adverse effect on historic properties as there are none in the immediate area that would be impacted. Therefore, no impacts are anticipated and no mitigation is required.

Answer: No Impact.

Cultural Resources. b. *Would the project cause a substantial adverse change in the significance of an archeological resource as defined in §15064.5?*

Although there were no archeological resources as defined in §15064.5 of the State CEQA Guidelines identified on the Project site, there is always the possibility of inadvertent discoveries during excavation activities. Therefore, EMWD will adhere to the following:

- At least 30 days prior to beginning Project construction, EMWD shall contact the Pechanga Band of Luiseño Indians (Luiseño) to notify the Luiseño of grading and excavation activities and to coordinate and develop a Cultural Resources Treatment and Monitoring Agreement. The Agreement shall address the treatment of known cultural resources; the designation, responsibilities, and participation of a professional Native American Tribal monitor during grading, excavation and other ground disturbing activities; Project grading and excavation schedule; terms of compensation for the monitor; and treatment and final disposition of any cultural resources, sacred items and human remains discovered on site. The Tribal monitor shall be allowed to monitor all grading, excavation and ground disturbing activities and, with the concurrence of EMWD's Field Engineering Inspector, have the authority to stop or redirect grading and/or excavation activities.

- If inadvertent discoveries of cultural resources are encountered at any time during construction, these materials and their context shall be avoided until a qualified archeologist and a representative from the Pechanga Band of Luiseño Indians have

consulted with EMWD regarding appropriate avoidance and mitigation measures for the newly discovered resources. Project personnel shall not collect or retain cultural resources. Prehistoric resources include, but are not limited to: chert or obsidian flakes; projectile points; mortars and pestles; dark, friable soil containing shell and bone; dietary debris; heat-affected rock; or human burials. Historic resources include stone or adobe foundations or walls; structures and remains with square nails; and refuse deposits (glass, metal, wood, ceramics), often found in old wells and privies. Pursuant to California Public Resources Code §21083.2(b) avoidance is the preferred method of preservation for archeological resources.

- All sacred items, should they be encountered within the project site, shall be avoided and preserved as the preferred mitigation, if feasible. All cultural materials that are collected during excavation and other earth disturbing activities on the Project site, with the exception of sacred items, burial goods and human remains which will be addressed in the Treatment Agreement, shall be tribally curated according to the current professional repository standards. The collections and associated records shall be transferred, including title, to the Pechanga Band of Luiseño Indians.

- In addition, EMWD will relinquish ownership of all cultural resources, including sacred items, burial goods and all archeological artifacts that are found on the Project site to the Luiseño for proper treatment and disposition.

Answer: Less than Significant with Mitigation Incorporated.

Cultural Resources. c. *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?*

It is possible that paleontological resources could be unearthed during excavation activities. Therefore, EMWD will include the following mitigation measures in its standard construction specifications:

- Should construction/development activities uncover paleontological resources, work will be moved to other parts of the Project site and a qualified paleontologist shall be contacted to determine the significance of these resources. If the find is determined to be significant, avoidance or other appropriate measures shall be implemented. Appropriate measures would include that a qualified paleontologist be permitted to recover and evaluate the find(s) in accordance with current standards and guidelines.

Answer: Less than Significant with Mitigation Incorporated.

Cultural Resources. d. *Would the project disturb any human remains, including those interred outside of formal cemeteries?*
No human remains, including formal cemeteries were identified within the Project site. However, it is always possible that unmarked burials could be unearthed during excavation activities. Implementation of the following mitigation measures would reduce this impact to a level of less than significant.

- Consistent with State CEQA Guidelines §15064.5, subdivision (e), in the event of an accidental discovery or recognition of any human remains, the County Coroner shall be notified and construction activities at the affected work site shall be halted. If the remains are found to be Native American, the Native American Heritage Commission (NAHC) shall be notified within 24 hours. The NAHC must immediately notify the Most Likely Descendant(s) under Public Resources Code §5097.98 and the descendants must make recommendations or preference for treatment within 24 hours of being granted access to the site. Guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains in accordance with the provisions of Health and Safety Code §7050.5 and Public Resources Code §5097.98.

Implementation of the above mitigation measures will ensure that the impacts to cultural resources will be reduced to a less than significant level and no further environmental review or mitigation is required.

Answer: Less than Significant with Mitigation Incorporated.

8.0 REFERENCES

Arnold, Jeanne E., Michael R. Walsh, and Sandra E. Hollimon
2004 The Archaeology of California. *Journal of Archaeological Research* Vol. 12, No. 1.

Bean, Lowell J.
1978 Cahuilla. In *California*, edited by Robert F. Heizer, pp. 575–587. Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

1990 Ethnography of the Toro Canyon Cahuilla. Prepared for George Berkey & Associates, Inc. Cultural Systems Research, Inc., Menlo Park, California.

Bean, Lowell J., and William B. Mason
1962 *The Romero Expeditions, 1823-1826*. Palm Springs Desert Museum, Palm Springs, California.

Bean, Lowell J., and Florence C. Shipek
1978 Luiseño. In *Handbook of North American Indians, California*, edited by Rober F. Heizer, pp. 550-563, vol. 8, William G. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Bean, Walton
1968 *California: An Interpretive History.* McGraw-Hill Book Company, New York.

Brian F. Smith and Associates, Inc.

2013 An Updated Phase I Cultural Resources Assessment for Tentative Tract Maps 36484 and 36485, Audie Murphy Ranch, City of Menifee, County of Riverside. Prepared for City of Menifee, Californa.

Byrd, Brian F., and L. Mark Raab
2007 Prehistory of the Southern Bight: Models for a New Millennium. In *California Prehistory*, edited by T. L. Jones and K. A. Klar, pp. 215-228. Altimira Press, New York.

City of Menifee.

2015 Profile of the City of Menifee. Prepared by the Southern California Association of Governments.

Couch, Jeffrey S., Joanne S. Couch, and Nancy Anastasia Wiley
2009 Saved by the Well: The Keystone Cache at CA-ORA-83, the Cogged Stone Site. *Proceedings of the Society for California Archaeology* 21:147-156.

Dixon, Keith A.
1968 Cogged Stones and Other Ceremonial Cache Artifacts in Stratigraphic Context at ORA-58, a Site in the Lower Santa Ana River Drainage, Orange County. *Pacific Coast Archaeological Society Quarterly* 4(3):57-68.

1975 New Evidence for the Most Important Archaeological Discovery in Long Beach: the Cogged Stones and Discs of Rancho Los Cerritos. *Los Fierros* 12(2):20–31.

Eberhart, Hal
1961 The Cogged Stones of Southern California. *American Antiquity* 26(3):361-370.

Engelhardt, Zephyrin, O.F.M.
1927a *San Fernando Rey, the Mission of the Valley*. Franciscan Herald Press, Chicago.

1927b *San Gabriel Mission and the Beginning of Los Angeles*. Mission San Gabriel, San Gabriel, California.

Erlandson, Jon M.
1991 Early Maritime Adaptations on the Northern Channel Islands. In *Hunter-Gatherers of Early Holocene Coastal California,* edited by J. M. Erlandson and R. Colten. Perspectives in California Archaeology, Vol. 1. Institute of Archaeology, University of California, Los Angeles.

Erlandson, Jon M., Theodore Cooley, and Richard Carrico
1987 A Fluted Projectile Point Fragment from the Southern California Coast: Chronology and Context at CA-SBA-1951. *Journal of California and Great Basin Anthropology* 9:120–128.

Glassow, Michael A, L. Wilcoxen, and J. M. Erlandson
1988 Cultural and Environmental Change during the Early Period of Santa Barbara Channel Prehistory. In *The Archaeology of Prehistoric Coastlines*, edited by G. Bailey and J. Parkington pp. 64–77. Cambridge University Press, Cambridge, England.

Guinn, J.M.
1977 Gold! Gold! Gold! from San Francisquito! In *Los Angeles Biography of a City*, edited by John Caughey and LaRee Caughey. University of California Press, Berkeley.

Heizer, Robert F.
1978 Introduction. In *California*, edited by R. F. Heizer, pp. 1–6. Handbook of North American Indians, Vol. 8, W.C. Sturtevant, general editor, Smithsonian Institution, Washington D.C.

Johnson, J. R., T. W. Stafford, Jr., H. O. Ajie, and D. P. Morris
2002 Arlington Springs Revisited. In *Proceedings of the Fifth California Islands Symposium*, edited by D. Browne, K. Mitchell, and H. Chaney, pp. 541–545. USDI Minerals Management Service and the Santa Barbara Museum of Natural History, Santa Barbara, California.

Jones, Terry L., Richard T. Fitzgerald, Douglas J. Kennett, Charles Miksicek, John L. Fagan, John Sharp, and Jon M. Erlandson
2002 The Cross Creek Site and Its Implications for New World Colonization. *American Antiquity* 67:213–230.

Jones, Terry L. and Kathryn A. Klar
2007 *California Prehistory: Colonization, Culture, and Complexity*. AltaMira Press, Berkeley, California.

Koerper, Henry C., and Christopher E. Drover
1983 Chronology Building for Coastal Orange County: The Case from CA-ORA-119-A. *Pacific Coast Archaeological Society Quarterly* 19(2):1–34.

Koerper, Henry C., Roger D. Mason, and Mark L. Peterson
2002 Complexity, Demography, and Change in Late Holocene Orange County. In *Catalysts to Complexity: Late Holocene Societies of the California Coast*, edited by Jon M. Erlandson and Terry L. Jones, pp. 63–81. Perspectives in California Archaeology, Vol. 6, Costen Institute of Archaeology, University of California, Los Angeles.

Kowta, Makoto
1969 The Sayles Complex, A Late Milling Stone Assemblage from the Cajon Pass and the Ecological Implications of its Scraper Planes. *University of California Publications in Anthropology* 6:35–69. Berkeley, California.

Kroeber, Alfred J.
1925 *Handbook of the Indians of California*. Bureau of American Ethnology, Bulletin 78. Originally published 1925, Smithsonian Printing Office, Washington, D.C. Unabridged reprint 1976, Dover Publications, Inc. New York.

Lech, Steve
1998 The History of Riverside County. Electronic document, http://www.usgennet.org/usa/ca/county/riverside/. Accessed April 10, 2013.

Lech, Steve
2004 *Along the Old Roads: A History of the Portion of Southern California that Became Riverside County 1772-1893*. Steve Lech, Riverside.

McCawley, William
1996 *The First Angelinos: The Gabrielino Indians of Los Angeles.* Malki Museum/Ballena Press Cooperative Publication, Banning or Novato, California.

Mason, Roger D., and Mark L. Peterson
1994 *Newport Coast Archaeological Project: Newport Coast Settlement Systems–Analysis and Discussion*, Volume 1, part 1 of 2. Prepared by The Keith Companies. On file, South Central Coastal Information Center, California State University, Fullerton.

Moratto, Michael
1984 *California Archaeology.* Academic Press, New York.

National Park Service (NPS)
1983 *Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines*. Electronic document accessed December 6, 2011. Online at http://www.nps.gov/history/local-law/Arch_Standards.htm.

Orr, Phil C.

1962 Arlington Springs Man. *Science* 135:219.

1968 *Prehistory of Santa Rosa Island*. Santa Barbara Museum of Natural History.

Peak & Associates, Inc.

2009 Cultural Resources Assessment, Quail Valley Sewer Improvements, Sub-Area 9, Riverside County, California. Prepared for K. S. Dunbar & Associates, Inc., Temecula, California.

Reeder, Leslie A., Torben C. Rick, and Jon M. Erlandson.

2008 Forty Years Later: What have we learned about the earliest human occupations of Santa Rosa Island, California? *North American Archaeologist* 29(1):37-64.

Reinman, Fred M.

1964 Maritime Adaptations on San Nicolas Island, California. *University of California Archaeological Survey Annual Report* 1963–1964:47–80.

Rick, Torben C., Jon M. Erlandson, and René Vellanoweth

2001 Paleocoastal Marine Fishing on the Pacific Coast of the Americas: Perspectives from Daisy Cave, California. *American Antiquity* 66:595–613.

Rolle, Andrew

2003 *California: A History.* Revised and expanded sixth edition. Harlan Davidson, Inc., Wheeling, Illinois.

Shumway, Burgess McK.

2007 *California Ranchos*. Second Edition. The Borgo Press.

Shipley, William F.

1978 Native Languages of California. In *California*, edited by R. F. Heizer, pp. 80–90. Handbook of North American Indians, Vol. 8, W. C. Sturtevant, general editor, Smithsonian Institution, Washington D.C.

State Lands Commission

1982 *Grants of Land in California Made by Spanish or Mexican Authorities*. Office of the State Lands Commission, Sacramento.

True, Delbert L.

1993 Bedrock Milling Elements as Indicators of Subsistence and Settlement Patterns in Northern San Diego County, California. *Pacific Coast Archaeological Society Quarterly* 29(2):1–26.

Van Bueren, Thad M., Susan K. Goldberg, Michael J. Moratto, Portia Lee, and Jerrel H. Sorrenson

1989 *Inventory and Evaluation of Cultural Resources: Bolsa Chica Mesa and Huntington Beach Mesa, Orange County, California*. Prepared by Infotech Research, Inc. Report on file at the South Central Coastal Information Center, California State University, Fullerton.

Wallace, William

1955 Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11:214–230.

1978 Post-Pleistocene Archaeology, 9000 to 2000 B.C. In *California*, edited by R. F. Heizer, pp. 25–36. Handbook of North American Indians, Vol. 8, W. C. Sturtevant, general editor, Smithsonian Institution, Washington D.C.

Warren, Claude N.
1968 Cultural Tradition and Ecological Adaptation on the Southern California Coast. In *Archaic Prehistory in the Western United States*, edited by C. Irwin-Williams, pp. 1–14. Eastern New Mexico University Contributions in Anthropology No. 1. Portales.

Workman, Boyle
1935 *The City that Grew*. Southland Publication Co., Los Angeles.

Appendix A

Records Search Summary

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
RI-01971	NADB-R - 1082377; Voided - MF-2151	1985	PETER, KEVIN J.	CULTURAL RESOURCES INVESTIGATION - AUDIE MURPHY RANCH, RIVERSIDE COUNTY, CALIFORNIA	SCIENTIFIC RESOURCE SURVEYS, INC., Huntington Beach, CA	33-001031, 33-001032, 33-001033, 33-001034, 33-001035, 33-001037, 33-001066, 33-008819, 33-008820
RI-02184	NADB-R - 1082611; Submitter - 918; Voided - MF-2370	1987	MCCARTHY, DANIEL F.	AN ARCHAEOLOGICAL ASSESSMENT OF TENTATIVE PARCEL 22745 LOCATED SOUTH OF SUN CITY IN WESTERN RIVERSIDE COUNTY, CALIFORNIA	ARCHAEOLOGICAL RESEARCH UNIT, U.C. RIVERSIDE	
RI-02745	NADB-R - 1083353; Voided - MF-2948	1990	BROWN, ROBERT	ARCHAEOLOGICAL SURVEY OF THE CANYON HEIGHTS PROJECT: A 275 ACRE PROPERTY IN THE QUAIL VALLEY AREA OF RIVERSIDE COUNTY, CALIFORNIA	ARCHAEOLOGICAL RESOURCE MANAGEMENT CORPORATION	
RI-02847	NADB-R - 1083450; Voided - MF-3044	1990	BROWN, JOAN	CULTURAL RESOURCES RECONNAISSANCE OF THE 130 ACRE MORRELL PROJECT RIVERSIDE COUNTY, CALIFORNIA	RMW PALEO ASSOCIATES	33-003937, 33-003938, 33-003939
RI-03691	NADB-R - 1084463; Voided - MF-3994	1993	KELLER, JEAN	A PHASE I ARCHAEOLOGICAL ASSESSMENT OF PUBLIC USE PERMIT 747. 1.0 ACRE OFLAND NEAR SUN CITY,RIVERSIDE COUNTY,CALIFORNIA USGS ROMOLAND,CALIFORNIA QUADRANGLE, 7.5' SERIES	PRIVATE	
RI-04222	NADB-R - 1085429; Voided - MF-4694	1999	CHANDLER, EVELYN N. and VALERIE M. HALLETT	PHASE I ARCHAEOLOGICAL SURVEY OF 7 ACRES IN SUN CITY, RIVERSIDE COUNTY, CALIFORNIA.	TETRA TECH, INC.	
RI-04268	NADB-R - 1085506; Submitter - 527; Voided - MF-4747	2000	LOVE, BRUCE and MICHAEL HOGAN	IDENTIFICATION AND EVALUATION OF HISTORIC PROPERTIES: AT&T WIRELESS SITE C908, NEAR THE CITY OF CANYON LAKE, RIVERSIDE COUNTY, CALIFORNIA.	CRM TECH	
RI-04700	NADB-R - 1086062; Submitter - SRS Project No. 1083	2002	BEER, ROBERT M.	ARCHAEOLOGICAL RESOURCE ASSESSMENT FOR THE AUDIE MURPHY RANCH ENVIRONMENTAL IMPACT REPORT	SCIENTIFIC RESOURCE SURVEYS, INC., Huntington Beach, CA	
RI-04878	NADB-R - 1086240; Submitter - FHG-01-122	2001	DICE, MICHAEL and LESLIE NAY IRISH	A PHASE I ARCHAEOLOGICAL RESOURCES SURVEY OF SPECIFIC PLAN 272, THE CANYON HEIGHTS PROJECT, A 272.71-ACRE RESIDENTIAL PROJECT LOCATED IN THE QUAIL VALLEY, COUNTY OF RIVERSIDE, CALIFORNIA	L&L ENVIRONMENTAL, INC.	

Gmail by Google

Keith Dunbar <ksdpe67@gmail.com>

Quail Valley Subarea 9, Phase 1

2 messages

Keith Dunbar <ksdpe67@gmail.com> Fri, Jun 19, 2015 at 3:56 PM
To: Anna Hoover <ahoover@pechanga-nsn.gov>
Cc: "Stratton, Helen" <strattoh@emwd.org>

Anna,

Good afternoon!

EMWD has determined that the Audie Murphy Ranch development is not going to have the "transport" line and regional lift station completed in time to serve the Quail Valley Subarea 9, Phase 1 Project. Therefore, EMWD will be constructing that portion of the project within the Audie Murphy Ranch development.

Consequently, we are now in the process of preparing a Subsequent Initial Study and Mitigated Negative Declaration for this Project which will cover the collection system, transport line and regional lift station.

A copy of the Project Map prepared by Atkins, an aerial showing the "transport" line and our recommended cultural resources mitigation measures are attached.

Due to our unexpected time constraints on this Project, we would greatly appreciate your input prior to June 26, 2015.

Thank you for your help in this and have a great weekend.

Keith

--
Keith S. Dunbar, P.E., BCEE, Hon.D.WRE, F. ASCE

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3 attachments

QV_AMR Fig. 1B_v3.jpg
1307K

Transport Line Alignment.jpg
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Cultural Resources Mitigation.docx
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Keith Dunbar <ksdpe67@gmail.com> Mon, Jul 6, 2015 at 8:32 AM
To: Anna Hoover <ahoover@pechanga-nsn.gov>

Anna,

Good morning!

On June 19th I sent you this email requesting your input on EMWD's Quail Valley Subarea 9, Phase 1 Project. I am now in the process of finalizing the document for publication and circulation. It is hopeful that I will have the final draft to Helen Stratton for publication by Friday. Your input would still be most welcome at this time.

Thanks and have a great week,

Keith

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3 attachments

QV_AMR Fig. 1B_v3.jpg
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Transport Line Alignment.jpg
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Appendix E

Mitigation Monitoring and Reporting Program

Mitigation Monitoring and Reporting Program

Quail Valley Sewer Improvements Subarea 9, Phase 1 (State Clearinghouse No. 2010031113)

Prepared for:

Eastern Municipal Water District
Post Office Box 8300
Perris, California 92572-8300

Prepared by:

K.S. Dunbar & Associates, Inc.
Environmental Engineering
45375 Vista Del Mar
Temecula, California 92590-4314
951-699-2082
Cell: 951-412-2634
Email: ksdpe67@gmail.com

June 2015

Mitigation Monitoring and Reporting Program
Quail Valley Sewer Improvements Subarea 9, Phase 1

The California Environmental Quality Act (CEQA) requires that when a public agency completes an environmental document which includes measures to mitigate or avoid significant environmental effects, the public agency must adopt a reporting or monitoring program. This requirement ensures that environmental impacts found to be significant will be mitigated. The reporting or monitoring program must be designed to ensure compliance during project implementation (Public Resources Code Section 21081.6).

In compliance with Public Resources Code Section 21081.6, the following MITIGATION MONITORING AND REPORTING CHECKLIST has been prepared for the Quail Valley Sewer Improvements subarea 9, Phase 1 Project. This Mitigation Monitoring and Reporting Checklist is intended to provide verification that all applicable Conditions of Approval relative to significant environmental impacts are monitored and reported. Monitoring will include: 1) verification that each mitigation measure has been implemented, 2) recordation of the actions taken to implement each mitigation, and 3) retention of records in the Quail Valley Sewer Improvements Subarea 9, Phase 1 project file.

This Mitigation Monitoring and Reporting Program delineates responsibilities for monitoring the Project, but also allows Eastern Municipal Water District (EMWD) flexibility and discretion in determining how best to monitor implementation. Monitoring procedures will vary according to the type of mitigation measure. Adequate monitoring consists of demonstrating that monitoring procedures took place and that mitigation measures were implemented.

Reporting consists of establishing a record that a mitigation measure is being implemented and generally involves the following steps:

- EMWD distributes reporting forms to the appropriate persons for verification of compliance.
- Departments/agencies with reporting responsibilities will review the Environmental Impact Report or Initial Study and Mitigated Negative Declaration, which provides general background information on the reasons for including specified mitigation measures.
- Problems or exceptions to compliance will be addressed to EMWD as appropriate.
- Periodic meetings may be held during project implementation to report on compliance of mitigation measures.
- Responsible parties provide EMWD with verification that monitoring has been conducted and ensure, as applicable, that mitigation measures have been implemented. Monitoring compliance may be documented through existing review and approval programs such as field inspection reports and plan review.
- EMWD or Applicant prepares a reporting form periodically during the construction phase and an annual reporting summarizing all project mitigation monitoring efforts.

- Appropriate mitigation measures will be included in construction documents and/or conditions of permits/approvals.

Minor changes to the Mitigation Monitoring and Reporting Program, if required, would be made in accordance with CEQA and would be permitted after further review and approval by EMWD. Such changes could include reassignment of monitoring and reporting responsibilities, program redesign to make any appropriate improvements, and/or modification, substitution or deletion of mitigation measures subject to conditions described in CEQA Guidelines Section 15162. No change will be permitted unless the Mitigation Monitoring and Reporting Program continues to satisfy the requirements of Public Resources Code Section 21081.6.

Mitigation Monitoring and Reporting Program Checklist
Quail Valley Sewer Improvements Subarea 9, Phase 1

Mitigation Measure	Monitoring Process	Monitoring Timing	Responsible Person(s)	Date Completed
Air Quality				
EMWD will appoint a construction relations officer to act as a community liaison concerning on-site construction activities including resolution of issues related to PM_{10} generation.	Project Records.	Prior to Construction.	Project Manager.	By: _____ Date: _____
EMWD will include the following mitigation measures in its standard construction specifications: The contractor shall:				
❖ Utilize electricity from power poles instead of from temporary diesel or gasoline power generators, when feasible.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____
❖ Require the use of 2010 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export) and if the lead agency determines that 2010 model year or newer diesel trucks cannot be obtained the lead agency shall use trucks that meet EPA 2007 model year NO_x emissions requirements.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____
❖ Require that all on-site construction equipment meet EPA Tier 3 or higher emissions standards according to the following: ✓ All construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. ✓ A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided at the time of mobilization of each applicable unit of equipment.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____

Mitigation Measure	Monitoring Process	Monitoring Timing	Responsible Person(s)	Date Completed
❖ Maintain construction equipment engines by keeping them properly tuned and maintained according to manufacturer's specifications.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____
❖ Use alternative fuels or clean and low-sulfur fuel for equipment.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____
❖ Idle trucks in accordance with the Airborne Toxic Control Measure (ACTM) to Limit Diesel Fueled Commercial Motor Vehicle Idling and other applicable laws.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____
❖ Spread soil binders on site, where appropriate, unpaved roads and staging areas.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____
❖ Water site and equipment as necessary to control dust.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____
❖ Sweep all streets at least once per day using SCAQMD Rule 1186 certified street sweepers or roadway washing trucks if visible soil materials are carried to adjacent streets.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____
❖ Conduct operations in accordance with SCAQMD Rule 403 requirements.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____
❖ If necessary, wash off trucks leaving the site.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____
❖ Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least two feet of freeboard in accordance with the requirements of California Vehicle Code (CVC) Section 23114.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____
The lift station shall include an air phase odor control system, a liquid phase odor control system, standby pumps and an emergency generator.	Project Records.	Prior To Construction.	Project Manager.	By: _____ Date: _____
Biological Resources				
EMWD will:				
❖ If ground-disturbing activities or removal of any trees, shrubs, or any other potential nesting habitat are scheduled within the avian nesting season (nesting season generally extends from February 1 - August 31), a pre-construction clearance survey for nesting birds should be conducted within 10 days prior to any ground disturbing activities. The biologist conducting the clearance survey should document a negative	Project Records.	Prior To Construction.	Project Manager.	By: _____ Date: _____

Mitigation Measure	Monitoring Process	Monitoring Timing	Responsible Person(s)	Date Completed
survey with a brief letter report indicating that no impacts to active bird nests will occur. If an active avian nest is discovered during the 10-day preconstruction clearance survey, construction activities should stay outside of a 300-foot buffer around the active nest. For raptor species, this buffer is expanded to 500-feet. It is recommended that a biological monitor be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged, normal construction activities can occur.				
❖ A burrowing owl clearance survey shall be conducted prior to any ground disturbing activities in accordance with the CDFW 2012 Staff Report on Burrowing Owl Mitigation. Two pre-construction clearance surveys shall be conducted 14-30 days and 24 hours prior to ground disturbing activities to document the continued absence of burrowing owl from the Project site..	Project Records.	Prior To Construction.	Project Manager.	By: _____ Date: _____
Cultural Resources				
Although there were no archeological resources as defined in §15064.5 of the State CEQA Guidelines identified within the immediate project area, there is always a possibility that buried cultural resources that were not previously identified could be unearthed during excavation activities. Therefore, EMWD will adhere to the following:				
❖ At least 30 days prior to beginning Project construction, EMWD shall contact the Pechanga Band of Luiseño Indians to notify the Luiseño of grading and excavation activities and to coordinate and develop a Cultural Resources Treatment and Monitoring Agreement. The Agreement shall address the treatment of known cultural resources; the designation, responsibilities, and participation of a professional Native American Tribal monitor during grading, excavation and other ground disturbing activities; Project grading and excavation schedule; terms of compensation for the monitor; and treatment and final disposition of any cultural resources, sacred items and human remains discovered on site. The Tribal monitor shall be allowed to monitor all grading, excavation and ground disturbing activities and, with the concurrence of EMWD's Field Engineering Inspector, have the authority to stop or redirect grading and/or excavation activities.	Project Records.	Prior To Construction.	Project Manager.	By: _____ Date: _____
❖ If inadvertent discoveries of cultural resources are encountered at any time during construction, these materials and their context shall be avoided until a qualified archeologist and a representative from the closest Tribe to the Project site have consulted with EMWD regarding	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____

Mitigation Measure	Monitoring Process	Monitoring Timing	Responsible Person(s)	Date Completed
appropriate avoidance and mitigation measures for the newly discovered resources. Construction personnel shall not collect or retain cultural resources. Prehistoric resources include, but are not limited to: chert or obsidian flakes; projectile points; mortars and pestles; dark, friable soil containing shell and bone; dietary debris; heat-affected rock; or human burials. Historic resources include stone or adobe foundations or walls; structures and remains with square nails; and refuse deposits (glass, metal, wood, ceramics), often found in old wells and privies. Pursuant to California Public Resources Code §21083.2(b) avoidance is the preferred method of preservation for archeological resources.				
❖ All sacred sites, should they be encountered within the project sites, shall be avoided and preserved as the preferred mitigation, if feasible.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____
❖ In addition, EMWD will relinquish ownership of all cultural resources, including sacred items, burial goods and all archeological artifacts that are found on the project site to the appropriate tribe for proper treatment and disposition.	Project Records.	During Construction.	Project Manager.	By: _____ Date: _____
❖ If paleontological resources (e.g., fossils) are encountered at any time during construction of the project, construction personnel shall avoid altering these materials and their context until a qualified paleontologist has evaluated the situation. Project personnel shall not collect or retain paleontological resources.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____
❖ Consistent with State CEQA Guidelines §15064.5, subdivision (e), in the event of an accidental discovery or recognition of any human remains, the County Coroner shall be notified and construction activities at the affected work site shall be halted. If the remains are found to be Native American, the Native American Heritage Commission shall be notified within 24 hours. The NAHC must immediately notify the Most Likely Descendant(s) under Public Resources Code §5097.98 and the descendants must make recommendations or preference for treatment within 48 hours of being granted access to the site. Guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains in accordance with the provisions of Health and Safety Code §7050.5 and Public Resources Code §5097.98.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____
Hazards and Hazardous Materials				
To reduce potentially hazardous conditions and minimize the impacts from the handling of potentially hazardous materials, EMWD will include the following in its construction contract documents:				

Mitigation Measure	Monitoring Process	Monitoring Timing	Responsible Person(s)	Date Completed
❖ The contractor(s) shall prepare a *Health and Safety Plan* in compliance with the requirements of Chapter 6.95, Division 20 of the Health and Safety Code (§§ 25500—25532). The plan shall include measures to be taken in the event of an accidental spill.	Site Inspection.	During Construction	Field Engineering Inspector.	By: _____ Date: _____
❖ The contractor(s) shall enforce strict on-site handling rules to keep construction and maintenance materials out of receiving waters and storm drains. In addition, the contractor(s) shall store all reserve fuel supplies only within the confines of a designated construction staging area, refuel equipment only within the designated construction staging area, and regularly inspect all construction equipment for leaks.	Site Inspection.	During Construction	Field Engineering Inspector.	By: _____ Date: _____
❖ The construction staging area shall be designed to contain contaminants such as oil, grease, and fuel products so that they do not drain towards receiving waters or storm drain inlets.	Site Inspection.	During Construction	Field Engineering Inspector.	By: _____ Date: _____
To further ensure adequate ingress and egress for emergency responders at all time, EMWD shall include the following in its construction specifications for this Project:				
❖ Traffic control plans shall be prepared by a qualified professional engineer prior to construction.	Project Records.	During Construction.	Project Manager.	By: _____ Date: _____
❖ Traffic control plans shall consider the ability of alternative routes to carry additional traffic and identify the least disruptive hours of construction site truck access routes and the type and location of warning signs, lights and other traffic control devices. Consideration shall be given to maintaining access to commercial parking lots, private driveways and sidewalks, bikeways and equestrian traffic to the greatest extent possible.	Project Records.	During Construction.	Project Manager.	By: _____ Date: _____
❖ Traffic control plans shall comply with Part 6 of the California Manual on Uniform Traffic Control Devices and the California Supplement as determined by each affected local agency to minimize any traffic and pedestrian hazards that exist during project construction.	Project Records.	During Construction.	Project Manager.	By: _____ Date: _____
❖ Encroachment permits for all work within public rights-of-way shall be obtained from each affected local agency prior to commencement of any construction. EMWD shall comply with all traffic control requirements of the affected local agencies.	Project Records.	During Construction.	Project Manager.	By: _____ Date: _____

Mitigation Measure	Monitoring Process	Monitoring Timing	Responsible Person(s)	Date Completed
❖ Working hours and lane closures shall be as specified by the affected local agency.	Project Records.	During Construction.	Project Manager.	By: _____ Date: _____
❖ Public streets shall be restored to a condition mutually agreed to between EMWD and the local jurisdictions prior to construction.	Project Records.	During Construction.	Project Manager.	By: _____ Date: _____
Geology and Soils				
Due to the likelihood of encountering groundwater within the pipe zone and to mitigate potential impacts to the greatest extent feasible, EMWD shall include the following mitigation measures in its construction specifications for the proposed Project:				
❖ Where pipe bedding is necessary to bring the trench bottom up to grade, a minimum of six (6) inches will be placed to provide uniform and adequate longitudinal support under the pipe.	Site Inspection.	During Construction	Field Engineering Inspector.	By: _____ Date: _____
❖ In the event groundwater is encountered on Vista Way, placement of clay dams shall be required at 500 foot intervals and any other locations where groundwater is encountered within the pipe zone. Elsewhere, dams shall be placed as directed in the field by the engineer.	Site Inspection.	During Construction	Field Engineering Inspector.	By: _____ Date: _____
❖ All excavations shall be configured in accordance with the requirements of CalOSHA. Classification of the soil and the shoring and/or slope configuration shall be determined by the contractor prior to excavation on the basis of trench depth and the soil encountered. The contractor shall have a "competent person" on-site for the purposes of assuring safety within and about all construction excavations.	Site Inspection.	During Construction	Field Engineering Inspector.	By: _____ Date: _____
Hydrology and Water Quality				
EMWD will require contractors to implement a program of best management practices (BMP's) and best available technologies to reduce potential impacts to water quality that may result from construction activities. To reduce or eliminate construction-related water quality impacts before the onset of construction activities, EMWD should obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Construction Permit. Construction activities shall comply with the conditions of this permit that include preparation of a stormwater pollution prevention plan, implementation of BMP's, and monitoring to insure impacts to water quality are minimized. As part of this process, multiple BMP's should be implemented to provide effective erosion and sediment control. These BMP's should be selected to achieve maximum sediment removal and represent the best available technology that is				

Mitigation Measure	Monitoring Process	Monitoring Timing	Responsible Person(s)	Date Completed
economically achievable. BMP's to be implemented as part of this mitigation measure should include, but not be limited to, the following:				
❖ Temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other groundcover shall be employed for disturbed areas.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____
❖ Storm drain inlets on the site and in downstream offsite areas shall be protected from sediment with the use of BMP's acceptable to EMWD, local jurisdictions and the California Regional Water Quality Control Board, Santa Ana Region.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____
❖ Dirt and debris shall be swept from paved streets in the construction zone on a regular basis, particularly before predicted rainfall events.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____
❖ No disturbed surfaces shall be left without erosion control measures in place between October 15 and April 15. EMWD shall file a Notice of Intent with the Regional Board and require the preparation of a pollution prevention plan prior to commencement of construction. EMWD shall routinely inspect the construction site to verify that the BMP's specified in the pollution prevention plan are properly installed and maintained. EMWD shall immediately notify the contractor if there were a noncompliance issue and require immediate compliance.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____
Noise				
In order to minimize impacts related to blasting to the greatest extent feasible, EMWD shall notify all affected homeowners of the possible inconvenience as soon as a firm construction schedule is known. In addition, EMWD shall include the following in its construction specifications for this Project:				
❖ Any blasting shall be done by a licensed blasting contractor.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____
❖ Each blast shall be monitored and recorded with an approved seismic monitor outside of the closest residence to the blast.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____
❖ Residents shall be notified well in advance of the blasts.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____
❖ The blasting plan, including calculations, shall be submitted to the City of Menifee for review and approval prior to the first blast.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____

Mitigation Measure	Monitoring Process	Monitoring Timing	Responsible Person(s)	Date Completed
❖ EMWD's consultant shall include additional specification language to mitigate air-borne sound waves.	Project Records	Prior to Construction	Project Manager	By: _____ Date: _____
EMWD will include the following in its construction contract documents: ❖ All equipment used during construction shall be muffled and maintained in good operating condition. All internal combustion engines should be fitted with well-maintained mufflers in accordance with manufacturer's recommendations.	Site Inspection.	During Construction.	Field Engineering Inspector.	By: _____ Date: _____
Transportation/Traffic				
Transportation/Traffic mitigation measures are included in the Hazards/Hazardous Materials section.				