CEQA Plus Document

Recycled Water Ponds Expansion and Optimization Project

(SCH No. 2010081044)

Prepared for:

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Project Background

Eastern Municipal Water District (EMWD) provides potable water, wastewater collection and treatment, and water recycling for a 542 square mile service area with a population of over 755,000 people in the western portion of Riverside County (Figure 1-1). Located approximately 70 miles east of the City of Los Angeles, EMWD is situated in one of the fastest growing areas in the nation. Growth during the period from 2005 to 2007 averaged over 12,000 equivalent dwelling units per year. However, the area is urbanizing rapidly with commercial and industrial development following in the wake of residential development. EMWD's service area includes seven incorporated cities: Temecula, Murrieta, Perris, Menifee, Hemet, San Jacinto and Moreno Valley. All seven rank in the top 50 fastest growing areas among California's 236 cities with populations of 30,000 or more.

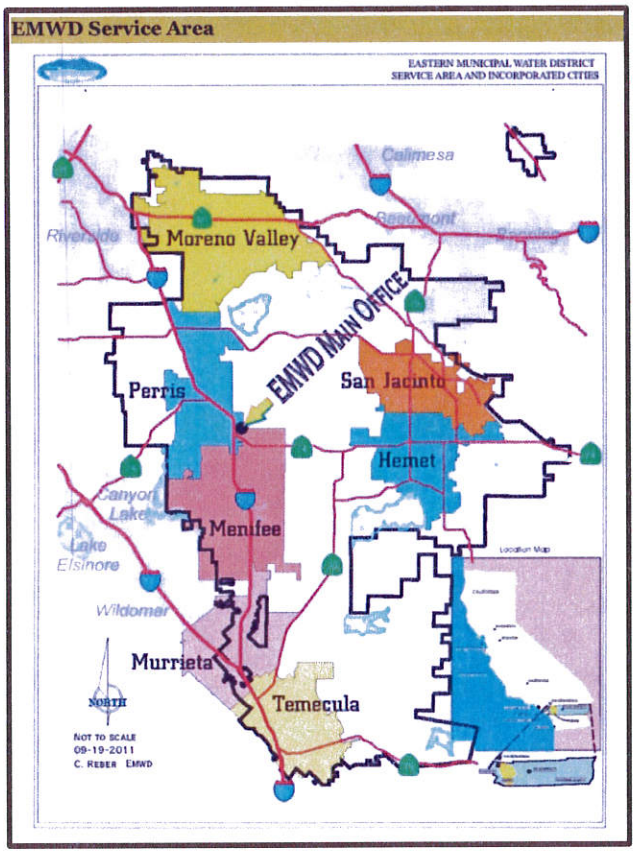


Figure 1-1 EMWD Service Area

EMWD's recycled water distribution system (Figure 1-2) evolved slowly from the early 1970's through the 1990's in response to an increasing need for treated wastewater disposal. EMWD is a land-locked agency that could not discharge recycled water to local water courses because of the presence of downstream drinking water supplies (i.e., Canyon Lake). Initially, treated effluent was disposed of in percolation ponds located at the treatment plant sites. As plant flows increased, however, EMWD constructed pipelines to offsite disposal ponds. Over time these pipelines grew to intertie the treatment plants in a network of pipelines, pump stations, and storage ponds that was well suited to delivering large quantities of recycled water to a limited number of major agricultural customers (e.g., fiber, feed and seed crops using secondary effluent). This combination of disposal and agricultural reuse was adequate to meet EMWD's effluent management needs until the late 1990's when seasonal surpluses of recycled water threatened to exceed the capacity of available disposal sites. EMWD responded by building an outfall pipeline to Temescal Creek, by-passing the potable water supply at Canyon Lake. Combined with the addition of tertiary treatment capability at EMWD's regional water reclamation

facilities, the outfall pipeline provided EMWD with the ability to discharge surplus recycled water without the threat of spills or permit violations.

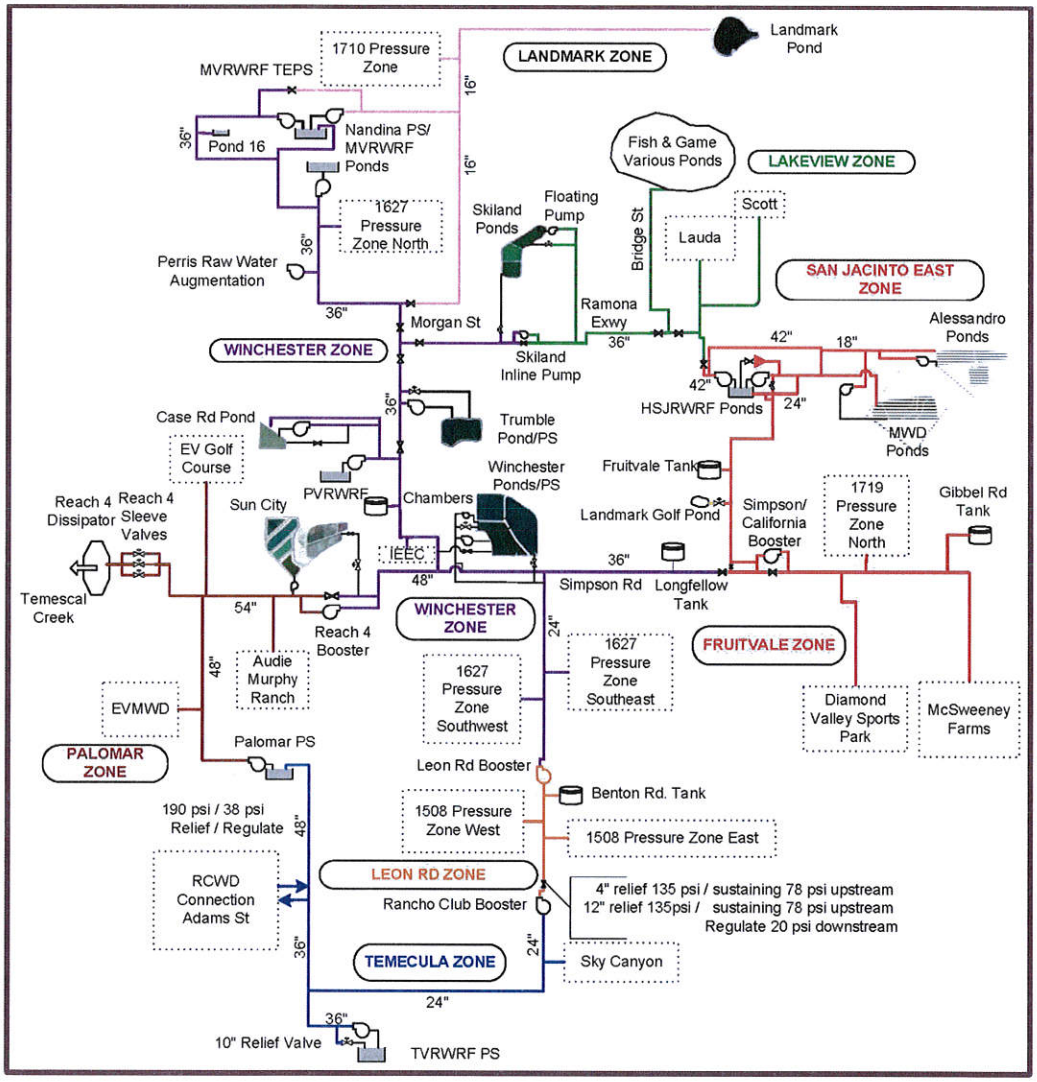


Figure 1-2 Recycled Water System Flow Schematic

EMWD entered a period of unprecedented growth in 2002. Land uses began shifting from rural/agricultural to urban/residential and EMWD began losing its agricultural customers. As agricultural demands dropped, disposal increased resulting in under utilization of an important water resource. Additionally, new potential municipal irrigation customers such as parks, schools, golf courses and green belts and industrial customers were approaching EMWD for recycled water service. However, EMWD's agricultural delivery system lacked pump stations, operational storage, pressure control and overall reliability needed to serve the new customers. The old system was fine for the low pressure delivery of recycled water to large agricultural customers capable of storing or re-pumping the water at the individual farm sites. However, the system did not provide the level of service capable of meeting the "on demand" needs of municipal customers.

EMWD is now in the process of upgrading its agricultural and landscape irrigation delivery system to a level capable of meeting municipal customers' needs. The improvements will pressurize the system by establishing pressure zones, increase pumping capacity, and develop operational storage for the system similar to what is found in potable water distribution systems. This program will also develop new pipelines for additional customers capable of supporting EMWD's long-term resource management plans. The specific goals of the proposed program include:

- Increased reuse of recycled water.
- Decreased imports from the State Water Project and Colorado River Aqueduct.
- Decreased groundwater pumping in over-drafted basins.
- Improved reliability of agricultural and landscape water supplies.

As part of its recycled water system, EMWD has established both on-site and off-site recycled water storage facilities in both the San Jacinto and Santa Margarita Basins as shown in Table 1-1. Groundwater Management Zone locations in the San Jacinto Basin are shown on Figure 1-3.

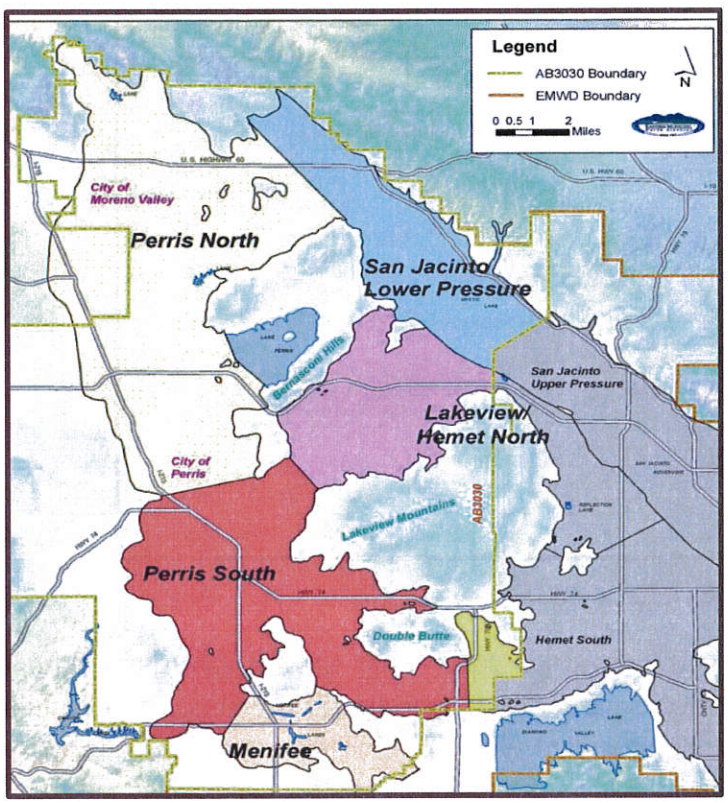


Figure 1-3 Groundwater Management Zones

As shown in Table 1-1, EMWD presently has 6,631 acre-feet of recycled water storage capacity in the recycled water system. However, in order to achieve its goals, it will be necessary to add additional storage capacity as follows *(EMWD October 2010)*:

- Year 2015 – 2,900 acre-feet
- Year 2020 – 700 acre-feet
- Year 2025 – 1,800 acre-feet
- Year 2030 – 1,700 acre-feet
- Total additional storage – 7,100 acre-feet

EMWD has prepared a Strategic Plan, Recycled Water Strategic Plan (June 2009), Integrated Resources Plan and Recycled Water Master Plan (October 2010). A critical element in all of these plans is the regional storage of recycled water.

Table 1-1
Recycled Water Storage Facilities

Storage Pond Location	Capacity		Purpose of Storage	Groundwater Management Zone
	mg	ac-ft		
San Jacinto Valley RWRF	264	810	Seasonal Recycle Storage	Hemet North
San Jacinto Reservoir	74	227	Seasonal Recycle Storage	San Jacinto Upper
Alessandro	55	169	Seasonal Recycle Storage	San Jacinto Upper
Moreno Valley RWRF	225	690	Seasonal Recycle Storage	Perris North
Landmark	4	12	Recycle Storage	Perris North
Perris Valley RWRF	275	844	Seasonal Recycle Storage	Perris South
Skiland	330	1,012	Recycle Storage	Perris South
Trumble Road	287	880	Seasonal Recycle Storage	Perris South
Winchester	550	1,687	Seasonal Recycle Storage	Perris South
Sun City RWRF	192	589	Seasonal Recycle Storage	Perris South
Temecula Valley RWRF	6	18	Seasonal Recycled Storage	Santa Margarita
Totals	2,162	6,938		

Project Purpose and Objectives

The purpose and goals of the Recycled Water Strategic Plan and therefore of the Recycled Water Pond Expansion and Optimization Project are:

- Maximize potable water offset.
- Minimize cost.
- Optimize salt balance.

Project Description

As part of its Recycled Water Pond Expansion and Optimization Project, EMWD is planning on the construction, operation and maintenance of additional recycled water storage facilities at its North Trumble Recycled Water Storage Ponds Site. In addition, EMWD is planning on optimization projects at two of its existing facilities: 1) Case Road and Watson Road Recycled Water Storage Ponds at the Perris Valley Regional Water Reclamation Facility (PVRWRF) and 2) Winchester Recycled Water Storage Facility. These individual expansion and optimization projects are described in the following paragraphs.

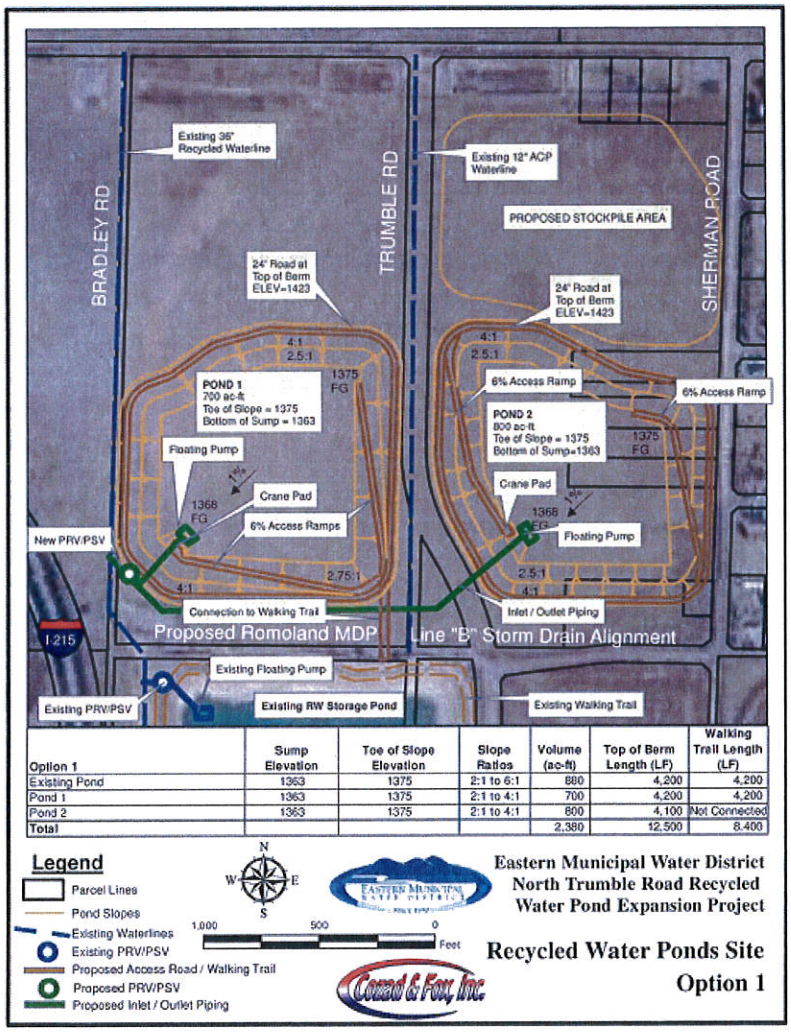
North Trumble Recycled Water Storage Ponds

EMWD currently owns 140 acres of property north of its existing Trumble Road Recycled Water Storage Pond. It is bounded on the north by Ellis Avenue, on the east by Sherman Road, on the south by Vista Road, and on the west by Bradley Road. EMWD intends to construct the North Trumble Recycled Water Storage Ponds on this property. EMWD retained the services of Cozad & Fox, Inc., to prepare a preliminary design report for this Project *(Cozad & Fox, Inc. October 31, 2011)*. The following discussion is based on that report.

As shown on Figure 1-4, Option 1 includes two ponds north of the proposed Romoland MDP Line "B" Storm Drain Channel alignment and on either side of the existing Trumble Road right-of-way. The toe of the slope would be at elevation 1375 with a local sump in the southwest corner of each pond at an elevation of approximately 1363. The locations of the sumps were selected based upon minimizing the length of the intake piping to the pumping facility. The volume of the easterly pond would be approximately 800 acre-feet and the volume of the westerly pond would be approximately 700 acre-feet for a total storage volume of approximately 1500 acre-feet.

The layout shown for Option 1 utilizes the existing Trumble Road right-of-way. Trumble Road is unimproved at this location; however, the right-of-way was dedicated to the County of Riverside who transferred it to the City of Perris when it annexed the area. This layout also avoids the need to relocate the existing 12" ACP waterline located within an EMWD easement.

Due to the lack of a buyer for the excess spoils, EMWD decided to phase the project (i.e., construct Pond 1 and temporarily stockpile the excess soils on-site; then when EMWD finds a buyer for the excess soils, it would remove the excess soils and construct Pond 2). The excess soils from Pond 2 would also be removed from the site for use by a private developer.



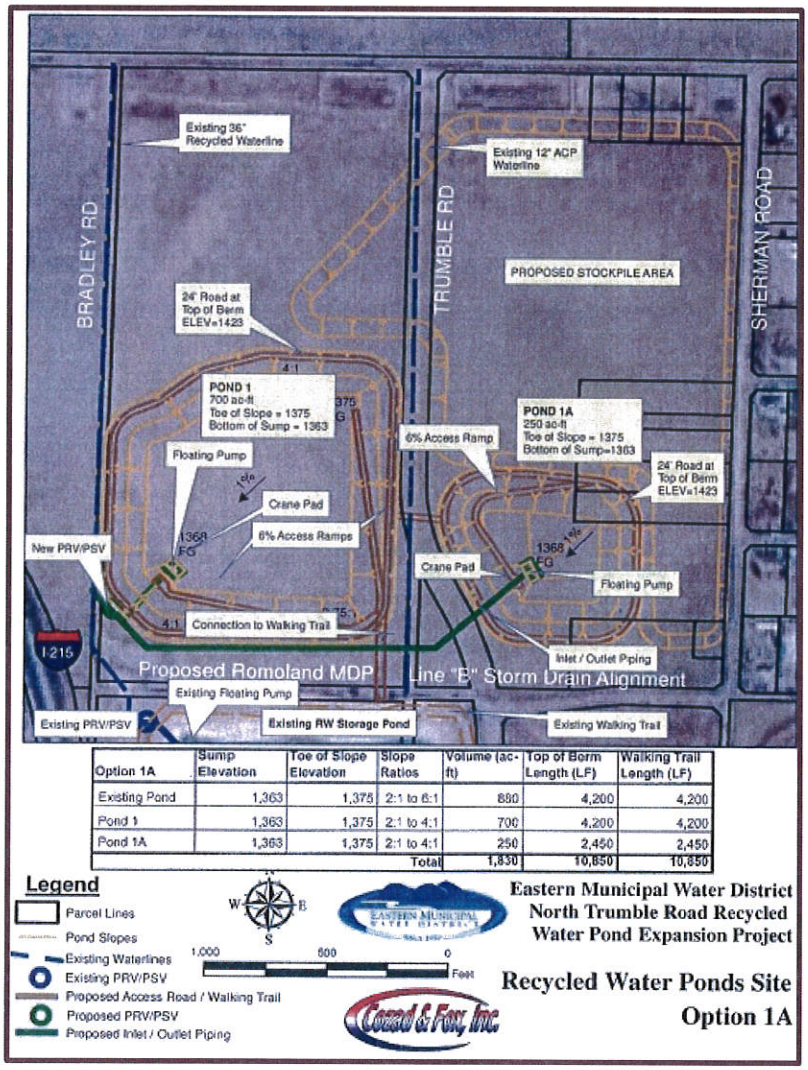
Option 1	Sump Elevation	Toe of Slope Elevation	Slope Ratios	Volume (ac-ft)	Top of Berm Length (LF)	Walking Trail Length (LF)
Existing Pond	1363	1375	2:1 to 6:1	880	4,200	4,200
Pond 1	1363	1375	2:1 to 4:1	700	4,200	4,200
Pond 2	1363	1375	2:1 to 4:1	800	4,100	Not Connected
Total				2,380	12,500	8,400

Figure 1-4
North Trumble Recycled Water Storage Ponds Option 1

Subsequent to that decision, EMWD decided to implement Option 1A which would construct Pond 1 plus a smaller Pond 1A at the location of Pond 2 and temporarily stockpile all excess soils on-site (Figure 1-5) . Option 1A is summarized in Table 1-2.

Table 1-2
Option 1A

Option 1A	Sump Elevation	Toe of Slope Elevation	Slope Ratios	Volume (acre-feet)	Top of Berm Length (feet)	Walking Trail Length (feet)
Existing Pond	1363	1375	2:1 to 6:1	880	4,200	4,200
Pond 1	1363	1375	2:1 to 4:1	700	4,200	4,200
Pond 1A	1363	1375	2:1 to 4:1	250	2,450	2,450
Total				1,830	10,850	10,850



Option 1A	Sump Elevation	Toe of Slope Elevation	Slope Ratios	Volume (ac-ft)	Top of Berm Length (LF)	Walking Trail Length (LF)
Existing Pond	1,363	1,375	2:1 to 6:1	880	4,200	4,200
Pond 1	1,363	1,375	2:1 to 4:1	700	4,200	4,200
Pond 1A	1,363	1,375	2:1 to 4:1	250	2,450	2,450
			Total	1,830	10,850	10,850

Figure 1-5
North Trumble Recycled Water Storage Ponds Option 1A

Summary for Option 1A

- Trumble Road right-of-way will not be relocated.
- The 12" ACP waterline can remain in place.
- The existing pond will use the existing connection to the existing 36" recycled waterline.
- The new ponds will be connected to the existing 36" recycled waterline by a new PRV/PSV.
- New and existing ponds will be serviced by floating pumps.
- A walking trail is provided on the westerly pond for a total length of 8,400 lineal feet.
- The two new ponds will be separated by Trumble Road.
- The total volume of the two new ponds will be 950 acre-feet.
- The ponds will be individually fenced.
- Excavation of Pond 1 will generate approximately 1,250,000 cubic yards of spoil material and excavation of Pond 1A will generate approximately 400,000 cubic yards of spoil material.
- Excess spoil material will be temporarily stockpiled on-site north of the new ponds.

Pump Station

Based on the analysis contained in the Preliminary Design Report (See Chapter 20, *Alternatives*, in this Draft EIR) it was decided to install floating pump stations with vertical pumps at the Trumble Recycled Water Storage Pond Site.

- The floating pump station alternative would consist of four (4) barge-mounted pumps, one in each pond and an extra pump that would, under normal operation, be located in the largest pond. The three permanent pumps would be connected to a pipe manifold system. The extra pump discharge pipe would also be connected to the manifold with a quick connect/disconnect fitting. This would make it relatively easy to move the extra pump from pond to pond and still connect to the recycled water facility. Moving a pump would require disconnecting it from the system, floating the pump to the shore and lifting it out of the water with a crane. This would allow up to four (4) pumps to be used simultaneously. The configuration would also provide a back-up pump at the ponds in the event one of the on-duty pumps needed to be serviced or replaced.

Figure 1-6
Floating Vertical Pumps

- The selected pump for this application is SIMFLO's SJ14C-3, recommended by Hy-Tran, Inc. This is a vertical pump with 200 HP, 3/60/60v.1.15SF premium efficiency motor suitable for inverter duty.
- The SymFlo SJ14C-3 vertical pumps will float within a Hy-Tran pump flotation system. The Hy-Tran's design consists of four super pontoons with an epoxy coated steel mainframe and handrails, with fiberglass floor grating. This will be suitable for mounting the SymFlo Model SJ14C vertical pump with a 200 hp motor. Each barge will also include the following: a shallow drain pump can with screens, steel pipe bottom protector, 10 inch pump discharge pipe spool couplings.
- The Trumble Road Pond recycled water system would be sized to pump up to 8,000 gpm. The 36" diameter recycled water pipeline on the west side of the site has capacity to carry system flows significantly exceeding 8,000 gpm. Based upon head loss of 3.5 feet per thousand feet of lineal pipe and assuming when all pumps are operational recycled water could be pumped in both the north and south direction of the 36" recycled water supply pipeline, the system capacity at the connection point is estimated to be approximately 40,000 gpm.

Spoils Storage

Construction would consist of excavation of approximately 2.5 million cubic yards of soil. The project schedule has been separated into two phases. The first phase would include construction of Pond 1 and Pond 1A. This would require the excavation of 1.65 million cubic yards of soil. As shown on Figure 1-7, the excess soils would be temporarily stockpiled onsite. The maximum elevation of this temporary stockpile would be 1440 feet. The existing ground surface elevation is approximately 1,420 feet. Pond 2 would not be constructed until such time as EMWD finds a buyer for the temporarily stockpiled material. Once these materials are removed from the site by others, EMWD would proceed with construction of the second pond. Excess materials from this later construction would be hauled off site for use by others.

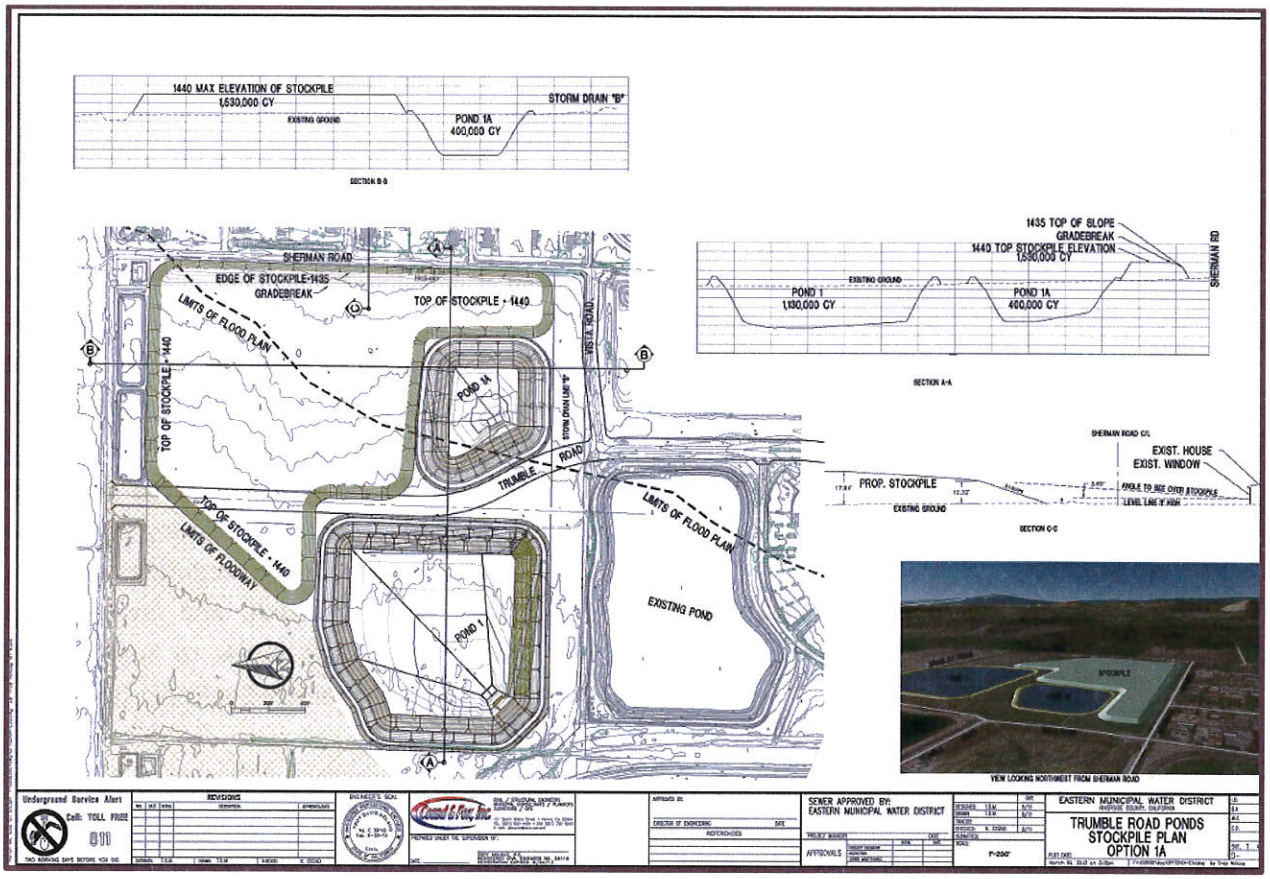


Figure 1-7
Stockpile Plan Option 1A

Construction Schedule

It is anticipated that construction on Ponds 1 and 1A would commence about March 1, 2015 and be completed about July 16, 2016.

Construction would not commence on Pond 2 until such time as EMWD has secured a buyer for the temporarily stockpiled material as well as the material to be excavated for Pond 2. All excess materials would be hauled off-site by others.

Case Road and Watson Road Optimization Projects

The Existing Trumble Road Pond has a storage capacity of approximately 880 acre-feet. To facilitate construction of the North Trumble Recycled Water Storage Ponds, it will be necessary to drain the existing Trumble Pond. During this outage, the Watson Road and Case Road ponds can allow for the utilization and distribution of approximately 150 acre-feet and 370 acre-feet, respectively, of storage capacity that can be pumped into the 1627 pressure zone. The Watson Road and Case Road Ponds are located at EMWD's PVRWRF within the City of Perris (Figure 1-8).

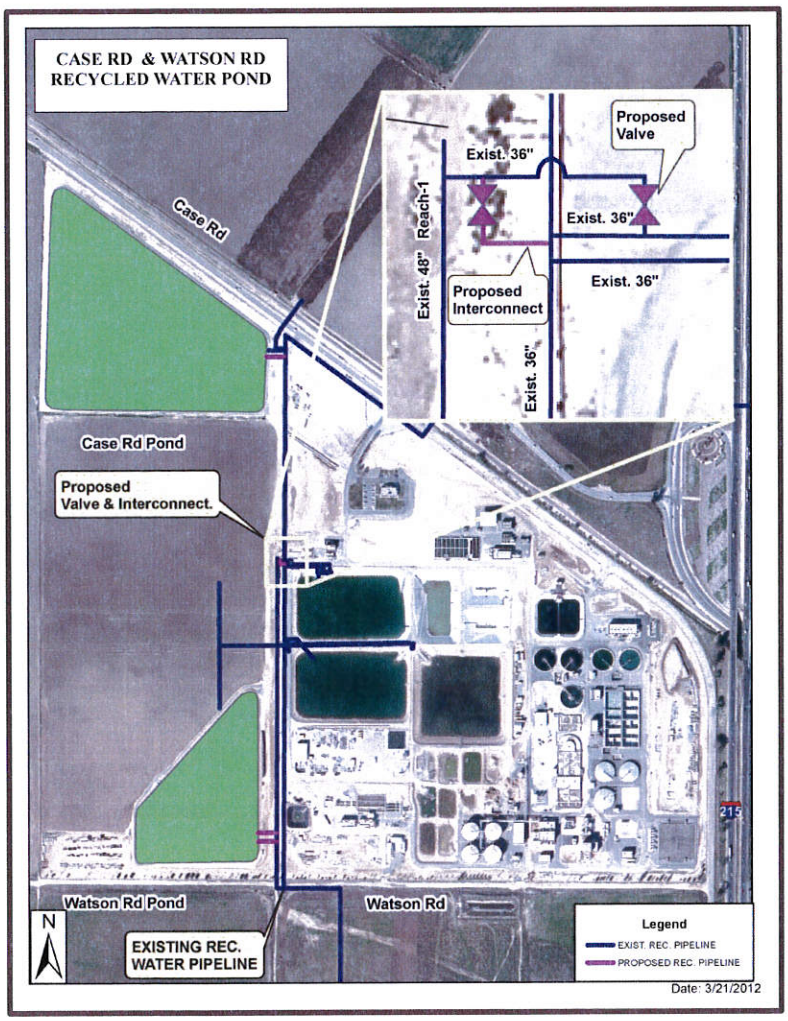


Figure 1-8
Case Road and Watson Road Optimization Projects

Case Road Pond

In order to maximize the utilization of recycled water stored in the Case Road Pond, it would be necessary to provide a discharge pipeline, SCADA system, electrical service, variable frequency drive and motor control equipment to operate the system remotely and efficiently. It would also be necessary to provide a minimum of (1) 2,000 gpm floating pump and motor, pressure reducing pressure sustaining valves, and level control gages in the ponds to measure the available recycled water in storage.

Watson Road Pond

In order to maximize the utilization of recycled water stored in the Watson Road Pond, it would be necessary to provide a pipeline and connection to the existing 48-inch diameter recycled water line for inflow into the pond, a discharge pipeline and connection to either the existing 36-inch diameter or 48-inch diameter recycled water line for distribution of recycled water. It would also be necessary to provide electrical service, variable

frequency drive and motor control equipment to operate the system remotely and efficiently, a minimum of (1) 2,000 gpm floating pump and motor, and level control gages in the pond to measure the available recycled water in storage.

The Case Road and Watson Road Recycled Water Storage Ponds have a combined water surface area of approximately 17 acres. It is proposed to deepen the ponds by 10 feet. This would add approximately 55 million gallons of storage at the site. It is anticipated that under the "worst-case" scenario, approximately 275,000 cubic yards of material would be excavated. It is assumed that all of this material would be stored onsite.

Perris Valley Pipeline

In addition to the proposed improvements stated above, it will be necessary to add a valve on the existing interconnect line from the existing 48-inch diameter recycled water pipeline to the existing 36-inch diameter recycled water pipeline that directs flows into Pond Number 3 at the Perris Valley Regional Water Reclamation Facility. It would also be necessary to install a new interconnect line from the existing 36-inch diameter pipeline to the existing 48-inch diameter Reach 1 pipeline.

Construction Schedule

It is anticipated that construction would commence on July 1, 2014 and be completed by February 28, 2015.

Winchester Optimization Project

EMWD's Winchester Recycled Water Storage Ponds are located at 28264 La Ventana in the unincorporated town of Winchester, Riverside County (Figure 1-9). They are shown in the Thomas Guide for Riverside County on page 839 in Grid A6. The existing three ponds have a combined storage capacity of approximately 550 million gallons (≈1,687 acre-feet) and a surface area of approximately 95 acres. The existing recycled water pump station is situated on an embankment of one of the recycled water storage ponds. This embankment is maintained in a vegetative free state.

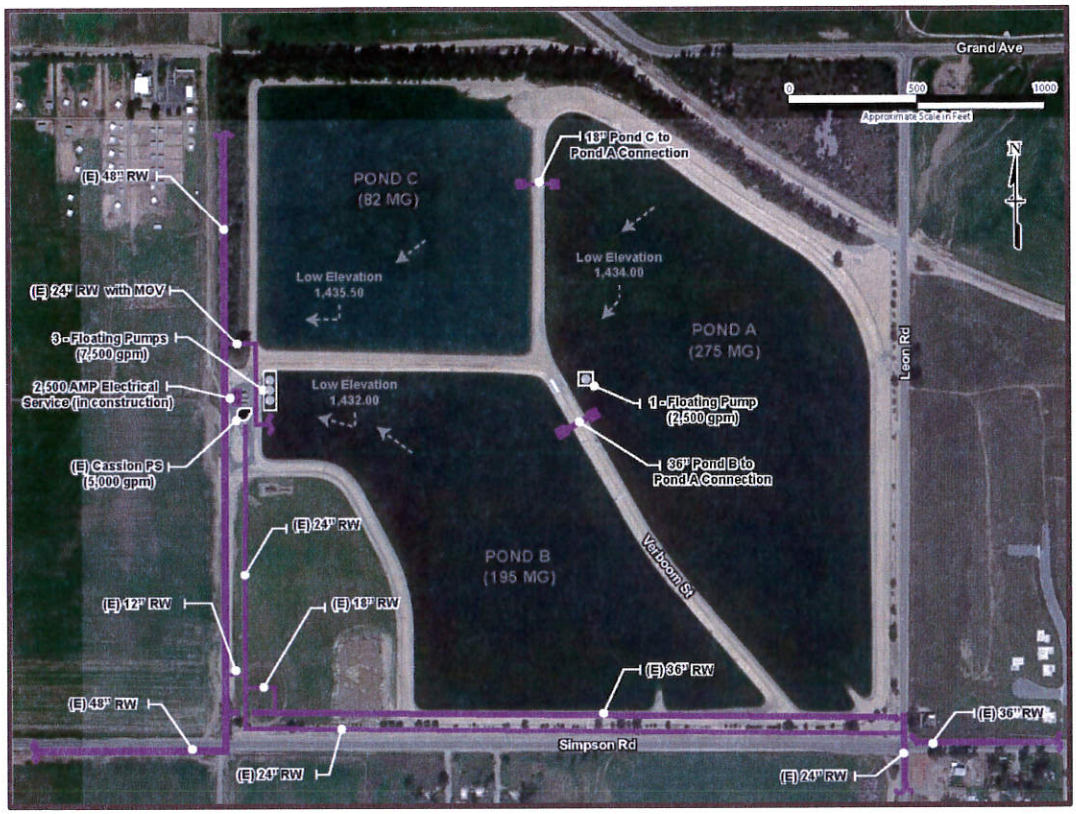


Figure 1-9 Existing Facilities at Winchester Recycled Water Storage Ponds

EMWD is proposing to construct additional recycled water pumping facilities, associated recycled water pipelines, and deepening existing ponds at its Winchester Ponds Site (Figure 1-9). The pumping capacity, pipeline length & sizes, and extent of pond deepening would be determined during final design.

The proposed facilities are briefly summarized below.

Pumping and Piping Facilities

Alternative 1

It is proposed to replace the existing pumps with a new pump station with a capacity of approximately 20,000 gallons per minute (gpm). The pumps, air compressor, mechanical equipment and electrical equipment would be housed in a building with concrete masonry unit walls and a steel framed roof with metal decking and a built-up roofing system. The building would have a foot print of approximately 100 feet by 52 feet (5,200 square feet). It will also be necessary to install a small percolation pit to handle the filter backwash as well as approximately 3,500 feet of up to 54-inch diameter pipeline to handle the capacity of the new pump station, suction lines from Ponds A and C, and a parallel discharge pipeline that will connect to the existing recycled water distribution system.

In order to improve connectivity between the ponds and allow all the ponds to drain to the lowest elevation, an approximate 10 x 10 foot square sump pit would be constructed three feet deep in both ponds A and B with an approximate 36-inch connection in-between and an approximate 30-inch line from Pond C to Pond A. A conceptual layout of Alternative 1 facilities is shown on Figure 1-10.

Figure 1-10 Winchester Recycled Water Storage Ponds Optimization Alternative 1

Alternative 2

Alternative 2 would consist of deepening the existing caisson pump station wet-well and extending the pump bowls deeper to provide adequate suction. Additionally, a submerged 'channel' would be dredged across the pond bottom to better facilitate the draining of the ponds. As in Alternative 1, EMWD may elect to build a smaller pump station, install a percolation pit, sump pits, interconnection pipelines, and suction and discharge pipelines. A conceptual layout of Alternative 2 facilities is shown on Figure 1-11.

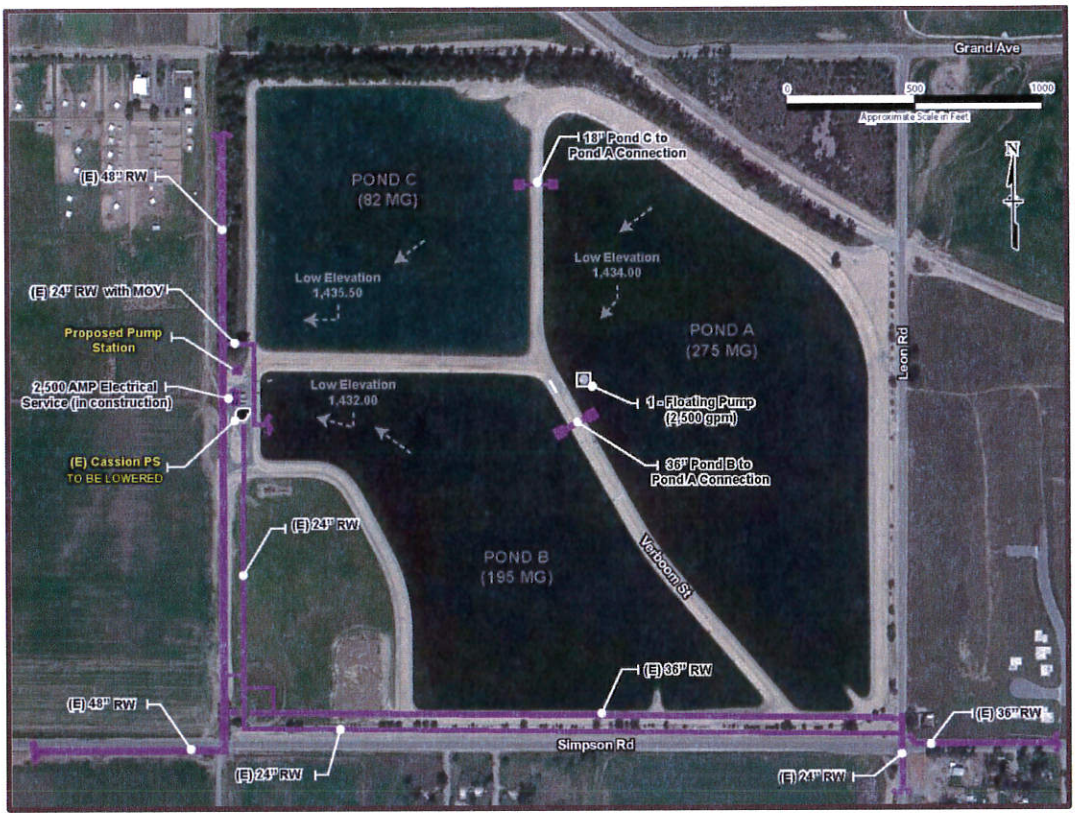


Figure 1-11 Winchester Recycled Water Storage Ponds Optimization Alternative 2

Alternative 3

Alternative 3 consists of utilizing the three existing floating pumps in Pond B and one existing floating pump in Pond A and constructing an additional floating pump station with a capacity of approximately 10,000 gpm to achieve a total pumping capacity of 20,000 gpm. Additional on-site piping may need to be constructed. A conceptual layout of Alternative 3 facilities is shown on Figure 1-12.

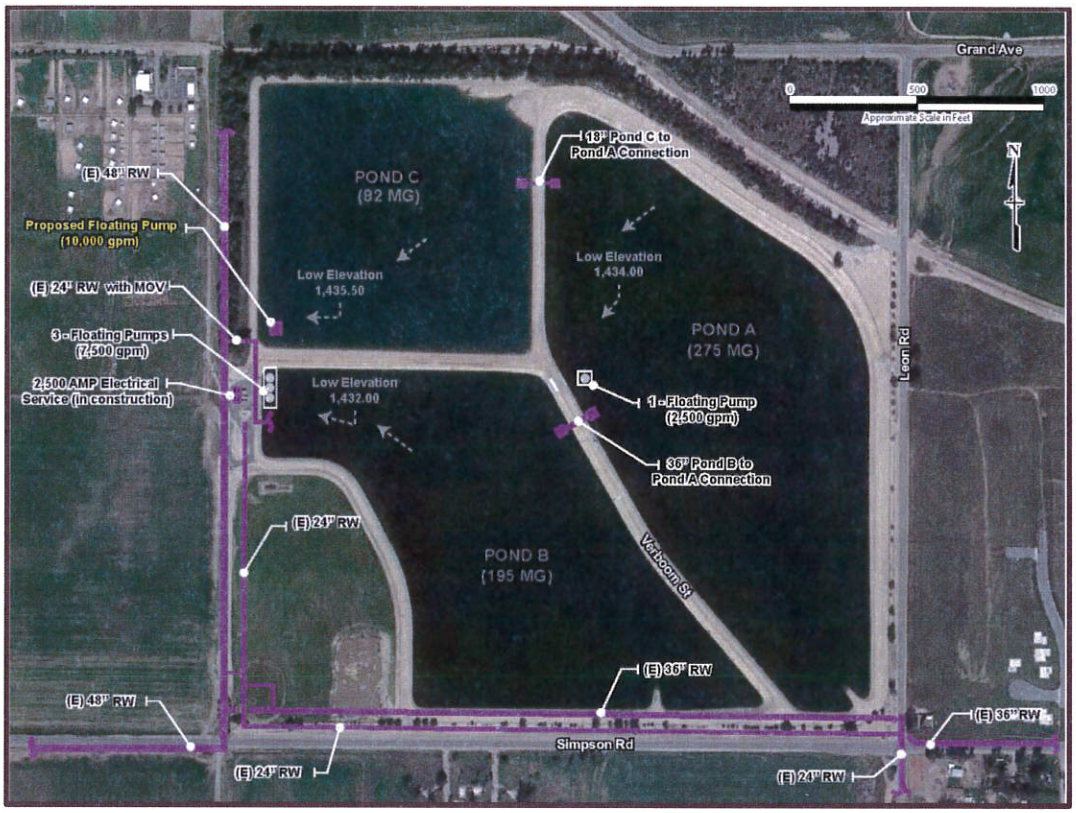


Figure 1-12 Winchester Recycled Water Storage Ponds Optimization Alternative 3

Pond Deepening

The existing Winchester Recycled Water Storage Ponds were constructed by excavating into the native soil and constructing a berm around the perimeter. The storage facility has a water surface area of 95 acres, and it is proposed to deepen the ponds by six feet. This would add approximately 185 million gallons of storage at the site. It is anticipated that under the "worst-case" scenario, approximately 900,000 cubic yards of material would be excavated. It is assumed that all 900,000 cubic yards would have to be exported from the site. It is anticipated that this material would be brokered by a materials supplier that would handle trucking and placement of the material for beneficial use at a remote location. That project would be the subject of a separate CEQA document prepared by the developers that would utilize the materials.

Evaporation Mitigation

The Winchester Recycled Water Storage Ponds experience approximately 390 acre feet per year of loss due to water evaporation. Additionally, open reservoir storage ponds are highly susceptible to negative water quality conditions. This results in not only the loss of a valuable resource but also the costly use of chemicals and additional filtration to manage water quality prior to delivery to customers. The Winchester Recycled Water Storage Ponds Optimization Project will evaluate alternatives for managing evaporation and water quality including the use of floating membrane covers, floating solar covers, and

shade balls. Covering the ponds will reduce evaporation and benefit water quality by reducing debris infiltration as well as minimize sunlight and algae growth.

Construction Schedule

It is anticipated that construction would commence on August 1, 2014 and be completed by January 31, 2016.

Preliminary Cost Estimate

The preliminary cost estimate shown in Table 1-3 was provided by Cozad & Fox, Inc., and EMWD staff.

Table 1-3
Preliminary Cost Estimate

Item	Amount
Construction of Phase I North Trumble Recycled Water Storage Ponds	$8,100,000
Improvements at Case Road and Watson Road Ponds	$500,000
Improvements at Winchester Recycled Water Storage Ponds	$8,243,700
Total Recycled Ponds Expansion and Optimization Project	$16,843,700

Potential Funding Sources

There are at least two potential funding sources for this Project. They are: Clean Water State Revolving Fund (CWSRF) administered by the State Water Resources Control Board and The Metropolitan Water District of Southern California's Local Resources Program. These programs are briefly summarized in the following paragraphs.

Clean Water State Revolving Fund (CWSRF)

The State Water Resources Control Board's Division of Financial Assistance is responsible for administering the Clean Water State Revolving Fund (CWSRF). The CWSRF is a financial assistance program. The purpose of the CWSRF is to implement the federal Clean Water Act (CWA) and various State water quality laws by providing financial assistance for construction or implementation of programs that address water quality problems and to prevent pollution of waters of the State.

The CWSRF Program provides low-interest loans and other financing mechanisms for construction of publicly-owned wastewater treatment facilities, local sewers, sewer interceptors, water recycling facilities, storm water treatment facilities, as well as, expanded use projects such as implementation of non-point source projects or programs, and development and implementation of estuary Comprehensive Conservation and Management Plans.

As required by law (California Water Code Section 13480), the CWSRF combined funding interest and loan service rate is set at a rate that does not exceed 50 percent of the interest rate paid by the State on the most recent sale of State General Obligation bonds.

Local Resources Program

The Local Resources Program administered by The Metropolitan Water District of Southern California provides funding for the development of water recycling and groundwater recovery supplies that replace an existing demand or prevent a new demand on Metropolitan's imported water supplies either through:

- Direct replacement of potable water, or
- Increased regional groundwater production.

Metropolitan seeks development of 174,000 afa of yield to meet a regional goal of 779,000 afa by year 2025.

2 CEQA Compliance

Introduction

Eastern Municipal Water District (EMWD) is in the process of implementing its Recycled Water Ponds Expansion and Optimization Project (Project). As part of its Recycled Water Pond Expansion and Optimization Project, EMWD is planning on the construction, operation and maintenance of additional recycled water storage facilities at its North Trumble Recycled Water Storage Ponds Site. In addition, EMWD is planning on optimization projects at two of its existing facilities: 1) Case Road and Watson Road Recycled Water Storage Facility and 2) Winchester Recycled Water Storage Facility. To fulfill its responsibilities as the Lead Agency under the California Environmental Quality Act (CEQA), EMWD circulated a Draft Environmental Impact Report (DEIR) to all responsible and trustee agencies as well as interested individuals on December 14, 2012.

Subsequently, EMWD prepared the Final EIR for the Project, which consisted of the DEIR plus a Consultation Summary document including a list of persons, organizations, and public agencies commenting on the DEIR; EMWD's responses to significant environmental points made in the review and consultation process; and the actual comment letters received.

Then on March 6, 2013 EMWD's Board of Directors adopted a Minute Order Certifying the Final EIR and adopting the Mitigation Monitoring and Reporting Program as well as the authorization to file a Notice of Determination for the Recycled Water Ponds Expansion and Optimization Project (State Clearinghouse No. 2010081044).

EMWD has applied for financial assistance under the Clean Water State Revolving Fund Program (CWSRF) administered by the State Water Resources Control Board (State Water Board), Division of Financial Assistance (Division) for this Project. The CWSRF is a financial assistance program. The purpose of the CWSRF is to implement the federal Clean Water Act (CWA) and various State water quality laws by providing financial assistance for construction or implementation of programs that address water quality problems and to prevent pollution of waters of the State.

The CWSRF Program provides low-interest loans and other financing mechanisms for construction of publicly-owned wastewater treatment facilities, local sewers, sewer interceptors, water recycling facilities, storm water treatment facilities, as well as, expanded use projects such as implementation of non-point source projects or programs, and development and implementation of estuary Comprehensive Conservation and Management Plans.

The CWSRF Program is partially funded by the U.S. Environmental Protection Agency (EPA) and is, therefore, subject to federal environmental regulations. To comply with applicable federal statutes and authorities, EPA established specific "CEQA Plus" requirements in the Operating Agreement with the

State Water Board for administering the SRF Program. The CEQA Plus requirements are briefly described in the following paragraphs.

Federal Endangered Species Act

To ensure compliance with the Federal Endangered Species Act, the Division has been designated as the non-federal representative under the Federal Endangered Species Act for all wastewater and water reclamation projects in California that involve CWSRF funding.

To comply with Section 7 of the Federal Endangered Species Act, the Division's Environmental Services (ES) staff will review CWSRF projects during the facilities planning process to determine if a project may affect any federally listed species. In this case, EMWD needs to provide the ES staff with any species lists, biological assessments and other documents that disclose information on the project's effect on sensitive species. The ES staff will confer informally with the U.S. Fish and Wildlife Service (USFWS).

If there are federally listed species that may be affected by the project, either directly or indirectly, the ES staff will evaluate the extent of any impacts as part of its environmental review process and submit its findings to the USFWS. If the ES staff, in consultation with the USFWS, determines that the project will adversely affect any federally listed species, it will notify the EPA of the need to request formal consultation. The EPA will participate as lead agency in the formal consultation process. The USFWS may have up to 90 days to prepare a biological opinion in response to a formal request by EPA. The process can take up to 135 days and in some cases longer.

Magnuuson-Stevens Fishery Conservation and Management Act

The applicant shall identify whether or not the project involves any direct effects from construction activities, or indirect effects such as growth inducement that may adversely affect essential fish habitat.

National Historic Preservation Act

Applicants for CWSRF funds are required to demonstrate to the satisfaction of the State Historic Preservation Officer (SHPO) that the project complies with Section 106 of the National Historic Preservation Act.

Development of an *Area of Potential Effects* (APE) map is a critical first step that requires SHPO/Division Cultural Resources Officer (CRO) consultation. The project's APE includes all construction areas, borrow pits, haul roads, staging areas, etc., as well as the "built environment" in close proximity to the construction area, which may be subject to indirect effects. Property that may be acquired for the proposed project undertaking needs to be included in the APE. The APE is typically depicted on topographic maps and large-scale project plans, although aerial photographs are sometimes an effective "base map" alternative.

The Division's CRO will consult with the SHPO to determine which of the following items are needed to ensure compliance with Section 106. Items 1 and 2 are required for all CWSRF projects.

1. Background research for cultural resources beginning with a record search at the Eastern Information Center of the California Historical Resources File System.

2. Demonstration of Native American consultation is required under Section 106. This includes a letter from the applicant or its consultant to the Native American Heritage Commission (NAHC) requesting a review of its Sacred Lands Inventory files.

   The applicant should also make direct contact (e.g., letter followed by telephone call) with Native American representatives in the community that may have interest in the project.

3. The applicant may need to submit documentation of a cultural resources field survey conducted by a qualified archeologist throughout the APE.

4. The dates of construction of all elements of the built environment in and adjacent to the APE should be determined during pre-field work.

5. A *Determination of Eligibility* may be necessary for any cultural resources that cannot be avoided during project construction.

Federal General Conformity Rule for the Federal Clean Air Act

For CWSRF-funded projects, a Clean Air Act (CAA) general conformity analysis applies only to projects in a nonattainment area or an attainment area subject to a maintenance plan and is required for each criteria pollutant for which an area has been designated nonattainment or maintenance. If a project's emissions are below the "de minimus" level and are less than 10% of the areas emission inventory specified for each criteria pollutant in a nonattainment or maintenance area, further general conformity analysis is not required. A conformity determination must be made if emissions from project facilities are above "de minimus" thresholds established for the area. A conformity determination can be made if facilities are sized to meet only the needs of current population projections that are used in the approved State Implementation Plan (SIP) for air quality. Applicants must quantitatively indicate how the proposed capacity increase was calculated using population projections.

Coastal Zone Management Act

The applicant shall identify whether or not any portion of the project site is located within the coastal zone.

Coastal Barriers Resources Act

The applicant shall identify whether or not the project will impact or be located within or near the Coastal Barrier Resources System or its adjacent wetlands, marshes, estuaries, inlets, and near-shore waters. Note: There is currently no Coastal Barrier Resources System in California.

Farmland Protection Policy Act

The applicant shall identify whether or not the project would impact any important farmland or land under Williamson Act contract.

Floodplain Management Act

The applicant shall identify whether or not the project is in a Flood Management Zone. A copy of the Federal Emergency Management Agency flood zone map is also required.

Migratory Bird Treaty Act

The applicant shall identify whether or not the project will affect protected migratory birds that are known, or have a potential, to occur onsite, in the surrounding area, or in the service area.

Protection of Wetlands

The applicant shall determine whether any portion of the project boundaries contain areas that should be evaluated for wetland delineation or require a permit from the United States Army Corps of Engineers.

Wild and Scenic Rivers Act

The applicant shall identify whether any portion of the project is located within a wild and scenic river.

Safe Drinking Water Act, Sole Source Aquifer Protection

The applicant shall identify whether the project is located in an area designated by the United States Environmental Protection Agency, Region 9, as a Sole Source Aquifer.

Environmental Justice

The applicant shall identify whether or not the project involves an activity that is likely to be of particular interest to or have particular impact upon minority, low-income, or indigenous populations, or tribes.

3 Federal Endangered Species Act

Environmental Setting

The results of special-status species and habitat surveys conducted at the sites of the proposed Recycled Water Ponds Expansion and Optimization Project sites (i.e., North Trumble Recycled Water Storage Ponds, Case and Watson Road Recycled Water Storage Ponds and Winchester Recycled Water Storage Ponds) are described below. Both a literature review and field reconnaissance survey were performed. Descriptive data for undeveloped land parcels traversed at the Project sites were obtained from the online County of Riverside, Transportation and Land Management Agency's Land Information Geographic Information System (RCTLMA GIS; http://www3.tlma.co.riverside.ca.us/pa/rclis/). Soils data for the Project sites were obtained from the online U.S. Department of Agriculture, Natural Resources Conservation Service, National Cooperative Soil Survey, Web Soil Survey (http://websoilsurvey.nrcs.usda.gov/app/). Species-specific habitat requirements were obtained from online sources, including the U.S. Fish and Wildlife Service's (USFWS) Information, Planning and Conservation System (IPaC), the California Department of Fish and Game's (CDFG) California Natural Diversity Database (CNDDB; http://www.dfg.ca.gov/biogeodata/cnddb/), the County of Riverside's, Transportation and Land Management Agency's Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP; http://www.rctlma.org/mshcp/volume1/index.html), and the CalFlora database (http://www.calflora.org/). Data sources for special-status flora and fauna in the Project areas included the CNDDB; the USFWS's Riverside County list of threatened and endangered species (Appendix A), the CDFG's several lists of special plants and animals (http://www.dfg.ca.gov/wildlife/nongame/list.html), the CalFlora database, and the survey requirements for specific land parcels identified in the MSHCP. The MSHCP identifies special survey requirements for the western burrowing owl, criteria area species and narrow endemic species. Specifically, the North Trumble Recycled Water Storage Ponds Project site and the Case and Watson Road Recycled Water Storage Ponds Optimization Project site are located in the Mead Valley Area Plan. The North Trumble Recycled Water Storage Ponds Project site is also is within cell 3279. The Winchester Recycled Water Storage Ponds Optimization Project site is within the Harvest Valley/Winchester Area Plan.

The MSHCP has habitat assessment survey requirements for certain plant, bird, mammal, and amphibian species. These are listed below for the Recycled Water Ponds Expansion and Optimization Project sites.

Project Site	Amphibia Species	Burrowing Owl	Criteria Area Species	Mammalian Species	Narrow Endemic Plant Species	Special Linkage Area
North Trumble	No	Yes	Yes	Yes	Yes	No
Case & Watson	No	Yes	No	No	Yes	No
Winchester	No	Yes	No	No	Yes	No

At the North Trumble Recycled Water Storage Ponds site, the criteria species include: San Jacinto Valley crownscale, Parish's brittlescale, Davidson's saltscale, thread-leaved brodiaea, smooth tarplant, round-leaved filaree, Coultier's goldfields, little mousetail, and mud nama. The mammalian species include the Los Angeles pocket mouse. At all sites, the narrow endemic plant species include the Munz's onion, San Diego ambrosia, many-stemmed dudleya, spreading navarretia, California Orcutt grass, and Wright's trichocoronis.

The foregoing list of MSHCP species and the special-status flora and fauna identified from the sources listed above are presented in Tables 3-1 and 3-2 below, followed by a narrative for each species and the results of the field surveys conducted on the Project sites.

Table 3-1
Special-Status Fauna with the Potential to Occur at the Project Sites

Special-Status Fauna	Scientific Name	Listing Status
Crustaceans: Order Anostraca (Fairy Shrimp)		
Riverside fairy shrimp	*Streptocephalus woottoni*	FE Critical Habitat: Final designation
Vernal pool fairy shrimp	*Branchinecta lynchi*	FT Critical Habitat: Final designation
Insects: Order Lepidoptera (Butterflies and Moths Family)		
Quino checkerspot butterfly	*Euphydryas editha quino*	FE Critical Habitat: Final designation
Birds: Family Strigidae (Owl Family)		
Western burrowing owl	*Athene cunicularia hypugaea*	DFG; SSC MSHCP: Burrowing Owl Survey
Birds: Family Sylviidae (Gnatcatcher Family)		
Coastal California gnatcatcher	*Polioptila californica californica*	FT DFG: SSC Critical Habitat: Final designation
Birds: Family Tyrannidae (Tyrant Flycatcher Family)		
Southwestern willow flycatcher	*Empidonax traillii extimus*	FE SE Critical Habitat: Final designation
Birds: Family Vireonidae (Vireo Family)		
Least Bell's vireo	*Vireo bellii pusillus*	FE SE Critical Habitat: Final designation
Mammals: Family Heteromyidae (Kangaroo Rats, Pocket Mice, and Kangaroo Mice Family)		
Los Angeles pocket mouse	*Perognathus longimembris brevinasus*	DFG: SSC MSHCP: Mammal Species Assessment
San Bernardino kangaroo rat	*Dipodomys merriami parvus*	FE DFG: SSC Critical Habitat: Final Designation
Stephens' kangaroo rat	*Dipodomys stephensi*	FE ST Critical Habitat: Not designated

FE = Federally Endangered; FT = Federally Threatened.
SE = State Endangered; ST = State Threatened.
DFG: SSC = California Department of Fish and Game Species of Special Concern.
MSHCP = Western Riverside County Multiple Species Habitat Conservation Plan.
Critical Habitat = Status of federally designated critical habitat.

Table 3-2
Special-Status Flora with the Potential to Occur at the Project Sites

Special-Status Flora	Scientific Name	Listing Status
Alliaceae (Onion Family)		
Munz's onion	*Allium fimbriatum* var. *munzii*	FE ST CNPS 1B.1 MSHCP: Narrow Endemic Species Critical Habitat: Final designated
Asteraceae (Sunflower Family)		
Coulter's goldfields	*Lasthenia glabrata* ssp. *coulteri*	CNPS 1B.1 MSHCP: Criteria Area Species
San Diego ambrosia	*Ambrosia pumula*	FE CNPS 1B.1 MSHCP: Narrow Endemic Species Critical Habitat: Final designated
Smooth tarplant	*Centromadia pungens* var. *laevis*	CNPS 1B.1 MSHCP: Criteria Area Species
Wright's trichocoronis	*Trichocoronis wrightii* var. *wrightii*	CNPS 2.1 MSHCP: Narrow Endemic Species
Boraginaceae (Borage Family)		
Mud nama	*Nama stenocarpum*	CNPS 2.2 MSHCP: Criteria Area Species
Chenopodiaceae (Goosefoot Family)		
Davidson's saltscale	*Atriplex serenana* var. *davidsonii*	CNPS 1B.2 MSHCP: Criteria Area Species
Parish's brittlescale	*Atriplex parishii*	CNPS 1B.1 MSHCP: Criteria Area Species
San Jacinto Valley crownscale	*Atriplex coronate* var. *notatior*	FE CNPS 1B.1 MSHCP: Criteria Area Species Critical Habitat: Final designated
Crassulaceae (Orpine Family)		
Many-stemmed dudleya	*Dudleya multicaulis*	CNPS 1B.2 MSHCP: Narrow Endemic Species
Geraniaceae (Cranesbill Family)		
Round-leaved filaree	*Erodium macrophyllum*	CNPS 1B.1 MSHCP: Criteria Area Species
Poaceae (Grass Family)		
California Orcutt grass	*Orcuttia californica*	FE SE CNPS 1B.1 MSHCP: Narrow Endemic Species Critical Habitat: Not designated
Polemoniaceae (Phlox Family)		
Spreading navarretia	*Navarretia fossalis*	FT CNPS 1B.1 MSHCP: Narrow Endemic Species Critical Habitat: Final designated
Ranunculaceae (Buttercup Family)		
Little mousetail	*Myosurus minimus* spp. *apus*	CNPS 3.1 MSHCP: Criteria Area Species
Themidaceae (Brodiaea Family)		
Thread-leaved brodiaea	*Brodiaea filifolia*	FT SE

Special-Status Flora	Scientific Name	Listing Status
		CNPS 1B.1 MSHCP: Criteria Area Species Critical Habitat: Final designated

Scientific names based on **The Jepson Manual Vascular Plants of California, Second Edition,** Bruce G. Baldwin (Editor), Douglas H. Goldman (Editor), David J Keil (Editor), Robert Patterson (Editor), Thomas J. Rosatti (Editor). U.C. Press, Berkeley, CA. January 2012.

Abbreviations:

FE = Federally Endangered; FT = Federally Threatened.

SE = State Endangered; ST = State Threatened.

CNPS 1B.1 = California Native Plant Society rare or endangered in California and elsewhere. Seriously endangered in California; CNPS 1B.2 = rare or endangered in California and elsewhere. Fairly endangered in California; CNPS 2.1 = rare, threatened, or endangered in California, but more common elsewhere. Seriously endangered in California; CNPS 2.2 = rare, threatened, or endangered in California, but more common elsewhere. Fairly endangered in California; CNPS 3.1 = plants about which we need more information. Seriously endangered in California.

MSHCP = Western Riverside County Multiple Species Habitat Conservation Plan.

Critical Habitat = Status of federally designated critical habitat.

A brief description of these sensitive species and the potential for them to occur on the Project sites follows.

Riverside Fairy Shrimp

The Riverside fairy shrimp *(Streptocephalus woottoni)* is federally endangered but not listed under the California Endangered Species Act (CESWA). This species is narrowly distributed in the MSHCP Area. It is know from five localities in deep vernal pools. In the Plan Area, vernal pools supporting Riverside fairy shrimp have been identified on Murrieta stony clay loams, Los Posas series, Wyman clay loams, and Willows soils. They are located on the Santa Rosa Plateau, Skunk Hollow, Murrieta, and Lake Elsinore Back Basin.

No suitable habitat exists at the Project sites and no shrimp were observed.

Vernal Pool Fairy Shrimp

Vernal pool fairy shrimp *(Branchinecta lynchi)* is a federally threatened species with no status under the CESA. The vernal pool fairy shrimp is restricted to vernal pools. They prefer cool-water pools that have low to moderate dissolved solids. The vernal pool fairy shrimp are known from four locations in Western Riverside County: Skunk Hollow, the Santa Rosa Plateau, Salt Creek, and the vicinity of the Pechanga Indian Reservation.

No suitable habitat exists at the Project sites and no shrimp were observed.

Quino Checkerspot Butterfly

The Quino checkerspot [butterfly] *(Euphydryas editha quino)*, a federally endangered species, but without state CESA status, is narrowly distributed at relatively few locations within the MSHCP Plan Area. The core populations occur in the southwestern portion of the Riverside Basin in the south and

southeastern portions of the Plan Area from the vicinity of Diamond Valley Lake trending to the south and east into the Anza Valley.

No suitable habitat exists at the Project sites and no butterflies were observed.

Burrowing Owl

The western burrowing owl *(Athene cunicularia hypugaea)* is a CDFG Species of Special Concern. Because the owls are protected under the federal Migratory Bird Treaty Act, killing or possessing burrowing owls or destruction of their nests with eggs or young is prohibited. The MSHCP requires that the burrowing owl be surveyed for in areas supporting suitable habitat. The burrowing owl is narrowly distributed at relatively few locations within the MSCHP area in suitable habitat. Although the preferred habitat, grassland and some forms of agricultural land, is well distributed, the recent locations of the burrowing owl are clumped in only a few locations. Because this species requires specific soil and micro-habitat conditions, occurs in few locations within a broad habitat category, requires a relatively large home range to support its life history requirements, occurs in relatively low numbers, and is semi-colonial, the burrowing owl will require site-specific considerations and management conditions.

The burrowing owl occurs in shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), prairies, coastal dunes, desert floors, and some artificial, open areas as a year-long resident. They may also use golf courses, cemeteries, road allowances within cities, airports, vacant lots in residential areas and university campuses, fairgrounds, abandoned buildings and irrigation ditches. They may also occur in forb and open shrub stages of pinyon-juniper and ponderosa pine habitats. They require large open expanses of sparsely vegetated areas on gentle rolling or level terrain with an abundance of active small mammal burrows. As a critical habitat feature need, they require the use of rodent or other burrows for roosting and nesting cover. They may also dig their own burrows in soft, friable soil (as found in Florida) and may also use pipes, culverts, and nest boxes where burrows are scarce. The mammal burrows are modified and enlarged. One burrow is typically selected for use as the nest, however, satellite burrows are usually found within the immediate vicinity of the nest burrow within the defended territory of the owl.

Within Western Riverside County, the burrowing owl occurs within the central portion within the open lowlands. It has a sparsely scattered distribution throughout the Area Plan outside of the montane areas. Breeding and burrow locations have not been identified within the University of California, Riverside (UCR) database, although most observations that have been recorded are probably located near a burrow due to the relatively sedentary habits of the species.

The species has been detected east of the Jurupa Mountains, along the Santa Ana River, at Lake Mathews, at Good Hope, Alberhill, Murrieta, March Air Reserve Base, the Lake Perris/Mystic Lake area, the Badlands, within the vicinity of Beaumont and Banning, San Jacinto, Valle Vista, between San Jacinto River and Lakeview Mountains, west of Hemet, the area around Diamond Valley Lake, east and south of

Lake Skinner area, along Santa Gertrudis Creek and Tucalota Creek, in Long Canyon, and along De Portola Road as documented in the UCR database and from other sources.

The Project sites do not provide suitable foraging or nesting habitat for the burrowing owl. There is essentially no vegetation to provide opportunities for foraging. In addition, no ground squirrel burrows or other suitable burrows were observed in the immediate area of the Project sites. Burrowing owls were not observed on the sites.

Coastal California Gnatcatcher

The coastal California gnatcatcher *(Polioptila californica californica)* is a federally threatened species, but has no state status under the CESA. It is recognized by the CDFG as a Species of Special Concern. This bird is a small blue gray songbird which measures only 4.5 inches (11 centimeters) in length and weighs 0.2 ounces (6 grams). It has dark gray feathers on its back and grayish-white feathers on its underside. The wings have a brownish wash to them. Its long tail is mostly black with white outer tail feathers. They have a thin, small bill. The males have a black cap during the summer which is absent during the winter. Both males and females have a white ring around their eyes.

The primary habitat for the coastal California gnatcatcher includes coastal sage scrub, desert scrubs, and Riversidian alluvial fan scrub within the Riverside lowlands and San Jacinto foothills bioregions.

No suitable habitat exists at the Project sites and no birds were observed.

Southwestern Willow Flycatcher

The southwestern willow flycatcher *(Empidonax traillii extimus)* is both state and federally endangered. It is restricted to riparian woodlands along streams and rivers with mature, dense stands of willows *(Salix* spp.*),* cottonwoods *(Populus* spp.*)* or smaller spring fed or boggy areas with willows or alders *(Alnus* spp.*)*. Riparian habitat provides both breeding and foraging habitat for the species.

No suitable habitat exists at the Project sites and no birds were observed.

Least Bell's Vireo

Least Bell's vireos *(Vireo bellii pusillus)* is listed as both state and federally endangered. These small birds are only 4.5 to 5.9 inches (11.5 to 12.5 centimeters) in length. They have short rounded wings and short, straight bills. There is a faint white eye ring. Feathers are mostly gray above and pale below. This is a common protective marking in birds. Seen from below, the bird blends into the clouds and seen from above it blends into the landcover.

The least Bell's vireo occupies a more restricted nesting habitat than the other subspecies of Bell's vireo. Least Bell's vireos primarily occupy riverine riparian habitats that typically feature dense cover within 3 to 7 feet (1 to 2 meters) of the ground and a dense stratified canopy. It inhabits low, dense riparian

habitat along water or along dry parts of intermittent streams. Typically it is associated with southern willow scrub, cottonwood forest, mule fat, wild blackberry or mesquite in desert locations.

No suitable habitat exists at the Project sites and no birds were observed.

Los Angeles Pocket Mouse

The Los Angeles pocket mouse *(Perognathus longimembris brevinasus)* has no federal status but is a CDFG Species of Special Concern. It is also on the *Additional Survey Needs and Procedures* list in the MSHCP.

The Los Angeles pocket mouse is widely distributed in the eastern two-thirds of the MSHCP area, but recent known localities are sparsely scattered throughout this area. This species appears to be limited to sparsely vegetated habitat areas in patches of fine sandy soils associated with washes or of aeolian (windblown) origin, such as dunes. The current status of populations in the Plan Area is unknown, but some biologists believe that the Los Angeles pocket mouse is in serious decline in the region because it is seldom trapped and much of its suitable habitat has been lost to agriculture and urban development.

No suitable habitat exists at the Project sites and no animals were observed.

San Bernardino Merriman's Kangaroo Rat

The San Bernardino Merriman's kangaroo rat *(Dipodomys merriami parvus)* is not state listed pursuant to the CESA, but is federally listed as endangered. . It is recognized by the CDFG as a Species of Special Concern. It is typically found in Riversidian alluvial fan sage scrub, but may occur at lower densities in Riversidian upland sage scrub, chaparral, and grassland in uplands and tributaries in proximity to Riversidian alluvial fan sage scrub habitats. The key populations of the San Bernardino kangaroo rat are located along the San Jacinto River and Bautista Creek in the San Jacinto, Hemet, and Valley Vista areas.

No suitable habitat exists at the Project sites and no kangaroo rats were observed.

Stephens' Kangaroo Rat

The Stephens' kangaroo rat *(Dipodomys stephensi)* is federally listed as endangered and state listed as threatened. This rodent species occurs in a patchy distribution in western Riverside County, ranging from the Corona/Norco Hills just west of Highway 91 in the west to the Anza Valley in the east and to Temecula in the south and the Badlands in the north. Key populations occur in the Lake Mathews-Estelle Mountain Reserve, Lake Skinner-Domenigoni Valley Reserve, San Jacinto Wildlife Area-Lake Perris Reserve, Motte-Rimrock Reserve, Sycamore Canyon-March Air Reserve Base Reserve, Steele Peak, Kabian Park, Anza/Cahuilla valleys, Potrero/Badlands area, and patches scattered throughout Wilson Creek, Sage, Lewis Valley, Vail Lake, and Aguanga areas.

No suitable habitat exists on the Project sites and no animals were observed.

Munz's Onion

Munz's onion *(Allium munzii)* is a federal endangered species and a state threatened species. It is endemic to southwestern Riverside County. This species is restricted to heavy clay soils which are scattered in a band several miles wide and extending some 40 miles southeast from Corona through Temescal Canyon and along the Elsinore Fault Zone to the southwestern foothills of the San Jacinto Mountains from 985 to 3,280 feet (300 to 1,000 meters) elevation.

Munz's onion is restricted to clay soils. A bulb-bearing perennial, this species often does not flower in very dry years and may be difficult to locate during surveys. Flowering may also be suppressed by heavy infestations of weedy grasses. Like other bulb-bearing perennials, this species is probably susceptible to damage from ground disturbance activities (e.g., discing).

No suitable habitat exists at the Project sites and no plants were observed.

Coultier's Goldfields

Coultier's goldfields *(Lasthenia glabrata* spp. *coulteri)* has no federal or state status but is listed as 1.B.1 by the California Native Plant Society (CNPS), which indicates that it is considered endangered in California and elsewhere. It is usually found on alkaline soils in playas, sinks and grasslands.

No suitable habitat exists at the Project sites and no plants were observed.

San Diego Ambrosia

San Diego ambrosia *(Ambrosia pumila)* is a federally listed endangered species, but it is not listed under the CESA. It is recognized by the CNPS as a 1B.1 species. It occurs in open habitats in coarse substrates near drainages, and in upland areas on clay slopes or on the dry margins of vernal pools. This species occurs in a variety of associations that are dominated by sparse grasslands or marginal wetland habitats such as river terraces, pools, and alkali playas. In Riverside County, San Diego ambrosia is associated with open, gently-sloped grasslands and is generally associated with alkaline soils. Riverside County localities for this plant are found in close proximity to silty, alkaline soils of the Willows series.

Only three populations of San Diego ambrosia have been mapped in Riverside County. One population is known from Skunk Hollow (Murrieta Hot Springs), a second from Nichols Road north of Lake Elsinore. The Skunk Hollow population is relatively small but the Nichols Road population in one of the largest in the United States. A third population has been reported for the City of Riverside based on a 1941 collection. The current status of this latter population is unknown but it is likely extirpated.

No suitable habitat exists at the Project sites and no plants were observed.

Smooth Tarplant

Smooth tarplant *(Centromadia pungens* spp. *laevis)* has no state status or federal status; however, it is on the CNPS's List 1B.1. Smooth tarplants occur in a variety of habitats including alkali scrub, alkali playas, riparian woodland, watercourses, and grasslands with alkaline affinities. The majority of the populations in western Riverside County are associated with alkali vernal plains.

The most important populations are located at Salt Creek, along the San Jacinto River, Temecula Creek, and northwest Hemet. Other locations include Sycamore Canyon Park, south of Lake Elsinore, within the City of San Jacinto, French Valley, Moreno Valley, Lake Skinner, Clinton Keith Road east of Deer Creek Development, and Potrero Creek near Beaumont. Large populations in the Domenigoni Valley have been inundated by Diamond Valley Lake. This species is also known to occur at Lake Matthews and along the Santa Ana River. It is also known to occur in the alkaline swales near Alberhill Creek, Murietta, and Goodhope.

No suitable habitat exists at the Project sites and no plants were observed.

Wright's Trichocoronis

Wright's trichocoronis *(Trichocoronis wrightii* var. *wrightii)* has no federal or state status by it is considered to be fairly endangered in California by the CNPS. In western Riverside County, Wright's trichocoronis is found in the alkali vernal plains and associated with alkali playa, alkali annual grassland, and alkali vernal pool habitats.

This species is known only from four locations along the San Jacinto River from the vicinity of the Ramona Expressway and San Jacinto Wildlife Area and along the northern shore of Mystic Lake. Only two locations on either side of the Ramona Expressway have been seen in recent years. This species may have once occurred at Salt Creek and possibly in the alkali wetlands near Nichols Road in the vicinity of Lake Elsinore.

No suitable habitat exists at the Project sites and no plants were observed.

Mud Nama

Mud nama *(Nama stenocarpum)* has no federal or state status but is on the CNPS's List 2B.2, indicating that it is still considered endangered in California. This tiny annual herb grows on the muddy embankments of ponds and lakes. It is also reported to utilize river embankments.

No suitable habitat exists at the Project sites and no plants were observed.

Davidson's Saltscale

Davidson's saltscale *(Atriplex serenana* var. *davidsonii)* has no federal or state status but is listed as 1B.2 by the CNPS [fairly endangered in California (20-80% of occurrences threatened)]. This plant typically

grows in coastal bluff scrub and in alkaline coastal scrub habitats at elevations between 30 and 660 feet (9 to 201 meters).

No suitable habitat exists at the Project sites and no plants were observed.

Parish's Brittlescale

Parish's brittlescale *(Atriplex parishii)* has no federal or state status but is listed as 1B.1 [seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)] by the California Native Plant Society. It is native to central and southern California where it can occasionally be found between the immediate coastline and the Mojave Desert. This is a plant of saline and alkaline soils, such as those on dry lakebeds and ephemeral vernal pools.

No suitable habitat exists at the Project sites and no plants were observed.

San Jacinto Valley Crownscale

San Jacinto Valley crownscale *(Atriplex coronata* var. *notatior)* is a federal endangered species. It occurs primarily in floodplains (seasonal wetlands) dominated by alkali scrub, alkali playas, vernal pools, and to a lesser extent, alkali grasslands. San Jacinto Valley crownscale is restricted to highly alkaline, silty-clay soils in association with the Traver-Domino-Willows soil association; the majority (approximately 80%) being associated with the Willows soil series.

San Jacinto Valley crownscale is endemic to Western Riverside County and is restricted to the San Jacinto, Perris, Menifee, and Elsinore Valleys. In Western Riverside County, San Jacinto Valley crownscale occurs as 11 loosely-defined populations that are primarily associated with Mystic Lake, the San Jacinto River and Salt Creek tributary drainages. One small, isolated population has recently been observed on Willows soils at Alberhill Creek near Lake Elsinore. The majority of the populations of San Jacinto Valley crownscale are located on privately owned lands. Three populations are on state land (San Jacinto Wildlife Area), one population is partially on county lands (Riverside County Habitat Conservation Agency along the San Jacinto River), and one population is on a private preserve managed by The Metropolitan Water District of Southern California.

The key populations of San Jacinto Valley crownscale are located along the San Jacinto River from the vicinity of Mystic Lake to the vicinity of Perris and in the upper Salt Creek drainage west of Hemet.

No suitable habitat exists at the Project sites and no plants were observed.

Many-stemmed Dudleya

Many-stemmed dudleya *(Dudleya multicaulis)* has no federal or state status; however, it is listed as a 1B.2 species by the CNPS. It is often associated with clay soils in barrens, rocky places, or thinly vegetated openings in chaparral, coastal sage scrub, and southern needlegrass grasslands. The majority of populations are associated with coastal sage scrub or open coastal sage scrub.

Many-stemmed dudleya is endemic to southwestern California from western Los Angeles County south through extreme southwestern San Bernardino, Orange, and western Riverside counties south to extreme northern San Diego County. About ten populations of many-stemmed dudleya have been reported in western Riverside County. These populations are known from the vicinity of Santa Ana Canyon, the Temescal Canyon, Estelle Mountain and Lake Mathews, Alberhill near Lake Elisinore, Oak flats in the San Mateo Wilderness, and at Vail Lake.

No suitable habitat exists at the Project sites and no plants were observed.

Round-Leaved Filaree

Round-leaved filaree *(Erodium macrophyllum)* has no federal or state status but is listed as 1B.1 (rare, threatened or endangered in California and elsewhere) by the CNPS. It occurs in grasslands on friable clay soils although it may have historically been common on other soil types.

No suitable habitat exists at the Project sites and no plants were observed.

California Orcutt Grass

Listed as endangered under both the state and federal endangered species acts, the California Orcutt grass *(Orcuttia californica)* has limited geographic distribution and special habitat requirements. This species is primarily restricted to the southern basaltic claypan vernal pools at the Santa Rosa Plateau and alkaline vernal pools at Skunk Hollow and at Salt Creek west of Hemet.

No suitable habitat exists at the Project sites and no plants were observed.

Spreading Navarretia

Spreading navarretia *(Navarretia fossalis)*, a federally threatened species not listed under the state CESA, but a CNPS 1B.1 species, is a low, spreading or ascending annual herb. Stems are 4 to 6 inches (10 to 15 centimeters) long, mostly bare on the lower portions. Leaves are soft and finely divided into linear segments they become spine tipped when dry. Flowers (April – June) have linear, white to pale lavender petals and are borne in small, flat-topped, leafy clusters. Fruits are two-celled capsules with reddish-brown seeds.

Plants are found in vernal pool, alkali playa, and alkali sink habitats. They are occasionally found in ditches and other man-made depressions that mimic vernal pools. They are found on flat to gently sloping terrain. Soils have a clay component or an impermeable surface or subsurface layer that supports the vernal pool habitat. Spreading navarretia requires areas that are (ephemerally) wet in winter and spring but dry in summer and fall.

There is designated critical habitat to the north and west of the Project site. However, no suitable habitat exists on the Project sites and no plants were observed.

Little Mousetail

Little mousetail *(Myosurus minimus* ssp. *apus)* is not well known but it is considered a criteria area species by the MSHCP when conducting surveys at the North Trumble Recycled Water Storage Ponds Project site . This plant occurs at vernal pools. Typically this cryptic species grows in the deeper portions of vernal pool basins sprouting immediately after the surface water has evaporated.

No suitable habitat exists at the Project sites and no plants were observed.

Thread-Leaved Brodiaea

Thread-leaved brodiaea *(Brodiaea filifolia)* is a federally threatened species and state endangered species. It is also listed as 1B.1 by the CNPS. Vernally moist grasslands and the periphery of vernal pools are the typical locales where this species has been found.

No suitable habitat exists at the Project sites and no plants were observed.

Survey Results For Special-Status Plants, Animals, And Habitats

A pedestrian field survey of the Project sites was conducted on August 24, 2012.

As shown previously on Figure 3-1 the North Trumble Recycled Water Storage Ponds Project site is a commercial agricultural field that had been planted with silage (corn) prior to the August 24, 2012 field inspection. The primary soil on the project site is Pachappa fine sandy loam, 0 to 2 percent slopes (45.8%). Other soils include Willows silty clay, deep, strongly saline-alkaline (21.7%); Domino silt loan, saline-alkali (12.3%); Exeter very fine sandy loam, 0 to 5 percent slopes (7.0%); Exeter very fine sandy loam, deep, 0 to 5 percent slopes (6.2%); Greenfield sandy loam, 0 to 2 percent slopes (5.1%); and Ramona sandy loam, 0 to 2 percent slopes (1.9%).

Because active agricultural practices have disturbed the North Trumble Recycled Water Storage Ponds Project site, no special-status species of flora or fauna, special-status habitats, designated critical habitats, wetlands, or waters of the state or United States occur onsite.

The other two Project sites are existing recycled water storage facilities. The man-made embankments which will be disturbed during construction are maintained in a vegetative free state. Therefore, no special-status species of flora or fauna, special-status habitats, designated critical habitats, wetlands, or waters of the state or United States occur on these sites.

There is designated critical habitat for the spreading navarretia *(Navarretia fossalis)* north of the North Trumble Recycled Water Storage Ponds site and north of the Case and Watson Road Recycled Water Storage Ponds Optimization Project site, as well as designated critical habitat for the coastal California gnatcatcher *(Polioptila californica californica).* However, no designated critical habitats would be impacted by the proposed Project.

Regulatory Setting

U.S. Fish and Wildlife Service

Endangered Species Act

Projects that would result in adverse effects on federally listed threatened or endangered species are required to consult with and mitigate through consultation with the U.S. Fish and Wildlife Service (USFWS). The objective of consultation is to determine whether the project would impact a protected species or designated critical habitat, and to identify mitigation measures that would be required to avoid or reduce impacts to the species. This consultation can be pursuant to either Sections 7 or 10 of the Endangered Species Act (ESA). Section 7 consultation is required when a federal agency is involved in project approval, funding, or permitting. Section 10 consultation is required when no federal agencies are involved with the project.

The federal ESA of 1973[1] provides legal protection for plant and animal species in danger of extinction, and requires definitions of critical habitat and development of recovery plans for specific species. Section 7 of the ESA requires federal agencies to make a finding on the potential to jeopardize the continued existence of any listed species potentially impacted by all federal actions, including the approval of a public or private action. Section 9 of the ESA prohibits the take of any member of an endangered species. Take is defined in the ESA as "... to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." USFWS has further defined the terms harass and harm. Harass is defined as follows:

> "... an intentional or negligent act or omission that creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns that include, but are not limited to, breeding, feeding, or sheltering."

Harm is defined as follows:

> "... significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering."

Section 10(a) of the ESA permits the incidental take of listed species if the take is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.

Section 3 of the ESA defines an endangered species as any species, including subspecies, in danger of extinction throughout all or a significant portion of its range. This section defines threatened species as any species "likely to become endangered within the foreseeable future throughout all or a significant portion of its range". Federally listed or "listed" indicates that a species has been designated as endangered or threatened through publication of a final rule in the *Federal Register*. Designated endangered and threatened species, listed under Section 4 of the ESA, receive the full protection of the

[1] The federal Endangered Species Act of 1973, as amended (16 USC 1531 et seq.), Sections 7, 9, and 10.

ESA. Proposed endangered and threatened species are those for which a proposed regulation, but not a final rule, has been published in the *Federal Register.* Proposed species are granted limited protection, while candidate species and species of special concern are afforded no protection under the ESA.

Migratory Bird Treaty Act—1936

The Migratory Bird Treaty Act (MBTA) regulates or prohibits taking, killing, possession of, or harm to migratory bird species listed in Title 50 Code of Federal Regulations (CFR) Section 10-13. The MBTA is an international treaty for the conservation and management of bird species that migrate through more than one country and is enforced in the United States by the USFWS. Hunting of specific migratory game birds is permitted under the regulations listed in Title 50 CFR 20. The MBTA was amended in 1972 to include protection for migratory birds of prey (raptors). Six families of raptors occurring in North America were included in the amendment:

- Accipitridae (kites, hawks, and eagles);
- Catharidae (New World vultures);
- Falconidae (falcons and caracaras);
- Pandionidae (ospreys);
- Strigidae (typical owls); and
- Tytonidae (barn owls).

All species and subspecies of the families listed above are protected under the amendment.

California Department of Fish and Game

California Endangered Species Act

The California Department of Fish and Game (CDFG) administers a number of laws and programs designed to protect fish and wildlife resources. Principal of these is the California Endangered Species Act of 1984 (CESA;Fish and Game Code Section 2050), which regulates the listing and take of state-endangered and state-threatened species. CESA declares that deserving species will be given protection by the state because they are of ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the state. CESA established that it is state policy to conserve, protect, restore, and enhance endangered species and their habitats.

Species listed under CESA cannot be taken without adequate mitigation and compensation. The definition of take under CESA is the same as described above for the federal ESA. However, based on findings of the California Attorney General's office, take under CESA does not prohibit indirect harm by way of habitat modification. Typically, CDFG implements endangered species protection and take determinations by entering into management agreements (Section 2018 Management Agreements) with project applicants.

CDFG maintains lists for Candidate-Endangered Species and Candidate-Threatened Species. California candidate species are given equal protection to the law as listed species have. CDFG also lists Species of Special Concern based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. Species of special concern do not receive protection under the CESA or any section of the California Fish and Game Code and do not necessarily meet CEQA Guidelines Section 15380 criteria as rare, threatened, endangered, or of other public concern. Like federal species of concern, the determination of significance for California species of special concern must be made on a case-by-case basis. Designation of Species of Special Concern is intended by CDFG to be used as a management tool for consideration in future land use decisions.

Fish and Game Code – Sections 3503, 3503.5 and 3513

California Fish and Game Code Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Fish and Game Code Section 3503.5 protects birds-of-prey (raptors) and their eggs and nests. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the Migratory Bird Treaty Act. These regulations could require that elements of a proposed project (particularly vegetation removal or construction near nest trees) be reduced or eliminated during critical phases of the nesting cycle unless surveys by a qualified biologist demonstrate that nests, eggs, or nesting birds will not be disturbed, subject to approval by CDFG and/or USF&WS.

Fish and Game Code – Sections 3511, 4700, 5050, and 5515

California Fish and Game Code Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians) and 5515 (fish) designate certain species as "fully protected". Fully protected species, or parts thereof, may not be taken or possessed at any time, and no provision of the Code or any other law may be construed to authorize the issuance of permits or licenses to take any fully protected species. No such permits or licenses heretofore issued may have any force or effect for any such purpose, except that the California Fish and Game Commission may authorize the collecting of such species for necessary scientific research. Section 3511 of the Code may authorize the live capture and relocation of fully protected birds pursuant to a permit for the protection of livestock. Legally imported and fully protected species or parts thereof may be possessed under a permit issued by CDFG.

Streambed Alteration Agreements

Under sections 1600-1607 of the California Fish and Game Code, the CDFG regulates activities that would alter the flow, bed, channel, or bank of streams and lakes. The limits of CDFG's jurisdiction are defined in the code as the . . . "bed, channel or bank of any river, stream, or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit..."

This broad definition gives the CDFG great flexibility in deciding what constitutes a river, stream, or lake. The CDFG defines streams under the jurisdictions of sections 1600-1607 as follows:

1. The term "stream" can include intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams [United States Geological Survey (USGS) maps], and water courses with subsurface flows. Canals, aqueducts, irrigation ditches, and other means of water conveyance can also be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife.

2. Biological components of any stream may include aquatic and riparian vegetation, all aquatic animals including fish, amphibians, reptiles, invertebrates, and terrestrial species that derive benefits from the stream systems.

3. As a physical system, a stream not only includes water (at least on an intermittent or ephemeral basis), but also a bed or channel, a bank and/or levee, instream features such as logs or snags, and various floodplains depending on the return frequency of the flood event being considered.

4. The lateral extent of a stream can be measured in several ways depending on a particular situation and the type of fish and wildlife resource at risk. The following criteria are present in order from the most inclusive to the least inclusive:

    a. The floodplain of a stream can be the broadcast measurement of a stream's lateral extent depending on the return frequency of the flood event used. For most flood control purposes, the 100-year flood event is the standard measurement. However, because it may include significant amounts of upland or urban habitat, in many cases the 100-year floodplain may not be appropriate.

    b. The outer edge of riparian vegetation is generally used as the line of demarcation between riparian and upland habitats and is therefore a reasonable and identifiable boundary for the lateral extent of a stream. In most cases, the use of this criterion should result in protecting the fish and wildlife resources at risk.

    c. Most streams have a natural bank which confines flows to the bed or channel except during flooding. In some instances, particularly on smaller streams or dry washes with little or no riparian habitat, the bank should be used to mark the lateral extent of a stream.

    d. A levee or other artificial stream bank could also be used to mark the lateral extent of a stream. However, in many instances, there can be extensive areas of valuable riparian habitat located behind a levee.

In practice, the CDFG usually marks its jurisdictional limit at the top of the stream or bank, or at the outer edge of the riparian vegetation, whichever is wider.

Riverside County

Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) encompasses 1,966 square miles of western Riverside County including approximately 842,500 acres of unincorporated County land west of the crest of the San Jacinto Mountains to the Orange County line, as well as approximately 372,700 acres within the jurisdictional areas of cities. The MSHCP provides for the creation of a conservation area that protects and manages 500,000 acres of habitat for covered species (146 species). The MSHCP provides for habitat conservation, species protection and management, program costs, and development certainty to the County and cities; State and federal wildlife agencies; development, agriculture, and environmental communities; and the public at large. The goal of the MSHCP is to target the highest quality habitats for preservation, while allowing development of less important habitat areas.

Riverside County Ordinance No. 663.10, Stephens' Kangaroo Rat Mitigation Fee Ordinance

The purpose of this ordinance is to finance the preparation, development and implementation of a Habitat Conservation Plan, including the acquisition of habitat reserve sites, and the application for a Section 10(a) permit under the federal ESA. It is the further purpose of this ordinance to provide a method for mitigation of impacts to the Stephens' kangaroo rat caused by the loss of its habitat due to development during the preparation and implementation of a Habitat Conservation Plan and provide for habitat mitigation to be identified in the Habitat Conservation Plan. Mitigation of impacts to the Stephens' kangaroo rat will be accomplished through the review of each proposed development project within the Fee Assessment Area to determine whether on-site mitigation through the reservation or addition of lands included within or immediately adjacent to a potential habitat reserve site or payment of the Mitigation Fee or a combination of both is appropriate and furthers the ultimate Habitat Conservation Plan objectives. A proposed development project may be referred, for review, to federal and state resource agencies based upon criteria which may be established and agreed upon by the county and the agencies.

This ordinance provides for the establishment of this review process and satisfaction of on-site mitigation to protect potential habitat reserve sites or payment of the Mitigation Fee or a combination of both, which upon implementation will satisfy USFWS, CDFG, as well as Riverside County mitigation requirements for the Stephens' kangaroo rat and its habitat which may occur within designated unincorporated areas of the county.

Data used for this section were obtained from various sources including the U.S. Fish and Wildlife Service, California Natural Diversity Data Base and Western Riverside County Multiple Species Habitat Conservation Plan. Full bibliography entries for all reference material are contained at the end of this section.

Environmental Impact Analysis

Threshold Criteria

The following thresholds of significance are based on Appendix G of the 2012 State CEQA Guidelines. For purposes of this DEIR, implementation of the proposed project may have a significant adverse impact if it would result in any of following:

- 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.
- 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.
- 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.
- 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.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.

Environmental Analysis

Potential Impact. *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.*

Based on literature searches, analysis of aerial photographs and a field survey, there are no special-status species that would be impacted by implementation of the Recycled Water Ponds Expansion and Optimization Project.

Significance of Impact:

No impact.

Mitigation Measures:

None required.

Potential Impact. *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.*

Based on literature searches, analysis of aerial photographs and a field survey, there are no riparian habitats or other sensitive natural communities that would be impacted by implementation of the Recycled Water Ponds Expansion and Optimization Project.

Significance of Impact:

No impact.

Mitigation Measures:

None required.

Potential Impact. *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.*

Based on literature searches, analysis of aerial photographs and a field survey, there are no federally protected wetlands that would be impacted by implementation of the Recycled Water Ponds Expansion and Optimization Project.

Significance of Impact:

No impact.

Mitigation Measure:

None required.

Potential Impact. *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.*

The proposed Project would not interfere with any migratory activities or impact migratory corridors because there are none in the Project area. Reviews of General Plans and the MSHCP show no active habitat linkages or corridors, habitat does not support such linkages, and no nursery sites exist within the Project area.

Significance of Impact:

No impact.

Mitigation Measure:

None required.

Potential Impact. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*

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.

Significance of Impact:

No impact.

Mitigation Measure:

None required.

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

As shown above, implementation of the proposed project would not conflict with the provisions of the Western Riverside County Multiple Species Habitat Conservation Plan.

Significance of Impact:

No Impact.

Mitigation Measure:

None required.

References

Association of Environmental Professionals. 2012. *2012 California Environmental Quality Act (CEQA) Statute and Guidelines.*

California Natural Diversity Data Base. 2012. California Department of Fish and Game. Biogeographic Data Branch. Commercial Version – Dated July 2012. U.S. Geological Survey topographic map at 1:24,000 for Perris and Winchester.

Riverside County Board of Supervisors. 2012. Riverside County Land Information System.

Riverside County Board of Supervisors. Western Riverside County Multiple Species Habitat Conservation Plan.

Riverside County Board of Supervisors. Riverside County Ordinance No. 663.10, Stephens' Kangaroo Rat Mitigation Fee Ordinance.

United States Department of the Interior, Fish and Wildlife Service. 2012. *Endangered Species Act Species List, North Trumble Recycled Water Storage Ponds.* September 8.

4 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act, commonly referred to as the Magnuson-Stevens Act, is the primary law governing marine fisheries management in the United States. The law is named after Warren G. Magnuson, former U.S. Senator from Washington and Ted Stevens, former Senator from Alaska.

There is no marine fisheries habitat or anadromous fisheries habitat that would be affected by implementation of the Recycled Water Ponds Expansion and Optimization Project.

5 National Historic Preservation Act

Environmental Setting

Ethnography

The Project area is within the area controlled, at the time of Spanish and Euro-American contact by the Cahuilla. The name is of uncertain origin but probably a corruption of a word from the Cahuilla language. Like many California Indian groups defined primarily by ethnographers on the basic of language, the Cahuilla probably did not have a specific word referring to the whole population now known as Cahuilla. The fact that many modern Cahuilla do not prefer this term for referring to themselves reflects this situation. The language is part of the Cupan group of the Takic subfamily of the Uto-Aztecan family (Bean 1978:375).

Cahuilla territory covered a very large area in the central portion of southern California, but much of its territory was desert that was very lightly used with few permanent villages. This is not to say that the more arid zones were not used. The Cahuilla exploited every useful source of food and other resources to derive a living from its environment.

Villages were located in canyons or on alluvial fans with availability of reliable water being a very important consideration in location. The residents of the village were normally family groups that "owned" the resources around the villages in common. The vast open areas beyond the range of the village's control were available to anyone. When important food sources were ripe, particularly acorns, the villages were almost deserted as the occupants moved into the groves for the duration of the harvest.

The primary contribution of the men to subsistence was hunting. A variety of techniques were used for this appropriate to the terrain and the intended prey. The women were primarily responsible for harvesting and processing vegetable foods. One advantage the Cahuilla had in this area was the wide variation in elevation available in its territory. This led to a considerable variety of useful plants that matured at various times of year. This allowed a more even supply of food as opposed to the "feast or famine" pattern often associated with desert dwellers. This was also aided by Cahuilla technology, which included construction of granaries, various approaches to preservation by drying and sealing foodstuffs in pottery jars.

The Cahuilla were basically a small population spread over a very large territory. The splintering affect of this was counteracted by political organization and elaborate ceremonial interconnections. This allowed the scattered village units to act in concert in an emergency, such as an attack by occasionally warlike neighbors. The patrilineal lineage that occupied a village recognized close interrelationships with up to ten other lineages, forming a clan. The clan would operate together for defense, in major

rituals and in important harvesting activities. One lineage was recognized as the founding lineage of the clan and often controlled the office of ceremonial leader. The ceremonial house structure would be in its village. The village chiefs held an administrative position that combined and controlled religious, economic, and warfare powers. The village chief also supervised specific areas for group hunting and gathering. The produce from these areas was under the chief's control and was used for public occasions. This position was normally hereditary. In turn, each Cahuilla was either a Wildcat or a Coyote, the patrilineal moieties that cross-cut the clan structure and further cemented the Cahuilla together as a socio-political entity (Bean1978:578-581).

Older men were most active in rituals and ceremonial affairs. They created most of the ceremonial paraphernalia used by the tribe. While the chief controlled religious powers, he had an assistant who had important ritual duties and an advisory council of ritual specialists and shamans. These shamans each had their own special area of knowledge about the environment or ritual magic. These positions were hereditary with each man training his own successor from his own lineage who showed the proper innate abilities. Because shamans were held in great awe, they exercised de facto political power as well. In contrast to many Californian tribes, the healers in Cahuilla society were not shamans and were, in fact, normally women who learned healing techniques from their mothers and earned reputations as effective curers.

History

Most of the following is derived from the City of Perris web site and Kyle (1990).

Perris is named in honor of Fred T. Perris, chief engineer of the California Southern Railroad. The California Southern Railroad connected through the City in the 1880s to build a rail connection between Barstow and San Diego. Prior to this, the bulk of Euro-American occupation of the area was in the Pinacate mining district. The California Southern Railroad purchased land from Southern Pacific Railroad in the Pinacate area for a town site on the new railroad. Local citizens offered to erect a depot, dig a well, and donate a number of lots to the railroad in exchange for establishing a station at the new town site.

The Perris station came online in April 1886. By 1887, six passenger trains and two freight trains stopped at Perris daily and rapid growth followed for several years. After storms repeatedly washed out the tracks in the Temecula Gorge, service to San Diego through this route ended.

With rapid access to markets assured by the railroad the new town soon relied on agriculture over mining as the primary economic basis for the community. Because of limited groundwater, dry grain farming was the main crop before water was brought to the valley by the Eastern Municipal Water District in the early 1950's. Alfalfa, the King potato (which would produce two crops a year), and still later, sugar beets became the mainstay of farming the Perris Valley. Perris officially incorporated as a city in 1911.

With the construction of Lake Perris, the terminous of the California Water Project, in the late 1960's and early 70's, Perris saw a population jump due to recreational opportunities and as a retirement area.

Romoland was named by Greek immigrant Romonio Homonicholai. The town itself began in the 1890s, planned by the Santa Fe Railroad. In the early 1900s, large numbers of railroad workers from Mexico arrived to become a near dominant ethnic group. They created shops, schools, recreational facilities and churches that catered to a Spanish speaking community.

The first blood oranges grown in the United States were cultivated in Romoland in the 1920s. In an attempt to build a larger market for the oranges, the Romoland Fruit Co. began in 1936 to market its blood oranges as "citrus tomatoes" on the idea that the word "blood" discouraged buyers. However, "citrus tomatoes" proved unsuccessful, and the Romoland Fruit Co. returned to marketing its oranges as "blood oranges" in 1937. On October 1, 2008, a significant portion of Romoland was annexed by the City of Menifee.

Historically, the majority of the greater planning area was a part of the San Jacinto Nuevo y Potrero Rancho. Raising cattle was the predominant activity. As portions of the large Rancho were sold, land development began and gradually smaller communities began to spring up. The areas known as Hemet, Moreno and Winchester developed in the late 1800's. Water problems plagued the areas from the beginning. In the 1890's, the construction of Lake Hemet Dam stabilized diversions to the Hemet community from the San Jacinto River. Moreno and Winchester, however, gradually converted from agriculture to dry land farming as a result of the water problems.

The area still faces water-related problems. Not only is the quantity of water available to supply the area limited, the quality of the water is continually degrading. Therefore, the area is now dependent upon imported water from the State Water Project and Colorado River as well as supplemental supply projects such as EMWD's regional water reclamation facilities and its Menifee Basin Desalter Project.

Past cultural remnants in the greater project area range from permanent villages to individual sites with the larger sites found near water, food and game in the Menifee, San Jacinto and Perris Valleys. Habitation sites and seed processing stations contained baskets, bowls and mortars found in early years. Most sites were altered and artifacts removed by rapid development. Rock implements and clay pottery shards are occasionally found today.

Record Searches

North Trumble Recycled Water Storage Ponds

A review of records maintained by the Eastern Information Center of the California Historical Resources Information System was conducted by center staff on September 24, 2012. Copies of the communication are provided in Peak & Associates, Inc.'s report in Appendix B.

According to the Eastern Information Center files, the entire project area was surveyed for cultural resources with negative results. The survey was conducted in 1988 by archeologists from the Archaeological Research Unit, University of California, Riverside (Swope 1988).

The Information Center supplied copies of USGS maps from 1901 and 1943 that covered the project area. None of these indicated the presence of historic features near the proposed project. As would be expected from the historic background above, the land use in the region was agricultural, except for the railroad and later highways.

Case Road and Watson Road Recycled Water Storage Ponds

A review of records maintained by the Eastern Information Center (EIC) of the California Historical Resources Information System was conducted by center staff on September 24, 2012. The EIC records search indicated that five cultural resources studies have been conducted within or adjacent to the project area. Three of these studies included the project area. One cultural resource property involved a portion of the project area. That property is the historic San Jacinto Valley Railway (now the Burlington Northern Santa Fe which parallels Case Road in the northeast corner of the PVRWRF site and would not be affected by the Case and Watson Road Recycled Water Storage Ponds Optimization Project.

The site of the Case and Watson Road Recycled Water Storage Ponds is located approximately 1,400 feet above sea level about ½ mile west of the San Jacinto River. Prehistoric habitation can be expected to be low at this distance from the water sources on this high desert floor. The Native American Heritage Commission has indicated that there are no known Native American cultural resources in the Project area. *(USACE, February 2006 in K.S. Dunbar & Associates, Inc., 2009)*

Winchester Recycled Water Storage Ponds

A review of records maintained by the Eastern Information Center (EIC) of the California Historical Resources Information System was conducted by center staff on September 24, 2012. The EIC records search indicated that 15 cultural resources studies have been conducted within or adjacent to the project area. Two of these studies included the project area. One cultural resource property involved a portion of the project area. That property is the historic San Jacinto Valley Railway (now the Burlington Northern Santa Fe which parallels Matthews Road in the northeast corner of the Winchester Recycled Water Storage Ponds site and would not be affected by the Winchester Recycled Water Storage Ponds Optimization Project.

Native American Heritage Commission

The Native American Heritage Commission was contacted by K.S. Dunbar & Associates, Inc., to request a review of its Sacred Lands File, and to provide the names of individuals and/or organizations in the area that may have knowledge concerning cultural resources in the Project vicinity. Its reply indicates that no resources contained in the Sacred Lands File exist within the Project area (Appendix B).

Native American Consultation

On September 10, 2012, K.S. Dunbar & Associates, Inc., sent letters with accompanying maps to the following Native American contacts:

Shasta Gaugher
Tribal Historic Preservation Office
PMB 50 35008 Pala Temecula Road
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The only response received to the September 10, 2012 request for information was the Pala Band of Mission Indians who indicated that the project was not within the boundaries of the recognized Pala Indian Reservation and that the project was also beyond the boundaries of the territory that the tribe considers its Traditional Use Area. However, Joseph Ontiveros of the Soboba Band of Luiseño Indians did comment on the NOP. His comments and EMWD's responses to those comments are contained in Chapter 21, *Persons and Organizations Consulted* in this document.

Field Inspection

Because the project area had already been surveyed by qualified teams with negative results, the field inspections were conducted simply to determine if the results seemed reasonable.

North Trumble Recycled Water Storage Ponds

The project area is an active agricultural field, although not planted at the time of the survey, thus, surface visibility was excellent. The land is flat, as irrigated farmland would be, but inspection of surrounding lands indicates that this was always flat land or nearly so. There is no rock anywhere on the property and no natural water. It is a highly unlikely place for prehistoric occupation. No artifacts or other evidence of Native American occupation or use of the project areas was observed.

The project area is only about one quarter mile from the San Jacinto River. This suggests that any village in the vicinity would have been located at the river and exploitation of resources in the project area would have been conducted from there. This would leave little or no archeological evidence in the project area.

Evidence of historic use of the vicinity was restricted to the farm roads and irrigation ditches. There are no structures or foundations.

No cultural resources were identified during the inspection in 1988 or the current evaluation and there is no indication from background research that any are likely. Peak & Associates, Inc., concludes that a finding of no effect regarding historic properties is appropriate.

Case Road and Watson Road Recycled Water Storage Ponds

The project area is an existing recycled water storage facility. All work proposed would be conducted on man-made embankments. The project site has previously been field inspected by a qualified team and no historic or cultural resources were discovered on the site. The historic San Jacinto Valley Railway does

abut the northeast corner of the PVRWRF site but would not be affected by construction of the optimization project.

Winchester Recycled Water Storage Ponds

The project area is an existing recycled water storage facility. All work proposed would be conducted on man-made embankments. The project site has previously been field inspected by a qualified team and no historic or cultural resources were discovered on the site. The historic San Jacinto Valley Railway does abut the northeast corner of the recycled water storage ponds site but would not be affected by construction of the optimization project.

Data used to prepare this section were taken from several sources. Full bibliographic entries are provided at the end of this chapter.

Environmental Impact Analysis

Threshold Criteria

The following thresholds of significance are based on Appendix G of the 2012 State CEQA Guidelines. For purposes of this DEIR, implementation of the proposed project may have a significant adverse impact if it would result in any of following:

- Cause a substantial adverse change in the significance of a historical resource, as defined in §15064.5 of the State CEQA Guidelines.
- Cause a substantial adverse change in the significance of an archeological resource, pursuant to §15064.5 of the State CEQA Guidelines.
- Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature.
- Disturb any human remains, including those interred outside of formal cemeteries.

Environmental Analysis

Potential Impact. *Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the State CEQA Guidelines.*

Based on literature searches, analysis of aerial photographs and field studies, there are no known historical resources in the immediate Project area that would be impacted by implementation of the Recycled Water Ponds Expansion and Optimization Project.

Significance of Impact:

No impact.

Mitigation Measure:

None required.

Potential Impact. *Cause a substantial adverse change in the significance of an archeological resource as defined in § 15064.5.*

Based on literature searches, analysis of aerial photographs and field studies, there are no known archeological resources in the immediate Project area. Although there were no archeological resources as defined in §15064.5 of the State CEQA Guidelines identified within or immediately adjacent to the proposed Project site, there is always a possibility that buried cultural resources that were not previously identified could be unearthed during excavation activities thus leading to a potentially significant impact.

Significance of Impact:

Potentially significant.

Mitigation Measures:

EMWD shall include the following mitigation measure in its construction contract documents for the individual components of the Recycled Water Ponds Expansion and Optimization Project:

- If inadvertent discoveries of cultural resources are encountered at any time during construction, mitigation shall be conducted consistent with Public Resources Code §21083.2 [State CEQA Guidelines §15126.4, subdivision (b)]. Construction personnel shall avoid altering these materials and their context until a qualified archeologist has evaluated the situation and contacted the State Office of Historic Preservation and the closest Indian Tribe to the Project. 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.

Potential Environmental Effects of Measures

All physical improvements or activities that could result in changes to the physical environment required by these mitigation measures would be located within areas evaluated elsewhere in this DEIR. The impacts of implementing such measures, if any, would be similar to those identified for the project in Sections 3 through 18 of this DEIR.

Level of Significance After Mitigation:

Less than significant.

Potential Impact. *Directly or indirectly destroy a unique paleontological resource or site or unique geological feature.*

According to the Riverside County Land Information System, the Project site has a high paleontological sensitivity (High B) which is equivalent to a High A but is based on the occurrence of fossils at a specified depth below the surface. The category High B indicates that fossils are likely to be encountered at or below four feet of depth and may be impacted during excavation by construction activities. Therefore, it is possible that paleontological resources could be unearthed during excavation activities thus leading to a potentially significant impact.

Significance of Impact:

Potentially significant.

Mitigation Measure:

EMWD shall include the following mitigation measure in its construction contract documents:

- 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

Potential Environmental Effects of Measures

All physical improvements or activities that could result in changes to the physical environment required by these mitigation measures would be located within areas evaluated elsewhere in this DEIR. The impacts of implementing such measures, if any, would be similar to those identified for the project in Sections 3 through 18 of the December 2012 DEIR.

Level of Significance After Mitigation:

Less than significant.

Potential Impact. *Disturb any human remains, including those interred outside of formal cemeteries.*

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

Significance of Impact:

Potentially significant.

Mitigation Measure:

EMWD shall include the following mitigation measure in its construction contract documents:

- 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.

Potential Environmental Effects of Measures

All physical improvements or activities that could result in changes to the physical environment required by these mitigation measures would be located within areas evaluated elsewhere in this DEIR. The impacts of implementing such measures, if any, would be similar to those identified for the project in Sections 3 through 18 of the December 2012 DEIR.

Level of Significance After Mitigation:

Less than significant.

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6 Federal Clean Air Act

Environmental Setting

Climate

The climate of Southern California is primarily influenced by topography and the position and the strength of the East Pacific High Pressure Area that influences wind flow, rainfall patterns and ocean currents. The project area's proximity to the Pacific Ocean combined with varying topography and winds greatly influence temperatures within the area. As shown on Figure 6-1 the average maximum temperature is about 99ºF in July and August and the average minimum temperature is about 37ºF in December (www.wwrc.dri.edu 5/16/11).

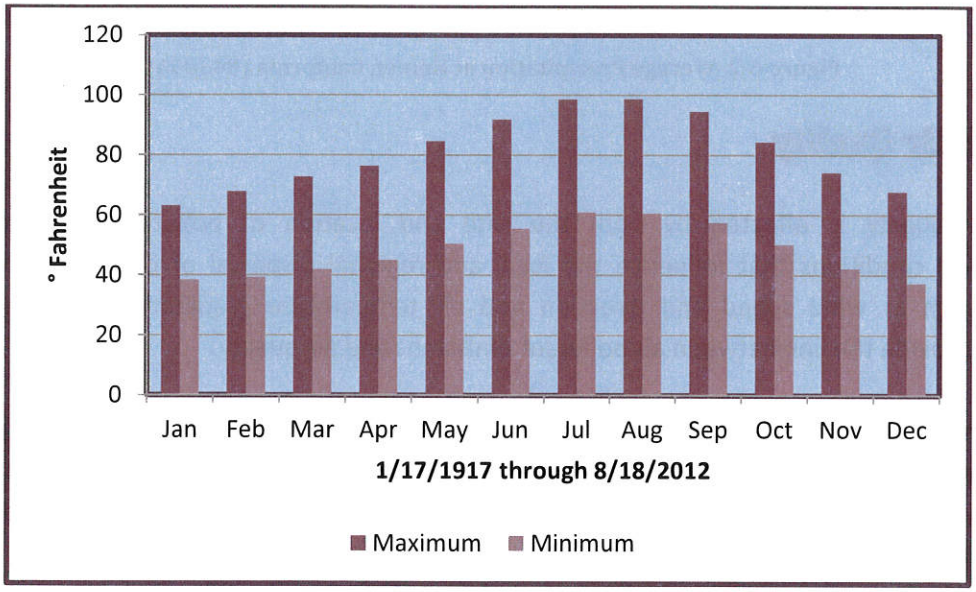

Figure 6-1 Average Temperatures at Hemet, California (043896)

Generally, rainfall is low in the winter due to this high pressure system. As shown on Figure 6-2, about 85 percent of the precipitation falls from November through April with maximums occurring usually in January. The annual precipitation averages about 11.4 inches (www.wwrc.dri.edu 5/16/11).

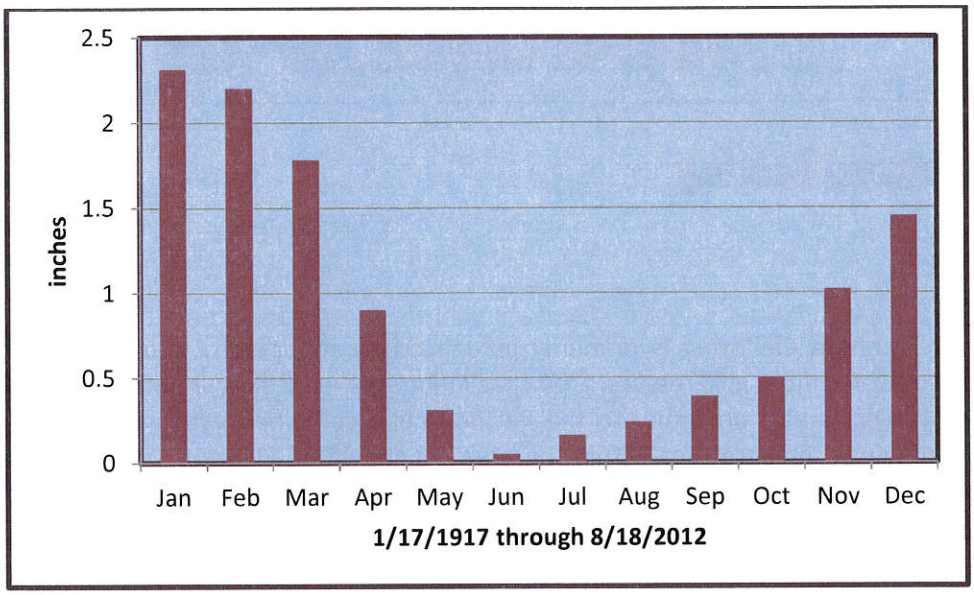

Figure 6-2 Average Precipitation at Hemet, California (043896)

Regional Air Quality

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).

Air Pollutants

Pollutants regulated by the State and federal Clean Air Acts fall within three categories:

- criteria air pollutants
- toxic air contaminants, and
- global warming and ozone depleting gases.

Pollutants in each of these categories are monitored and regulated differently. Criteria air pollutants are measured by sampling concentrations in the air; toxic air contaminants are measured at the source and in the general atmosphere, and global warming and ozone-depleting gases are not monitored but are subject to federal and regional policies that call for their reduction and eventual phaseout *(www.aqmd.gov, 10/18/06).* California's landmark global warming legislation, AB 32, requires that the State's greenhouse gas emissions be reduced to 1990 levels by 2020. Emission trading is being considered for achieving the requirements of AB 32 *(www.aqmd.gov, 4/21/07).*

Criteria Air Pollutants

Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health. Those standards have been set at levels to protect the human health with an adequate margin of safety.

The following paragraphs describe the source and health effects of the criteria pollutants. In addition, Table 6-1 lists the primary emission sources of the criteria pollutants and some of the harmful effects of the pollutants.

Table 6-1
Primary Sources and Effects of Criteria Pollutants

Pollutant	Source	Primary Health Effects
Lead (Pb)	Contaminated soil	Impairment of blood function and nerve construction. Behavioral and hearing problems in children.
Sulfur Dioxide (SO_2)	Combustion of sulfur-containing fossil fuels. Smelting of sulfur-bearing metal ores. Industrial processes.	Plant injury. Reduced visibility. Deterioration of metals, textiles, leather, finishes, coatings, etc. Irritation of eyes. Reduced lung function. Aggravation of respiratory diseases (asthma, emphysema).
Carbon Monoxide (CO)	Incomplete combustion of fuels and other carbon-containing substances, such as motor vehicle exhaust. Natural events, such as decomposition of organic matter.	Plant injury. Reduced visibility. Deterioration of metals, textiles, leather, finishes, coatings, etc. Irritation of eyes. Reduced lung function. Aggravation of respiratory diseases (asthma, emphysema).
Nitrogen Dioxide (NO_2)	Motor vehicle exhaust. High temperature stationary combustion. Atmospheric reactions.	Reduced plant growth. Reduced visibility. Aggravation of respiratory illness. Formation of acid rain.
Ozone (O_3)	Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	Plant leaf injury. Irritation of eyes. Aggravation of respiratory and cardiovascular diseases.

Pollutant	Source	Primary Health Effects
		Impairment of cardiopulmonary function.
Respirable Particulate Matter (PM_{10})	Secondary combustion of solid fuels. Construction activities. Industrial processes. Atmospheric chemical reactions.	Soiling. Reduced visibility. Aggravation of the effects of gaseous pollutants. Increased cough and chest discomfort. Reduced lung function. Aggravation of respiratory and cardio-respiratory diseases.
Fine Particulate Matter ($PM_{2.5}$)	Secondary combustion of solid fuels. Construction activities. Industrial processes. Atmospheric chemical reactions.	Soiling. Reduced visibility. Aggravation of the effects of gaseous pollutants. Increased cough and chest discomfort. Reduced lung function. Aggravation of respiratory and cardio-respiratory diseases.

Source: SCAQMD, 1999

Lead

Lead (Pb) in the atmosphere occurs as particulate matter. The combustion of leaded gasoline was the primary source of lead emissions. Other sources of lead include the manufacturing of batteries, paint, ink, ceramics, and ammunition and secondary lead smelters. With the phase-out of leaded gasoline, secondary lead smelters and battery recycling and manufacturing facilities are becoming lead emission sources of greater concern.

Prolonged exposure to lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance (including IQ performance, psychomotor performance and reaction time) and growth. Lead is classified as a probable human carcinogen with an EPA weight-of-evidence classification of B2.

Sulfur Dioxide

Sulfur dioxide (SO_2) is a colorless gas with a pungent, irritating odor. Sulfur dioxide is created by the combustion of sulfur containing fuels. This substance is known to oxidize to sulfur trioxide, which combines with moisture in the atmosphere to form a sulfuric acid mist. Sulfur dioxide damages and irritates lung tissue and accelerates corrosion of materials.

Carbon Monoxide

The automobile and other types of motor vehicles are the primary source of carbon monoxide (CO). This gas is colorless and odorless which adds to its danger. In high concentrations, carbon monoxide can cause physiological and pathological changes, and ultimately death, by incapacitating the red blood cells and interfering with their ability to carry oxygen to body tissues.

Nitrogen Dioxide

Nitrogen dioxide (NO_2) is a by-product of fuel combustion. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but nitric oxide reacts quickly to form nitrogen dioxide, creating the mixture of nitric oxide and nitrogen dioxide commonly called NO_x. Nitrogen dioxide acts as an acute irritant and, in equal concentrations, is more injurious than nitric oxide. At atmospheric concentrations, however, nitrogen dioxide is only potentially irritating. There is some indication of a relationship between nitrogen dioxide and chronic pulmonary fibrosis. Some increase in bronchitis in children (two to three years old) has been observed at concentrations below 0.3 ppm. Nitrogen dioxide absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. Nitrogen dioxide also contributes to the formation of suspended particulate matter.

Ozone

Ozone (O_3) is one of a number of substances called photochemical oxidants that are formed when reactive organic compounds and nitrogen oxides, both byproducts of the internal combustion engine, react in the presence of ultraviolet sunlight. Ozone may pose its worst health threat to those who already suffer from respiratory diseases. However, ozone also hurts healthy people. In the past, those effects were thought to be limited to more difficult breathing during work and exercise. However, research has shown that children residing in areas of high ozone concentrations experience a loss in lung function.

Suspended Particulate Matter Less Than 10 Microns in Diameter (PM_{10})

Suspended particulate matter (PM_{10}) consists of extremely small suspended particles or droplets 10 microns or smaller in diameter that can lodge in the lungs contributing to respiratory problems. PM_{10} arises from such sources as road dust, diesel soot, combustion products, abrasion of tires and brakes, construction operations, and windstorms. It is also formed in the atmosphere from nitrogen dioxide and sulfur dioxide reactions with ammonia. PM_{10} scatters light and significantly reduces visibility.

Particulates pose a serious health hazard, alone or in combination with other pollutants. More than half of the smallest particles inhaled will be deposited in the lungs and can cause permanent lung damage. Fine particulates can also have a damaging effect on health by interfering with the body's mechanism for clearing the respiratory tract or by acting as a carrier of an absorbed toxic substance.

Fine Particulate Matter ($PM_{2.5}$)

Fine particulate matter ($PM_{2.5}$) is defined as particulate matter with a diameter less than 2.5 microns and is a subset of PM_{10}. It consists mostly of products from the reaction of NO_x and SO_2 with ammonia, secondary organics, and finer dust particles.

Toxic Air Pollutants

Toxic air pollutants (TAPs) are those pollutants that are known or suspected of causing cancer or other serious health effects. Some TAPs are immediately dangerous to human health even in small quantities; some TAPs cause health problems if the exposure extends over a longer period of time. The degree to which a TAP affects a person's health depends on many factors, including the quantity of the pollutant the person is exposed to, the duration and frequency of exposures, the toxicity of the chemical, and the person's state of health and susceptibility.

Scientists estimate that millions of tons of TAPs are released into the air each year. Some air toxics are released from natural sources such as volcanic eruptions and forest fires. However, most originate from manmade sources, including both mobile sources (e.g., cars, trucks and buses) and stationary sources (e.g., factories, refineries, power plants and small businesses). In addition, many routine activities around the home, such as using gas-powered lawn mowers and tools, or using volatile paints and solvents release TAPs into the atmosphere.

The list of TAPs in the Clean Air Act is a long one (275 names) and includes some familiar names such as benzene. Examples of other TAPs include percholoroethylene, methylene chlorine, toluene, dioxin, and metals such as mercury, chromium and lead compounds.

Greenhouse Gases

The following discussion on greenhouse gases is excerpted from SCAQMD's *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold* dated October 2008.

Gases that trap heat in the atmosphere are often called greenhouse gases. The Kyoto Protocol, adopted in December 1997, is an agreement under which industrialized countries will reduce their collective emissions of greenhouse gases by specified percentages, depending upon the country, compared to 1990 levels. The goal is lower overall emissions of six greenhouse gases – carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons, and perfluorocarbons, averaged over the period of 2008-2012.

Similarly, AB 32, defines GHG's as including the following: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (NO_2), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride [Health and Safety Code, §38505(g)]. The most common GHG that results from human activity is carbon dioxide, followed by methane and nitrous oxide.

Some greenhouse gases such as carbon dioxide occur naturally and are emitted to the atmosphere through natural processes and human activities. Other greenhouse gases (e.g., fluorinated gases) are created and emitted solely through human activities. The principal greenhouse gases that enter the atmosphere because of human activities are:

- **Carbon Dioxide (CO_2):** Carbon dioxide enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and also as a result of other chemical reactions (e.g., manufacture of cement). Carbon dioxide is also removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.

- **Methane (CH_4):** Methane is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.

- **Nitrous Oxides (NO_2):** Nitrous oxide is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.

- **Fluorinated Gases:** Hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride are synthetic, powerful greenhouse gases that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances (i.e., CFCs, HCFCs, and halons). Fluorinated gases are typically emitted in smaller quantities, but because they are potent greenhouse gases, they are sometimes referred to as high global warming potential gases (high GWP gases).

  - Hydrofluorocarbons are manmade chemicals that have historically replaced chlorofluorocarbons used in refrigeration and semi-conductor manufacturing.

  - Perfluorocarbons are manmade chemicals that are by-products of aluminum smelting and uranium enrichment.

  - Sulfur hexafluoride is a manmade chemical that is largely used in heavy industry to insulate high voltage equipment and to assist in the manufacturing of cable cooling systems.

GWP is a measure of how much a given mass of greenhouse gas is estimated to contribute to global warming. It is a relative scale that compares the gas in question to the same mass of carbon dioxide (whose GWP by definition is 1). A GWP is calculated over a specific time interval and the value of this must be stated whenever a GWP is quoted or else the value is meaningless. A substance's GWP depends on the time span over which the potential is calculated. A gas which is quickly removed from the atmosphere may initially have a large effect but for longer time periods as it has been removed becomes less important. For the purposes of a CEQA analysis, especially an analysis of operating emissions, the maximum GWP is typically used, regardless of the actual atmospheric lifetime. This approach simplifies the analysis and provides a very conservative analysis, especially for the fluorinated gases. The GWP of

the six Kyoto GHGs is shown in Table 6-2.

Table 6-2
Global Warming Potential of Kyoto GHGs

Gas	GWP (100 years)
Carbon Dioxide (CO_2)	1
Methane (CH_4)	21
Nitrous Oxide (NO_2)	310
HFC-23 (Hydrofluorocarbons)	11,700
HFC-32	650
HFC-125	2,800
HFC-134a	1,300
HFC-143a	3,800
CF_4 (Perfluorocarbons)	6,500
C_2F_6	9,200
SF_6 (Sulfurhexafluoride)	23,900

Source: ARB, 11/16/07

Ambient Air Quality Standards

The current ambient air quality standards are provided in Table 6-3.

Table 6-3
National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Concentration	Federal Primary	Federal Secondary
Ozone (O_3)	1 hour	0.09 ppm (180 µg/m^3)	--	Same as primary standard.
	8 hour	0.070 ppm (137 µg/m^3)	0.075 ppm (147 µg/m^3)	
Respirable Particulate Matter (PM_{10})	24 hour	50 µg/m^3	150 µg/m^3	Same as primary standard.
	Annual Arithmetic Mean	20 µg/m^3	---	
Fine Particulate Matter ($PM_{2.5}$)	24 hour	---	35 µg/m^3	Same as primary standard.
	Annual Arithmetic Mean	12 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	---
	8 hour	9.0 ppm (10 mg/m^3)	9.0 ppm (10 mg/m^3)	
Nitrogen Dioxide (NO_2)	1 hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	---
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as primary standard.
Sulfur Dioxide (SO_2)	1 hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	---
	3 hour	---	---	0.5 ppm (1300 µg/m^3)
	24 hour	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)	---
	Annual Arithmetic Mean	---	0.030 ppm (80 µg/m^3)	---
Lead	30 day Average	1.5 µg/m^3	---	---
	Calendar Quarter	---	1.5 µg/m^3	Same as primary standard.
	Rolling 3-month Average	--	0.15 µg/m^3	

Pollutant	Averaging Time	California Concentration	Federal Primary	Federal Secondary
Visibility Reducing Particles	8 hour	Extinction coefficient of 0.23 kilometer—visibility of 10 miles or more due to particles when relative humidity is less than 70 percent.	No Federal Standards.	
Sulfates	24 hour	25 µg/m^3		
Hydrogen Sulfide	1 hour	0.03 ppm (42 µg/m^3)		
Vinyl Chloride	24 hour	0.01 ppm (26 µg/m^3)		

Source: ARB (6/7/12) www.arb.ca.gov 9/02/12.

Ambient Air Quality Data

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 greater project area is provided in Tables 6-4, 6-5.

Table 6-4
Ozone Trends Summary
Perris

Year	Days > Standard				1-hr Observations			8-hr Averages				
	State		National			State	Nat'l	State		National		Year Coverage
	1-hr	8-hr	1-hr	'08 8-hr	Max	D.V.[1]	D.V.[2]	Max	D.V.[1]	Max	'08 D.V.[2]	
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	0.0115	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	0.144	0.107	99
2007	66	88	4	73	0.138	0.14	0.140	0.117	0.117	0.116	0.100	99
2006	77	98	12	83	0.169	0.14	0.140	0.123	0.117	0.122	0.097	99
2005	0	1	0	1	0.088	0.16	0.136	0.079	0.122	0.078	0.088	5
2004	36	59	2	44	0.128	0.14	0.136	0.104	0.122	0.104	0.106	99
2003	67	82	7	72	0.155	0.15	0.149	0.122	0.130	0.121	0.115	100
2002	59	92	4	73	0.147	0.15	0.149	0.117	0.130	0.117	0.113	100

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 2012 (arb.ca.gov 9/02/2012)

Table 6-5
PM_{10} Trends Summary
Perris

Year	Est. Days > Std.		Annual Average		3-yr Average		High 24-hr Average		Year
	Nat'l	State	*Nat'l*	State	*Nat'l*	State	Nat'l	State	Coverage
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	110.1	*39.1*	**37.1**	*41*	**37**	80.0	**75.0**	99
2004	0.0	*	*41.4*	*	*43*	**43**	83.0	**79.0**	97
2003	**0.0**	*	*43.9*	*	*43*	**43**	142.0	**135.0**	88
2002	0.0	**125.4**	*45.1*	**42.8**	*42*	**43**	100.0	**95.0**	100

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 2012 (arb.ca.gov 9/02/2012)

The ARB has designated the SCAB as non-attainment for the State ozone standard, the State PM_{10} standard, the State $PM_{2.5}$ standard and the State nitrogen dioxide 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.

Emissions Inventory

The ARB provides estimates of annual average emissions for the entire State broken down by counties and air basins. The latest available data for Riverside County within the South Coast Air Basin are summarized in Table 6-6.

Table 6-6
2008 Estimated Annual Average Emissions
Riverside County within South Coast Air Basin
(tons per day)

	TOG	ROG	CO	NO_X	SO_X	PM	PM_{10}	$PM_{2.5}$
Stationary Sources								
Fuel Combustion	2.2	0.3	1.8	3.5	0.7	0.2	0.2	0.2
Waste Disposal	3.4	1.2	0.0	0.1	0.0	0.4	0.2	0.0
Cleaning and Surface Coatings	4.3	3.8	0.0	0.0	0.0	0.2	0.2	0.1
Petroleum Production and Marketing	2.4	2.3	--	--	0.0	--	--	--
Industrial Processes	2.5	2.3	0.0	0.1	0.0	4.5	2.6	1.0
Total Stationary Sources	**14.8**	**10.0**	**1.9**	**3.7**	**0.4**	**5.2**	**3.1**	**1.4**
Areawide Sources								
Solvent Evaporation	14.4	12.6	--	--	--	0.0	0.0	0.0
Miscellaneous Processes	40.7	4.0	108	2.2	0.1	77.8	38.6	7.2
Total Areawide Sources	**55.1**	**16.7**	**10.8**	**2.2**	**0.1**	**77.8**	**38.6**	**7.2**
Mobile Sources								
On-Road Motor Vehicles	25.9	23.4	264.5	57.4	0.3	3.2	3.2	2.3
Other Mobile Sources	14.4	13.3	70.2	22.7	0.1	1.5	1.5	1.3
Total Mobile Sources	**40.3**	**36.7**	**334.6**	**80.1**	**0.3**	**4.8**	**4.7**	**3.7**
Natural (Non-Anthropogenic) Sources								
Natural Sources	27.8	24.1	37.7	1.1	0.3	4.0	3.8	3.2
Total Natural (Non-Anthropogenic) Sources	**27.8**	**24.1**	**37.7**	**1.1**	**0.3**	**4.0**	**3.8**	**3.2**
Total Riverside County in SCAB	**138.0**	**87.4**	**384.9**	**81.2**	**1.1**	**91.8**	**50.3**	**15.4**

Source: ARB 2009 (arb.ca.gov 7/07/10)

Regulatory Setting

Federal

The U.S. Environmental Protection Agency (EPA) is responsible for enforcing the many federal environmental and hazardous waste laws. California is under the jurisdiction of EPA Region IX with offices in San Francisco. The federal 1970 Clean Air Act (CAA) authorized the establishment of national health-based air quality standards and also set deadlines for their attainment. The federal Clean Air Act Amendments of 1990 (1990 CAAA) made major changes in deadlines for attaining National Ambient Air Quality Standards (NAAQS) and in actions required of areas of the nation that exceeded these standards. Under the CAA, state and local agencies in areas that exceed the NAAQS are required to develop state implementation plans (SIP) to show how they will achieve the NAAQS for ozone by specific dates (42 USC 7409, 7411). The EPA's responsibility to control air pollution in individual states is primarily to review submittals of SIPs that are prepared by each state. Failure of California's state and local agencies to develop a SIP by the statutory deadline resulted in a series of lawsuits and appeal that began in 1990.

On April 15, 2004, EPA issued Clean Air Ozone Rules of 2004. This new rule, issued at the same time new designations on attainment and nonattainment were issued, replaces the 1-hour ozone standard with the 8-hour ozone standard and outlines a process for reducing ground level ozone pollution.

State of California

In California, the California Air Resources Board (ARB) is responsible for preparing and enforcing the federally-required SIP in an effort to achieve and maintain NAAQS and State Ambient Air Quality Standards (SAAQS) which were developed as part of the California Clean Air Act (CCAA) adopted in 1988. SAAQS for criteria pollutants equal or surpass NAAQS and include other pollutants for which there are no NAAQS. In addition, ARB is responsible for assigning air basin attainment and nonattainment designations in California. Air basins are designated as being in attainment if the levels of a criteria pollutant meet the SAAQS for the pollutant and are designated as being in nonattainment if the level of a criteria pollutant is higher than the SAAQS.

ARB is the oversight agency responsible for regulating statewide air quality, but implementation and administration of SAAQS is delegated to several regional air pollution control districts (APCD) and air quality management districts (e.g., AQMD). These districts have been created for specific air basins and have principal responsibility for:

- developing plans to meet SAAQS and NAAQS;
- developing control measures for non-vehicular sources of air pollution necessary to achieve and maintain SAAQS and NAAQS;
- implementing permit programs established for the construction, modification, and operation of air pollution sources;
- enforcing air pollution statutes and regulations governing non-vehicular sources; and
- developing employer-based trip reduction programs.

To regulate air pollutant emissions within California, the State has been divided into 15 air basins based upon similar meteorological and geographic conditions and consideration for potential boundary lines whenever practicable. The project area is within the South Coast Air Basin.

South Coast Air Quality Management District

The South Coast Air Quality Management District (SCAQMD) is responsible for controlling emissions primarily from stationary sources of air pollution. These can include anything from large power plants and refineries to the corner gas station. There are about 28,000 such businesses operating under SCAQMD permits. Many consumer products are also considered stationary sources; these include house paint, furniture varnish, and thousands of products containing solvents that evaporate into the air. Also 23% of this area's ozone-forming air pollution comes from stationary sources, both businesses and residences. The other 77% comes from mobile sources—mainly cars, trucks and buses, but also

construction equipment, ships, trains and airplanes. Emission standards for mobile sources are established by state or federal agencies, such as the California Air Resources Board and the U.S. Environmental Protection Agency, rather than by local agencies such as the SCAQMD.

SCAQMD develops and adopts an Air Quality Management Plan (AQMP), which serves as the blueprint to bring this area into compliance with federal and State clean air standards. Rules are adopted to reduce emissions from various sources, including specific types of equipment, industrial processes, paints and solvents, even consumer products. Permits are issued to many businesses and industries to ensure compliance with air quality rules. SCAQMD staff conducts periodic inspections to ensure compliance with these requirements.

The latest Air Quality Management Plan was adopted in 2007. It is a regional and multi-agency effort (SCAQMD, California Air Resources Board, Southern California Association of Governments, and the U.S. Environmental Protection Agency). State and federal planning requirements include developing control strategies, attainment documentation, reasonable further progress, and maintenance plans.

The 2007 AQMP also incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes and new air quality modeling tools. The 2007 AQMP was adopted by SCAQMD on June 1, 2007 and by the California Air Resources Board on September 27, 2007 as part of the SIP.

Subsequently, on November 22, 2010, EPA published its notice of proposed partial approval and partial disapproval of the 2007 AQMP $PM_{2.5}$ Plan primarily because the attainment demonstration relies heavily on emission reductions from several State rules that have not been finalized or submitted to EPA for approval. On March 4, 2011, SCAQMD adopted revisions to the $PM_{2.5}$ and ozone SIP which addressed the critical issues of the proposed disapproval. It updated the implementation status of the AQMP measures to meet the 2015 $PM_{2.5}$ attainment and retained the SCAQMD's proposal for contingency measures and also referenced and relied on CARB's proposed contingency measures. In addition, SIP revisions re-initiated its request that EPA voluntarily accept reduction responsibility for 10 TPD NO_x emissions in 2014 but proposed that SCAQMD and CARB jointly provide a "fair share" backstop emissions reduction proposal, if necessary.

Recently, on December 16, 2011, EPA approved the SIP which will allow the SCAB to achieve the CAA's 1997 8-hour ozone standard of 0.08 parts per million (ppm) by 2024.

Subsequently on July 19, 2012, SCAQMD released its updated blueprint for reaching federally mandated, health-based clean air goals for the SCAB. SCAQMD is now seeking public comment on the document, known as the 2012 Air Quality Management Plan (AQMP). Once adopted by SCAQMD's Governing Board as well as State and federal agencies, the document becomes the legally enforceable plan for meeting the federal 24-hour $PM_{2.5}$ (fine particulate) standard by 2014.

To ensure attainment of the $PM_{2.4}$ standard by a federally mandated deadline of 2014, the AQMP includes three key control measures to reduce directly emitted $PM_{2.5}$, as well as pollutants that form $PM_{2.5}$ in the atmosphere. The control measures are additional nitrogen oxide emission reductions from the Regional CLean Air Incentives Market (RECLAIM) program and enhancements to SCAQMD's residential woodburning and open burning curtailment programs.

In addition to charting a path to reach the $PM_{2.5}$ federal standard, the AQMP also proposes measures to meet the commitment in SCAQMD's previous 8-hour ozone plan. Although the deadline for meeting the ozone standard is not until 2012, it is important for SCAQMD and its stakeholders to begin development of ozone control measures now.

Climate Change Legislative and Policy Context

EO S-3-05 made California the first state to formally establish GHG emissions reduction goals. Those are:

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

The final emission target of 80 percent below 1990 levels would put the State's emissions in line with the estimates of the worldwide reductions needed to bring about long-term climate stabilization and avoidance of the most severe impacts of climate change.

AB 32

AB 32 further codified the mid-term GHG reductio The following discussion on Climate Change Legislative and Policy Context is excerpted from the California Department of Water Resources' August 2010 *Proposition 84 and Proposition 1E Integrated Regional Water Management Guidelines.*

While there are numerous pieces of policy and legislation dealing with climate change, three pieces are important regarding the State's response to climate change, including how Integrated Regional Water Management (IRWM) planning efforts analyze climate change on a project level.

- Executive Order (EO) S-2-05 and the California Global Warming Solutions Act of 2006 (AB 32; amending California Health and Safety Code Division 25.5, §38500, *et seq.*) lay the foundation for California's response to climate change.
- Senate Bill 97, signed by the Governor on August 24, 2007 initiated formal changes to the CEQA Guidelines that provides for the way climate change is analyzed in CEQA documents by adding §21083.05 to the Public Resources Code.

- EO S-13-08, signed by the Governor on November 14, 2008, directed the preparation of a sea level rise impact study, a transportation systems vulnerability assessment, and preparation of California Climate Adaptation Strategy.

These pieces of policy and legislation are briefly summarized below:

EO S-3-05

EO S-3-05 made California the first state to formally establish GHG emissions reduction goals. Those are:

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

The final emission target of 80 percent below 1990 levels would put the State's emissions in line with the estimates of the worldwide reductions needed to bring about long-term climate stabilization and avoidance of the most severe impacts of climate change.

AB 32

AB 32 further codified the mid-term GHG reduction targets established in EO S-3-05. AB 32 also identified ARB as the State agency responsible for the design and implementation of emission limits, regulations, and other measures to meet the target. ARB's December 2008 Climate Change Scoping Plan outlined the State's strategy to achieve the 2020 GHG emission limit. It also included 39 measures that were developed to reduce GHG emissions from key sources and activities while improving public health, promoting a cleaner environment, preserving natural resources, and ensuring that the impacts of the reductions are equitable and do not disproportionately impact low-income and minority communities.

SB 97

SB 97 directed the Governor's Office of Planning and Research to develop CEQA Guideline amendments for the analysis of climate change in CEQA documents for the approval of the California Natural Resources Agency. The CEQA GHG Guidelines amendments became effective on March 18, 2010. The Guideline amendments for GHG emissions fit within the existing CEQA framework for environmental analysis which calls for lead agencies to determine baseline conditions and levels of significance, and to evaluate mitigation measures. The Guideline amendments do not include a threshold of significance for GHG emissions nor do they prescribe assessment methodologies or specific mitigation measures. The Guideline amendments encourage lead agencies to consider many factors in performing a CEQA analysis, but preserve the discretion that CEQA grants lead agencies to make their own determinations based on substantial evidence.

EO S-13-08

The California Climate Change Adaption Strategy, required by EO S-13-08 was finalized in December 2009.

Federal Involvement

Although California has taken the lead in climate change policy and legislation, there have been several recent important developments at the federal level. On September 22, 2009, EPA released its final GHG Reporting Rule. Starting in 2010, facility owners that emit 25,000 MT of carbon dioxide equivalents (CO_2e) or more per year are required to submit an annual GHG emissions report with detailed calculations of facility GHG emissions. On December 2, 2009, the EPA Administrator signed two distinct findings regarding GHGs under §202(a) of the Clean Air Act. He found that the current and projected concentrations of the six key well-mixed GHGs in the atmosphere threaten the public health and welfare of current and future generations and that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

Data used to prepare this section were taken from several sources. Full bibliographic entries are provided at the end of this section.

Environmental Impact Analysis

Threshold Criteria

The following thresholds of significance are based on Appendix G of the 2012 *State CEQA Guidelines*. For purposes of this DEIR, implementation of the proposed project may have a significant adverse impact on air quality if it would:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- 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).
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.
- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

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

While the final determination of whether or not a project is significant is within the purview of the lead agency pursuant to §15064 of the State CEQA Guidelines, the SCAQMD recommends that the quantitative air pollution thresholds shown in Table 6-7 be used by the lead agencies in determining whether the proposed project could result in a significant impact. If the lead agency finds that the proposed project has the potential to exceed these air pollution thresholds, the project should be considered significant. These thresholds have been defined by the SCAQMD for the SCAB based on scientific data that SCAQMD has obtained and factual data within the federal and State Clean Air Acts. Because the Project is located within the SCAB and current air quality in the Project area is typical of the air basin as a whole, these thresholds are considered valid and reasonable.

Table 6-7
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
Paticulates (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

Localized Significance Thresholds

In accordance with SCAQMD's Governing Board's direction, the staff developed the localized significance threshold (LST) methodology and mass rate look-up tables, which were formally adopted by the Governing Board on October 3, 2003 for voluntary use by other public agencies. The mass rate LST look-up tables are only applicable to the following criteria pollutants: oxides of nitrogen (NO_x), carbon monoxide (CO), particulate matter less than 10 microns in aerodynamic diameter (PM_{10}) and particulate matter less than 2.5 microns in aerodynamic diameter ($PM_{2.5}$). The mass rate look-up tables were developed for each source receptor area (SRA) and can be used on a voluntary basis by public agencies to determine whether or not a project may generate significant adverse localized air quality impacts. LST's represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or State ambient air quality standard, and are

developed based on the ambient concentrations of that pollutant for each SRA. For PM_{10} LST's, mass rate look-up tables were derived based on requirements in SCAQMD's Rule 403, Fugitive Dust.

The use of LST's is voluntary, to be implemented at the discretion of local public agencies acting as lead agencies pursuant to the CEQA or NEPA. The LST's established for construction of the Recycled Water Pond Expansion and Optimization Project are provided in Table 6-8.

Table 6-8
Localized Significant Thresholds

Component	SRA	Area	Distance to Nearest Receptor	Localized Significance Thresholds, lbs/da			
				NO_x	CO	PM_{10}	$PM_{2.5}$
North Trumble	Perris Valley	>5 acres	50 meters	302	2,178	40	10
Case & Watson	Perris Valley	2 acres	500 meters	684	18,947	186	91
Winchester	Perris Valley	>5 acres	200 meters	672	6,860	96	31

Source: (SCAQMD, October 21, 2009)

Toxic Air Contaminants (TACs)

For projects that emit toxic air contaminants (TACs) or for projects with a sensitive receptor within one-quarter mile of a facility that emits TACs, the California Air Resources Board recommends that a health risk assessment (HRA) be conducted. If the HRA determines that the TAC emissions either individually or cumulatively result in an individual cancer risk exceeding ten in one million, it is considered a significant impact.

Greenhouse Gases (GHGs)

SCAQMD has suggested significance threshold levels of 10,000 metric tons (MT)[1] per year CO_2 equivalents for industrial projects for both construction and operation.

The Council on Environmental Quality (CEQ) has issued draft GHG guidelines that direct federal agencies to quantify and describe expected direct and indirect GHG emissions where the emissions "may be meaningful". While CEQ has not proposed a specific GHGV significance threshold, it proposes that annual direct GHG emissions of 25,000 metric tons or more of CO_2 equivalent are "meaningful". But the guidance also indicates that GHG emissions of less than 25,000 MT of CO_2 emissions may warrant evaluation in NEPA documents. How much below that amount will be "meaningful" will surely be subject to extensive litigation.

De Minimus Thresholds

Pursuant to 40 CFR Part 93, Subpart B, the emission levels that trigger an air quality conformity analysis in the South Coast Air Basin are as follows:

[1] One metric ton equals 1.10 tons (2,200 pounds).

- Nitrogen Dioxide (NO_2): 10 tons per year.
- Carbon Monoxide (CO): 100 tons per year.
- Particulate Matter (PM_{10}): 70 tons per year.
- Volatile Organic Compounds (VOC): 10 tons per year.
- Sulfur Dioxide (SO_2): 100 tons per year.
- Lead (Pb): 25 tons per year.

These threshold criteria are used in this DEIR in determining significance of air quality impacts.

Environmental Analysis

***Potential Impact**: Conflict with or obstruct implementation of the applicable air quality plan.*

A project is deemed inconsistent with air quality management plans if it would result in population and/or employment growth that exceeds growth estimates included in applicable air quality management plans (i.e., South Coast Air Quality Management District's 2007 Air Quality Management Plan). The Air Quality Management Plan is based on general plans from local jurisdictions. The Air Quality Management Plan accounts for development that would occur as a result of implementation of the local general plans including the County's Mead Valley Area Plan and the Harvest Valley/Winchester Area Plan as well as the City of Perris' General Plan.

Section 4.5 in Table 1.4 of the County's General Plan Environmental Impact Report, it is stated: *The proposed General Plan is consistent with SCAG's Regional Growth Management Plan and SCAQMD's Air Quality Management Plan, and the vehicle miles traveled growth rate is consistent with SCAG's projected population growth.* In addition, on page VI-4 of the City of Perris' General Plan Draft Environmental Impact Report, it is stated: *the General Plan will not conflict with or obstruct implementation of the 1997 Air Quality Management Plan.* Due to the fact that the Project is consistent with these plans, there are no impacts anticipated and no mitigation is required.

Significance of Impact:

No impact.

Mitigation Measure:

No mitigation is required.

Potential Impact: *Violate any air quality standard or contribute substantially to an existing or projected air quality violation.*

Criteria Pollutants

North Trumble Recycled Water Storage Ponds

Heavy construction equipment such as excavators, dozers, loaders, scrapers, trucks, and other equipment powered by internal combustion engines would emit various levels of air pollutants. It is anticipated that the kinds of construction equipment to be used at the pond construction site are provided in Table 6-9.

Table 6-9
Typical Off-Road Heavy Construction Equipment List
North Trumble Recycled Water Storage Ponds

Equipment	Horsepower	Number	Load Factor[1]	Hours per Day
Mass Grading				
Excavator	476	4	0.57	8
Dozer	550	6	0.64	8
Wheel Loader	801	6	0.54	8
Water Truck	500	2	0.50	8
Sweeper	500	1	0.68	4
Scrapers	330	10	0.72	8
Welder	175	1	0.45	4
Compressor	175	1	0.48	4
Crane	399	1	0.43	4
Generator Set	549	1	0.74	4
Utility Trucks	479	2	0.57	4
Grader	259	2	0.61	8
Trencher	63	1	0.75	4
Roller	904	2	0.56	8
Pump Station and Pipelines				
Compressor	175	1	0.48	4
Backhoe/Loader	108	1	0.55	5
Utility Truck	479	2	0.57	4
Crane	399	1	0.43	1
Water Truck	500	2	0.50	2
Generator Set	549	1	0.74	4
Welder	175	1	0.45	4
Sweeper	500	1	0.68	4
Hydraulic Excavator	476	1	0.57	8
Drill Rig	291	1	0.75	4

[1] URBEMIS2007 default values. 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 South Coast Air Quality Management District (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 mass grading period of July 1, 2014 through February 29, 2016 and a pump station and pipeline construction period of March 1, 2016 through July 31, 2016, the model generated estimated construction emissions as shown in Table 6-10 (detailed model results are contained in Appendix C).

Table 6-10
Estimated Maximum Day Emissions from Off-road Heavy Construction Equipment with Mitigation[a]
North Trumble Recycled Water Storage Ponds
(pounds per day)

Year	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2
2014	55.03	193.81	403.38	0.00	2.63	2.42	68,169
2015	51.82	184.12	365.63	0.00	2.36	2.18	68,169
2016	49.59	176.78	330.74	0.00	2.15	1.98	68,169

[a] Use of particulate traps reduces PM_{10} and $PM_{2.5}$ by 85% and oxidation catalysts reduces NO_x by 15%.

There would also be an on-road fuel maintenance truck traveling to and from the job site as well as pickup trucks utilized by inspectors at the job site. Based on the assumption that there would be one fuel maintenance truck, two delivery trucks and six pickup trucks and each travels 50 miles day, exhaust emissions would be as shown in Table 6-11.

Table 6-11
Estimated Maximum Day Emissions from On-Road Vehicles
North Trumble Recycled Water Storage Ponds

Year	Equipment	Pollutant (pounds per day)						
		ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2
2014	On-Road Trucks	0.30	1.27	3.63	0.00	0.18	0.15	632
	Pickups	0.21	1.98	0.20	0.00	0.03	0.02	330
	Totals	0.51	3.25	3.83	0.00	0.21	0.17	962
2015	On-Road Trucks	0.27	1.15	3.18	0.00	0.16	0.13	631
	Pickups	0.20	1.84	0.18	0.00	0.03	0.02	331
	Totals	0.47	2.99	3.36	0.00	0.19	0.15	962
2016	On-Road Trucks	0.24	1.06	2.83	0.00	0.14	0.12	632
	Pickups	0.19	1.73	0.17	0.00	0.03	0.02	332
	Totals	0.43	2.79	3.00	0.00	0.17	0.14	964

Vehicles owned by construction workers would be an additional source of air pollutants. An estimate of emissions based on 45 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 60 miles is presented in Table 6-12.

Table 6-12
Construction Worker Commute Vehicle Emissions
North Trumble Recycled Water Storage Ponds

Year	Pollutant (pounds per day)						
	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2
2014	1.90	17.83	1.77	0.00	0.25	0.16	2,977
2015	1.79	16.58	1.63	0.00	0.25	0.16	2,975
2016	1.71	15.55	1.50	0.00	0.25	0.16	2,988

Construction of the proposed Project 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 with no mitigation. However, watering three times per day would reduce the emissions by 61 percent. Therefore, the resulting emission fugitive dust emissions would be estimated at 1.95 pounds per acre per day. Based on this estimate and an exposed area of 40 acres per day, the estimated fugitive dust emissions from grading, etc., would be 78 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 16.4 pounds per day.

The total estimated emissions from the construction of the proposed recycled water storage ponds are shown in Table 6-13.

Table 6-13
Total Estimated Maximum Day Construction Emissions[a]
North Trumble Recycled Water Storage Ponds

Year	Source	Pollutant (pounds per day)						
		ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2
2014	Construction Equipment	55	194	**403**	0	3	2	68,169
	On-Road Vehicles	1	3	4	0	0	0	962
	Worker Commutes	2	18	2	0	0	0	2,977
	Fugitive Dust	0	0	0	0	**78**	**16**	0
	Total	58	215	**409**	0	**81**	**18**	72,108
2015	Construction Equipment	52	184	**366**	0	2	2	68,169
	On-Road Vehicles	0	3	3	0	0	0	962
	Worker Commutes	2	17	2	0	0	0	2,975
	Fugitive Dust	0	0	0	0	**78**	**16**	0
	Total	54	204	**371**	0	**80**	**18**	72,106
2016	Construction Equipment	49	177	**331**	0	2	2	68,169
	On-Road Vehicles	0	3	3	0	0	0	964
	Worker Commutes	2	16	2	0	0	0	2,988
	Fugitive Dust	0	0	0	0	**78**	**16**	0
	Total	51	196	**336**	0	**80**	**18**	72,121
	Threshold Limits[1]	75	550	100	150	150	55	N/A
	Localized Thresholds[2]	N/A	2,178	302	N/A	40	10	N/A

[a] Use of particulate traps reduces PM_{10} and $PM_{2.5}$ by 85% and oxidation catalysts reduces NO_x by 15%.

Note: **Numbers in red exceed SCAQMD's thresholds of significance.**

[1] Threshold limits developed by SCAQMD to determine significance.

[2] Localized significant thresholds developed by SCAQMD to determine localized significance, based on a work area of 5 acres or more and a 50 meter distance to the nearest receptor.

As shown in Table 6-13, the total estimated maximum day emissions from the construction of the proposed recycled water storage ponds would exceed the construction-related threshold criteria for

significance for oxides of nitrogen. Construction emissions would also exceed the localized significance thresholds for oxides of nitrogen and particulate matter (both PM_{10} and $PM_{2.5}$).

At this time, it is not known when the second pond would be constructed as it is dependent upon EMWD finding a buyer for the excess materials. However, due to improving technology related to exhaust emissions and the phasing out of older equipment, the exhaust emissions would be less than those shown above. For example, should the project be constructed during the July 2018 through February 2020 period, the exhaust emission from heavy construction equipment would be as shown in Table 6-14.

Table 6-14
Estimated Maximum Day Emissions from Off-road Heavy Construction Equipment
North Trumble Recycled Water Storage Ponds
(pounds per day)

Year	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2
2018	45.40	168.63	316.13	0.00	1.90	1.74	66,743
2019	43.28	162.93	290.26	0.00	1.74	1.60	66,743
2020	40.94	158.54	266.17	0.00	1.49	1.37	66,743

Routine maintenance of the facilities would insure proper operation of the facilities and reduce impacts. This would include approximately one trip per week to the project facilities. The amount of emissions from one pickup trip per week would be considered less than significant by any threshold criteria.

Mitigation Measures:

EMWD shall include the following mitigation measures in its standard construction specifications to reduce the air quality impacts:

The contractor shall:

- 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.
- Require construction equipment that is compliant with the CARB off-road diesel engine regulations.
- Spread soil binders on site, where appropriate, unpaved roads and staging areas.
- 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.

Potential Environmental Effects of Mitigation Measures

All physical improvements or activities that could result in changes to the physical environment required by these mitigation measures would be located within areas evaluated elsewhere in this DEIR. The impacts of implementing such measures, if any, would be similar to those identified for the project in Sections 3 through 18 of the December 2012 DEIR.

Level of Significance After Mitigation

Implementation of the above mitigation measures would not reduce the oxides of nitrogen or particulate emissions during construction of the North Trumble Recycled Water Storage Ponds to a less than significant level.

Case Road and Watson Road Recycled Water Storage Ponds

Heavy construction equipment such as excavators, dozers, loaders, scrapers, trucks, and other equipment powered by internal combustion engines would emit various levels of air pollutants. It is anticipated that the kinds of construction equipment to be used at the pond construction site are provided in Table 6-15.

Table 6-15
Typical Off-Road Heavy Construction Equipment List
Case Road and Watson Road Recycled Water Storage Ponds

Equipment	Horsepower	Number	Load Factor[1]	Hours per Day
Mass Grading				
Excavator	476	2	0.57	8
Dozer	550	2	0.64	8
Wheel Loader	801	2	0.54	8
Water Truck	500	1	0.50	8
Sweeper	500	1	0.68	4
Scrapers	330	4	0.72	8
Welder	175	1	0.45	4
Compressor	175	1	0.48	4
Crane	399	1	0.43	4
Generator Set	549	1	0.74	4
Utility Trucks	479	1	0.57	4
Grader	259	1	0.61	8
Trencher	63	1	0.75	4
Roller	904	1	0.56	8
Pump Station and Pipelines				
Compressor	175	1	0.48	4
Backhoe/Loader	108	1	0.55	5
Utility Truck	479	2	0.57	4
Crane	399	1	0.43	1
Water Truck	500	2	0.50	2
Generator Set	549	1	0.74	4
Welder	175	1	0.45	4
Sweeper	500	1	0.68	4
Hydraulic Excavator	476	1	0.57	8
Drill Rig	291	1	0.75	4

[1] URBEMIS2007 default values. 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 South Coast Air Quality Management District (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 mass grading period of July 1, 2014 through October 31, 2014 and pump station and pipeline construction period of November 1, 2014 through February 28, 2015, the model generated estimated construction emissions as shown in Table 5-16 (detailed model results are contained in Appendix C).

Table 6-16
Estimated Maximum Day Emissions from Off-road Heavy Construction Equipment with Mitigation[a]
Case Road and Watson Road Recycled Water Storage Ponds Optimization Project
(pounds per day)

Year	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2
2014	14.49	49.82	107.77	0.00	0.69	0.63	19,823
2015	4.81	18.02	34.14	0.00	0.22	0.20	7,639

[a] Use of particulate traps reduces PM_{10} and $PM_{2.5}$ by 85% and oxidation catalysts reduces NO_x by 15%.

There would also be an on-road fuel maintenance truck traveling to and from the job site as well as pickup trucks utilized by inspectors at the job site. Based on the assumption that there would be one fuel maintenance truck, one delivery truck and two pickup trucks and each travels 50 miles day, exhaust emissions would be as shown in Table 6-17.

Table 6-17
Estimated Maximum Day Emissions from On-Road Vehicles
Case Road and Watson Road Recycled Water Storage Ponds Optimization Project

Year	Equipment	Pollutant (pounds per day)						
		ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2
2014	On-Road Trucks	0.20	0.84	2.42	0.00	0.12	0.10	422
	Pickups	0.07	0.66	0.07	0.00	0.01	0.00	110
	Totals	0.37	1.50	2.49	0.00	0.13	0.10	532
2015	On-Road Trucks	0.18	0.76	2.12	0.00	0.10	0.08	420
	Pickups	0.07	0.61	0.06	0.00	0.00	0.00	110
	Totals	0.25	1.37	2.18	0.00	0.10	0.08	530

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 60 miles is presented in Table 6-18.

Table 6-18
Construction Worker Commute Vehicle Emissions
Case Road and Watson Road Recycled Water Storage Ponds Optimization Project

Year	Pollutant (pounds per day)						
	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2
2014	0.42	3.96	0.39	0.00	0.06	0.04	662
2015	0.40	3.68	0.36	0.00	0.06	0.04	661

Construction of the proposed Project 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 with no mitigation. However, watering three times per day would reduce the emissions by 61 percent. Therefore, the resulting emission fugitive dust emissions would be estimated at 1.95 pounds per acre per day. Based on this estimate and an exposed area of 5 acres per day, the estimated fugitive dust emissions from grading, etc., would be 9.75 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 2.05 pounds per day.

The total estimated emissions from the construction of the proposed optimization projects at the Case Road and Watson Road Recycled Water Storage Ponds are shown in Table 6-19.

Table 6-19
Total Estimated Maximum Day Construction Emissions
Case Road and Watson Road Recycled Water Storage Ponds Optimization Project

Year	Source	Pollutant (pounds per day)						
		ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2
2014	Construction Equipment[a]	14	50	**108**	0	1	1	19,823
	On-Road Vehicles	0	2	2	0	0	0	532
	Worker Commutes	0	4	0	0	0	0	662
	Fugitive Dust	0	0	0	0	10	2	0
	Total	14	56	**110**	0	11	3	21,017
2015	Construction Equipment[a]	5	18	34	0	0	0	7,639
	On-Road Vehicles	0	1	2	0	0	0	530
	Worker Commutes	0	4	0	0	0	0	661
	Fugitive Dust	0	0	0	0	10	2	0
	Total	5	23	36	0	10	2	8,830
	Threshold Limits[1]	75	550	100	150	150	55	N/A
	Localized Thresholds[2]	N/A	18,947	684	N/A	186	91	N/A

[a] Use of particulate traps reduces PM_{10} and $PM_{2.5}$ by 85% and oxidation catalysts reduces NO_x by 15%.

Note: **Numbers in red exceed SCAQMD's thresholds of significance.**

[1] Threshold limits developed by SCAQMD to determine significance.

[2] Localized significant thresholds developed by SCAQMD to determine localized significance, based on a work area of 2 acres and a 500 meter distance to the nearest receptor.

As shown in Table 6-19, the total estimated emissions from the construction of the optimization projects at the Case Road and Watson Road Recycled Water Storage Ponds would not exceed either the construction-related threshold criteria for significance or the localized significance thresholds developed by SCAQMD with the exception of oxides of nitrogen construction-related thresholds during 2014.

Mitigation Measures:

None in addition to those shown above under North Trumble Recycled Water Storage Ponds are required.

Level of Significance After Mitigation:

Significant with respect to oxides of nitrogen emissions during 2014.

Winchester Recycled Water Storage Ponds

Heavy construction equipment such as excavators, dozers, loaders, scrapers, trucks, and other equipment powered by internal combustion engines would emit various levels of air pollutants. It is

anticipated that the kinds of construction equipment to be used at the pond construction site are provided in Table 6-20.

Table 6-20
Typical Off-Road Heavy Construction Equipment List
Winchester Recycled Water Storage Ponds Optimization Project

Equipment	Horsepower	Number	Load Factor[1]	Hours per Day
Mass Grading				
Excavator	476	2	0.57	8
Dozer	550	2	0.64	8
Wheel Loader	801	2	0.54	8
Water Truck	500	1	0.50	8
Sweeper	500	1	0.68	4
Scrapers	330	4	0.72	8
Welder	175	1	0.45	4
Compressor	175	1	0.48	4
Crane	399	1	0.43	4
Generator Set	549	1	0.74	4
Utility Trucks	479	1	0.57	4
Grader	259	1	0.61	8
Trencher	63	1	0.75	4
Roller	904	1	0.56	8
Pump Station and Pipelines				
Compressor	175	1	0.48	4
Backhoe/Loader	108	1	0.55	5
Utility Truck	479	2	0.57	4
Crane	399	1	0.43	1
Water Truck	500	2	0.50	2
Generator Set	549	1	0.74	4
Welder	175	1	0.45	4
Sweeper	500	1	0.68	4
Hydraulic Excavator	476	1	0.57	8
Drill Rig	291	1	0.75	4

[1] URBEMIS2007 default values. 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 South Coast Air Quality Management District (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 mass grading period of November 1, 2014 through February 28, 2015 and a pump station and pipeline construction period of March 1, 2015 through January 31, 2016, the model generated estimated construction emissions as shown in Table 6-21 (detailed model results are contained in Appendix C).

Table 6-21
Estimated Maximum Day Emissions from Off-road Heavy Construction Equipment with Mitigation[a]
Winchester Recycled Water Storage Ponds Optimization Project
(pounds per day)

Year	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2
2014	17.82	64.82	133.42	0.00	0.89	0.82	20,983
2015	16.70	61.42	121.81	0.00	0.80	0.74	20,983
2016	4.24	16.76	28.43	0.00	0.18	0.16	7,207

[a] Use of particulate traps reduces PM_{10} and $PM_{2.5}$ by 85% and oxidation catalysts reduces NO_x by 15%.

There would also be an on-road fuel maintenance truck traveling to and from the job site as well as pickup trucks utilized by inspectors at the job site. Based on the assumption that there would be one fuel maintenance truck, two delivery trucks and six pickup trucks and each travels 50 miles day, exhaust emissions would be as shown in Table 6-22.

Table 6-22
Estimated Maximum Day Emissions from On-Road Vehicles
Winchester Recycled Water Storage Ponds Optimization Project

Year	Equipment	Pollutant (pounds per day)						
		ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2
2014	On-Road Trucks	0.30	1.27	3.63	0.00	0.18	0.15	632
	Pickups	0.21	1.98	0.20	0.00	0.03	0.02	330
	Totals	0.51	3.25	3.83	0.00	0.21	0.17	962
2015	On-Road Trucks	0.27	1.15	3.18	0.00	0.16	0.13	631
	Pickups	0.20	1.84	0.18	0.00	0.03	0.02	331
	Totals	0.47	2.99	3.36	0.00	0.19	0.15	962
2016	On-Road Trucks	0.24	1.06	2.83	0.00	0.14	0.12	632
	Pickups	0.19	1.73	0.17	0.00	0.03	0.02	332
	Totals	0.43	2.79	3.00	0.00	0.17	0.14	964

Vehicles owned by construction workers would be an additional source of air pollutants. An estimate of emissions based on 45 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 60 miles is presented in Table 6-23.

Table 6-23
Construction Worker Commute Vehicle Emissions
Winchester Recycled Water Storage Ponds Optimization Project

Year	Pollutant (pounds per day)						
	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2
2014	1.90	17.83	1.77	0.00	0.25	0.16	2,977
2015	1.79	16.58	1.63	0.00	0.25	0.16	2,975
2016	1.71	15.55	1.50	0.00	0.25	0.17	2,988

Construction of the proposed Project 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 with no mitigation. However, watering three times per day would reduce the emissions by 61 percent. Therefore, the resulting emission fugitive dust emissions would be estimated at 1.95 pounds per acre per day. Based on this estimate and an exposed area of 40 acres per day, the estimated fugitive dust emissions from grading, etc., would be 78 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 16.4 pounds per day.

The total estimated emissions from the construction of the Winchester Recycled Water Storage Ponds Optimization Project are shown in Table 6-24.

Table 6-24
Total Estimated Maximum Day Construction Emissions[a]
Winchester Recycled Water Storage Ponds Optimization Project

Year	Source	Pollutant (pounds per day)						
		ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2
2014	Construction Equipment	18	65	**133**	0	1	1	20,983
	On-Road Vehicles	1	3	4	0	0	0	962
	Worker Commutes	2	18	2	0	0	0	2,977
	Fugitive Dust	0	0	0	0	78	16	0
	Total	21	86	**139**	0	79	17	24,922
2015	Construction Equipment	17	61	**122**	0	1	1	20,983
	On-Road Vehicles	0	3	3	0	0	0	962
	Worker Commutes	2	17	2	0	0	0	2,975
	Fugitive Dust	0	0	0	0	78	16	0
	Total	19	81	**127**	0	79	17	24,920
2016	Construction Equipment	4	17	**28**	0	0	0	7,207
	On-Road Vehicles	0	3	3	0	0	0	964
	Worker Commutes	2	16	2	0	0	0	2,988
	Fugitive Dust	0	0	0	0	78	16	0
	Total	6	35	**33**	0	78	16	11,159
	Threshold Limits[1]	75	550	100	150	150	55	N/A
	Localized Thresholds[2]	N/A	6,860	672	N/A	96	31	N/A

[a] Use of particulate traps reduces PM_{10} and $PM_{2.5}$ by 85% and oxidation catalysts reduces NO_x by 15%.

Note: **Numbers in red exceed SCAQMD's thresholds of significance.**

[1] Threshold limits developed by SCAQMD to determine significance.

[2] Localized significant thresholds developed by SCAQMD to determine localized significance, based on a work area of 5 acres or more and a 200 meter distance to the nearest receptor.

As shown in Table 6-24, the total estimated emissions from the Winchester Recycled Water Storage Ponds Optimization Project would exceed the construction-related threshold criteria for significance for oxides of nitrogen. No other construction-related significance thresholds or localized thresholds would be exceeded at the Winchester Recycled Water Storage Ponds Optimization Project.

Routine maintenance of the facilities would insure proper operation of the facilities and reduce impacts. This would include approximately one trip per week to the project facilities. The amount of emissions from one pickup trip per week would be considered less than significant by any threshold criteria.

Mitigation Measures:

None in addition to those shown above under North Trumble Recycled Water Storage Ponds are required.

Level of Significance After Mitigation:

Implementation of the above mentioned mitigation measures would not lower the oxides of nitrogen emissions to a level of less than significant.

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 the Recycled Water Ponds Expansion and Optimization Project would only occur over a two year period. Therefore, the impact would be considered less than significant and no further analysis is required.

Greenhouse Gases (GHGs)

SCAQMD has suggested significance threshold levels of 10,000 MT per year CO_2 equivalents for industrial projects. Estimated construction duration and CO_2 emissions for the project are presented in Table 6-25.

Table 6-25
Estimated Carbon Dioxide (CO_2) Emissions from Construction

Year	Component	Construction Days	Metric Tons/Day	Metric Tons/Year
2014	North Trumble Mass Grading	132	32.78	4,327
	Case Road and Watson Road Mass Grading	89	9.55	850
	Case Road and Watson Road Pumps and Pipelines	43	4.01	172
	Winchester Mass Grading	43	29.93	1,287
	Totals	--	76.27	6,636
2015	North Trumble Mass Grading	261	32.78	8,556
	Case Road and Watson Road Pumps and Pipelines	42	4.01	168
	Winchester Mass Grading	42	30.05	1,262
	Winchester Pumps and Pipelines	219	4.87	1,023
	Totals		71.71	11,009
2016	North Trumble Mass Grading	42	32.78	1,377
	North Trumble Pumps and Pipelines	109	5.26	573
	Winchester Pumps and Pipelines	81	4.87	394
	Totals		42.91	2,344

Based on the information presented in Table 6-25, the total CO_2 emissions from construction of the Recycled Water Ponds Expansion and Optimization Project would be approximately 6,636 MT per year in 2014, 11,009 MT per year in 2015 and 2,344 MT per year in 2015. The estimated emissions in 2015 would exceed SCAQMD's significance threshold levels of 10,000 MT per year.

De Minimus Thresholds

A summary comparison of estimated emissions from construction and "de minimus" thresholds is provided in Table 6-26.

Table 6-26
Comparison of Estimated Emissions from Construction and "De Minimis" Thresholds
Recycled Water Ponds Expansion and Optimization Project
(Tons per year)

		CO	ROG	NO_x	SO_x	PM_{10}
2014	North Trumble Mass Grading	13.31	3.65	**31.35**	0.00	1.16
	Case Road and Watson Grading	2.35	0.65	5.65	0.00	0.20
	Case Road and Watson Pumps and Pipelines	0.40	0.11	0.98	0.00	0.04
	Winchester Mass Grading	2.81	0.74	6.39	0.00	0.24
	Totals	18.87	5.15	**44.37**	0.00	1.64
2015	North Trumble Mass Grading	24.90	6.79	**56.19**	0.00	2.07
	Case Road and Watson Pumps and Pipelines	0.38	0.10	0.84	0.00	0.03
	Winchester Pumps and Pipelines	1.87	0.49	4.15	0.00	0.15
	Totals	27.15	7.38	**61.18**	0.00	2.25
2016	North Trumble Mass Grading	3.86	1.04	8.18	0.00	0.30
	North Trumble Pumps and Pipelines	0.96	0.25	1.93	0.00	0.07
	Winchester Pumps and Pipelines	0.68	0.17	1.35	0.00	0.05
	Totals	5.50	1.46	**11.46**	0.00	0.42
"De Minimus" Thresholds		100	10	10	100	70

As can be seen by the data in Table 6-26, the estimated emissions from construction of the Recycled Water Ponds Expansion and Optimization Project, would exceed the oxides of nitrogen "de minimus" thresholds for the South Coast Air Basin during all three years of construction.

The general conformity requirements (40 C.F.R. §93.158) require a demonstration that the federal action (i.e., State Water Board approval of a grant to EMWD to construct the Recycled Water Ponds Expansion and Optimization Project) will conform with the applicable SIP (i.e., SCAQMD's 2007 AQMP).

It should be pointed out that the construction-related emissions from the Recycled Water Ponds Expansion and Optimization Project for VOC, CO, SO_x and PM_{10} are below the *de minimus* thresholds for the SCAB. Consequently, the federal action is not subject to a general conformity determination for those criteria pollutants.

In addition, the project will comply with the 2007 AQMP which is designed to bring the SCAB into compliance with the federal 8-hour ozone standard by 2024. The 2007 AQMP was approved by the EPA on December 16, 2011.

In summary, the proposed construction-related NO_x emissions are only a small portion (less than 0.3 percent) of the EPA-approved 2007 SIP emissions budget for off-road equipment (Code 860). Consequently, EMWD concludes that the proposed federal action conforms to the purpose of the EPA-approved SIP and is consistent with all applicable requirements. In addition, in his April 25, 2012 email to Keith Dunbar, Ian MacMillan, Program Supervisor – CEQA Intergovernmental Review, South Coast Air Quality Management District stated:

Even though the project exceeds the de minimus threshold, there appears to be surplus available from lowered port activity due to economic conditions that will cover this project.

For CWSRF projects, there is also a requirement that if the emissions from the project exceed ten percent of the total estimated emissions in the project area then a general conformity analysis is required. A comparison of the project's construction emissions and the estimated average annual emissions in Riverside County within the South Coast Air Basin is provided in Table 6-27.

Table 6-27
Comparison of Estimated Emissions from Construction and Total Emissions in Project Area
Recycled Water Ponds Expansion and Optimization Project
(Tons per year)

		CO	ROG	NO_x	SO_x	PM_{10}
Total Estimated Emissions in Riverside County within the South Coast Air Basin		140,489	31,901	29,638	402	18,360
2014	Total Construction Emissions	18.87	5.15	44.37	0.00	1.64
	Percentage, %	0.01	0.02	0.15	--	0.01
2015	Total Construction Emissions	27.15	7.38	61.18	0.00	2.25
	Percentage, %	0.02	0.02	0.21	--	0.01
2016	Total Construction Emissions	5.50	1.48	11.46	0.00	0.42
	Percentage, %	0.00	0.00	0.04	--	0.00

As can be seen by the information in Table 6-27, the emissions from construction of the project are orders of magnitude less than 10 percent of the total emissions in the project area; therefore, based on the percentage criteria a general conformity analysis is not required.

Significance of Impact:

Less than significant.

Mitigation Measures:

No additional mitigation beyond that shown above is feasible.

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

The ARB has designated the SCAB as non-attainment for the State ozone standard, the State nitrogen dioxide standard, the State PM_{10} standard and the State $PM_{2.5}$ standard. In addition, the 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. The proposed Project would generate emissions during the construction phase. As shown in Table 6-13 the total estimated emissions from the construction of the North Trumble Recycled Water Storage Ponds would exceed the construction-related thresholds of significance for oxides of nitrogen as well as the oxides of nitrogen and particulate

emission localized thresholds for significance recommended by the SCAQMD. In addition, as shown in Table 6-19, construction of the Case Road and Watson Road Recycled Water Storage Ponds Optimization Project would exceed the construction-related thresholds of significance for oxides of nitrogen during 2014. Also, as shown in Table 6-24 the total estimated emissions from construction of the Winchester Recycled Water Storage Ponds Optimization Project would exceed the construction-related oxides of nitrogen thresholds of significance recommended by the SCAQMD. Oxides of nitrogen are precursors to ozone formation.

During 2015 the combined carbon dioxide emissions from construction of the Recycled Water Ponds Optimization Project would exceed the SCAQMD's thresholds of significance (i.e., 10,000 MT per year).

As stated above, the general conformity requirements (40 C.F.R. §93.158) require a demonstration that the federal action (i.e., State Water Board approval of a grant to EMWD to construct the Recycled Water Ponds Expansion and Optimization Project) will conform with the applicable SIP (i.e., SCAQMD's 2007 AQMP).

It should be pointed out that the construction-related emissions from the Recycled Water Ponds Expansion and Optimization Project for VOC, CO, SO_x, and PM_{10} are below the *de minimus* thresholds for the SCAB. Consequently, the federal action is not subject to a general conformity determination for those criteria pollutants.

In addition, the project will comply with the 2007 AQMP which is designed to bring the SCAB into compliance with the federal 8-hour ozone standard by 2024. The 2007 AQMP was approved by the EPA on December 16, 2011.

In summary, the proposed construction-related NO_x emissions are only a small portion (less than 0.3 percent) of the EPA-approved 2007 SIP emissions budget for off-road equipment (Code 860). Consequently, EMWD concludes that the proposed federal action conforms to the purpose of the EPA-approved SIP and is consistent with all applicable requirements. In addition, in his April 25, 2012 email to Keith Dunbar, Ian MacMillan, Program Supervisor – CEQA Intergovernmental Review, South Coast Air Quality Management District stated:

> *Even though the project exceeds the de minimus threshold, there appears to be surplus available from lowered port activity due to economic conditions that will cover this project.*

Significance of Impact:

Significant with respect to particulate matter and oxides of nitrogen emissions during construction.

Mitigation Measure:

No additional mitigation beyond that shown above is feasible.

Potential Impact: *Expose sensitive receptors to substantial pollutant concentrations.*

As shown in Table 6-13, emissions from construction of the North Trumble Recycled Water Storage Ponds exceed SCAQMD's thresholds of significance for particulate matter and oxides of nitrogen. The nearest sensitive receptors are the residents on the easterly side of Sherman Road near the project site. The average distance to these residences from the project site's property line is approximately 150 feet.

In addition, as shown in Table 6-19, emissions from construction of the Case Road and Watson Road Recycled Water Storage Ponds Optimization Project would exceed SCAQMD's thresholds of significance for oxides of nitrogen. However, the nearest sensitive receptors are over 600 feet to the nearest receptor. Also as shown in Table 6-24, emissions from construction of the Winchester Recycled Water Storage Ponds exceed SCAQMD's thresholds of significance for oxides of nitrogen. However, the nearest sensitive receptors are over 600 feet to the nearest receptor.

Significance of Impact:

Significant with respect to particulate matter and oxides of nitrogen emissions during construction.

Mitigation Measure:

No additional mitigation beyond that shown above is feasible.

Potential Impact: *Create objectionable odors affecting a substantial number of people.*

The proposed Project includes construction of a recycled water storage facility plus optimization projects at two other recycled water storage facilities. Based on EMWD's experience with recycled water storage facilities neither construction nor operation of the Project would create or cause objectionable odors.

Significance of Impact:

No Impact.

Mitigation Measure:

None required.

Potential Impact: *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.*

As shown above, the combined carbon dioxide emissions during construction of the Recycled Water Ponds Optimization Project would exceed the thresholds of significance criteria developed by SCAQMD.

Significance of Impact:

Potentially significant.

Mitigation Measure:

No additional mitigation beyond that shown above is feasible.

Potential Impact: *Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.*

Implementation of the Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Significance of Impact:

No impact.

Mitigation Measure:

None required.

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7 Coastal Zone Management Act

The Coastal Zone Management Act (Public Law 92-583) is an Act of Congress passed in 1972 to encourage coastal states to develop and implement coastal zone management plans. This act was established as a National Policy to preserve, protect, develop, and where possible, restore or enhance, the resources of the Nation's coastal zone for this and succeeding generations.

The project site is more than 35 miles from the coast. Therefore, it is not within the coastal zone.

8 Coastal Barriers Resources Act

The Coastal Barriers Resources Act (Public Law 97-348) was enacted in order to address the many problems associated with coastal barrier development. There are no coastal barriers within the State of California. In addition, the project site is more than 35 miles from the coast. Therefore, the project will not impact or be located within or near the Coastal Barrier Resources System or its adjacent wetlands, marshes, estuaries, inlets, and near-shore waters.

9 Farmland Protection Policy Act

Congress enacted the Farmland Protection Policy Act (FPPA) as a subtitle of the 1981 Farm Bill. The purpose of the law is to "...minimize the extent to which Federal programs contribute to the unnecessary conversion of farmland to non-agricultural uses..." (P.L. 97.98, Sec. 1539-1549; 7 U.S.C. 4201, et seq.). The FPPA also stipulates that federal programs be compatible with state, local and private efforts to protect farmland. For the purposes of the law, federal programs include construction projects—such as highways, airports, dams and federal buildings—sponsored or financed in whole or part by the federal government, and the management of federal lands. The U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) is charged with oversight of the FPPA.

There are four classifications of agricultural lands as established by State and federal agencies: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance. These are briefly described below *(County of Riverside, October 7, 2003)*:

Prime Farmland

Prime Farmland is land best suited for producing food, feed, forage, fiber and oil seed crops, and is available for these uses: cropland, pastureland, range land, forest land or other land, but not urban land or water. It has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed (including water management) according to modern farming methods.

Farmland of Statewide Importance

Farmland of Statewide Importance is land other than Prime Farmland that has a good combination of physical and biological characteristics for producing food, feed, forage, fiber and oil seed crops, or is available for these uses (the land could be cropland, pastureland, range land, forest land, or other land, but not urban land or water).

Unique Farmland

Unique Farmland is land other than Prime Farmland and Farmland of Statewide Importance that is currently being used for the production of specific high value food and fiber crops. It has the special combination of soil quality, location, growing season and moisture supply needed to produce a sustained high quality of a specific crop when treated and managed according to modern farming methods. Examples of such economically important crops are citrus, olives and avocados.

Farmland of Local Importance

These farmlands are not covered by the above categories but are of locally significant economic importance. These include the following:

- Lands with soils that would be classified as Prime Farmland or Farmland of Statewide Importance but lack available irrigation water.
- Lands planted in 1980 or 1981 in dry land grain crops such as barley, oats and wheat.
- Lands providing major crops for Riverside County but that are not listed as Unique Farmland crops. Such crops are permanent pasture (irrigated), summer squash, okra, eggplant, radishes and watermelon.
- Dairy lands including corrals, pasture, milking facilities, hay and manure storage areas if accompanied with permanent pasture or hay land of 10 acres of more.
- Lands identified by the County with Agricultural land use designations or contracts.
- Lands planted with jojoba that are under cultivation and are of producing age.

Based on the County of Riverside's on-line data base, there is Prime Farmland, Farmland of Statewide Importance and Unique Farmland on the North Trumble Recycled Water Storage Ponds Project site. However, the City of Perris' General Plan Land Use Map adopted on February 19, 2008 shows the entire parcel as P, Public/Semi-Public Facilities/Utilities. In addition, The City of Perris' October 2004 *Draft Environmental Impact Report, City of Perris General Plan 2030 (State Clearinghouse #2004031035)* stated:

> *The 1991 General Plan Land Use Element eliminated the "agricultural" land use designation. Accordingly, the Environmental Impact Report prepared in conjunction with the 1991 General Plan identified conversion of agricultural land as a significant cumulative impact. Findings and facts indicating that certain social and economic factors outweighed the cumulative impacts associated with conversion of agricultural land to non-agricultural use and a Statement of Overriding Considerations was thereby adopted. Accordingly, adoption and implementation of the project General Plan will have no impact.*

Due to this previous action by the City of Perris, the conversion of the agricultural use of the North Trumble Recycled Water Storage Ponds Project site to a non-agricultural use would be permitted within the existing land use designation of P and considered a less than significant impact with no mitigation required.

There is no farmland on either the Case Road and Watson Road Recycled Water Storage Ponds Optimization Project site or the Winchester Recycled Water Storage Pond Optimization Project site.

10 Floodplain Management

North Trumble Recycled Water Storage Pond Site

As shown on Figure 10-1, the North Trumble Recycled Water Storage Pond Project site is included on two Federal Insurance Rate Maps (FIRM) published by the Federal Emergency Management Agency (FEMA). Those are:

- FIRM Panel No. 06065C1440G and
- FIRM Panel No. 06065C1445G.

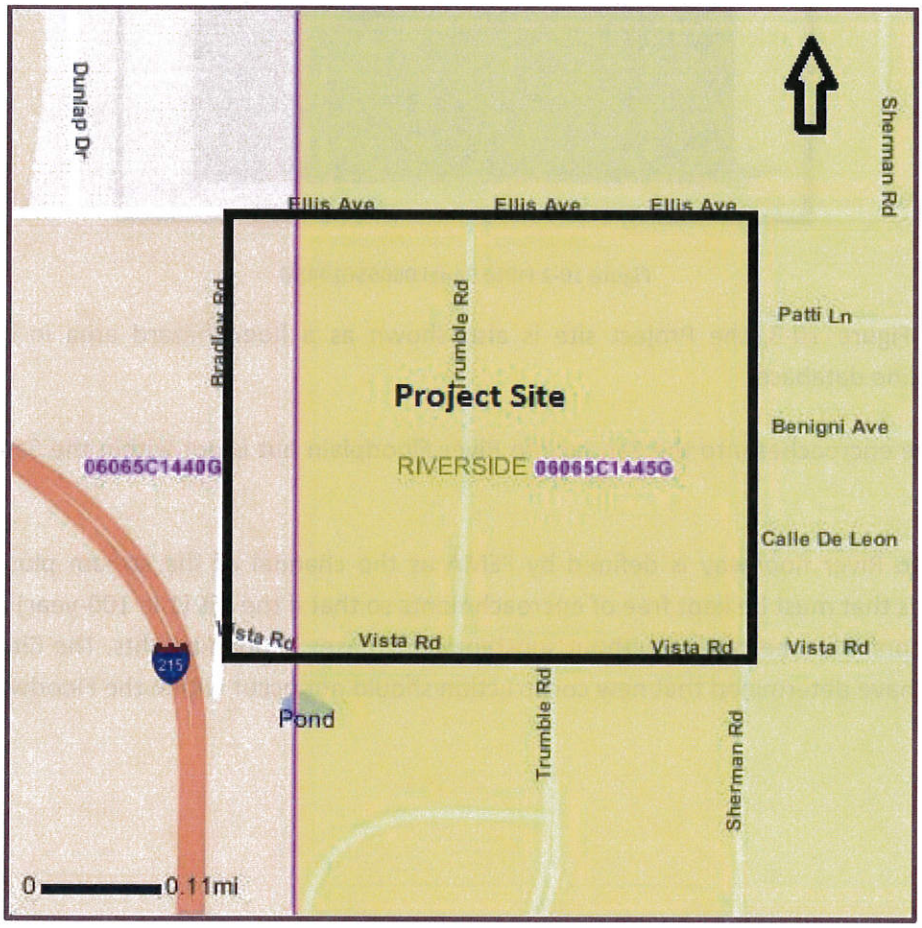

Figure 10-1 FIRM Panels at North Trumble Recycled Water Storage Ponds Site

Firm Panel No. 060651445G which includes the majority of the Project site is provided on Figure 10-2. That portion of the site shown on Panel No. 06065C1440G is within Zone AE. Zone AE is defined by FEMA as: *Areas subject to inundation by the 1-percent-annual-chance event determined by detailed methods.*

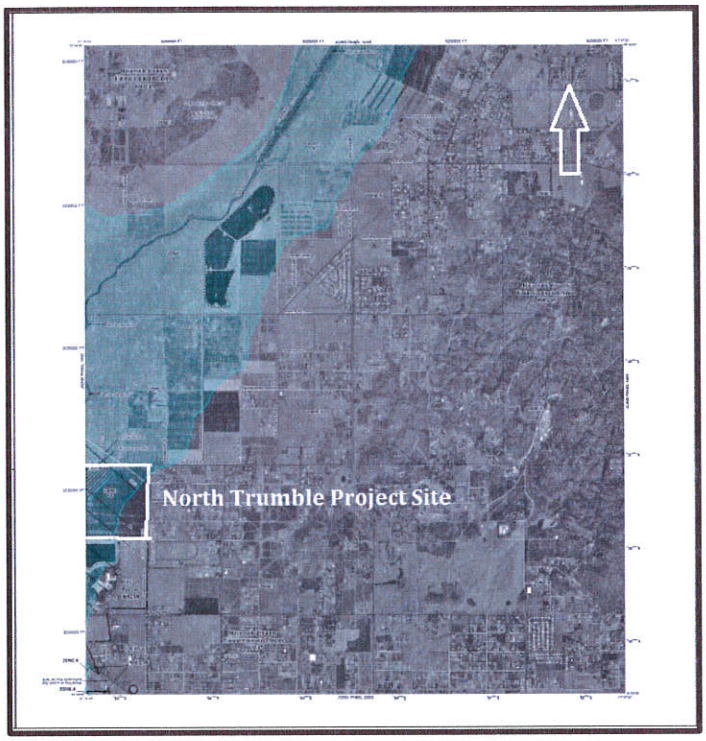

Figure 10-2 FIRM Panel 06065C1445G

As shown on Figure 10-3, the Project site is also shown as a flood hazard area in the County of Riverside's on-line database.

The Project site encroaches into the San Jacinto River Floodplain but is not within the San Jacinto River Floodway.

The San Jacinto River floodway is defined by FEMA as the channel of the stream plus any adjacent floodplain areas that must be kept free of encroachments so that if the 1% (1 in 100-year) annual chance of flooding occurs it can be carried without substantial increases in flood heights. The City of Perris and the RCFCWCD have determined that new construction should not occur within the Floodway.

Figure 10-3 Riverside County Flood Zone

A portion of the 140-acre site owned by EMWD lies within the San Jacinto River floodway and the 100-year floodplain as designated by the Federal Emergency Management Agency (FEMA). Approximately one quarter of the property lies within the floodway, about half of the property lies outside the floodway but inside the floodplain, and approximately one quarter is outside the floodway and the floodplain. The proposed recycled water storage ponds would be totally outside the floodway but a portion of them would be within the 100-year floodplain.

It is EMWD's position is that a floodplain review is not required by Section 60.3 (d) of the National Flood Insurance Program regulations because the Project would not encroach on the established floodway.

Case Road and Watson Road

The Case Road and Watson Road Recycled Water Storage Ponds Optimization Project site is included on FIRM Panel 06065C1440G (Figure 10-4).

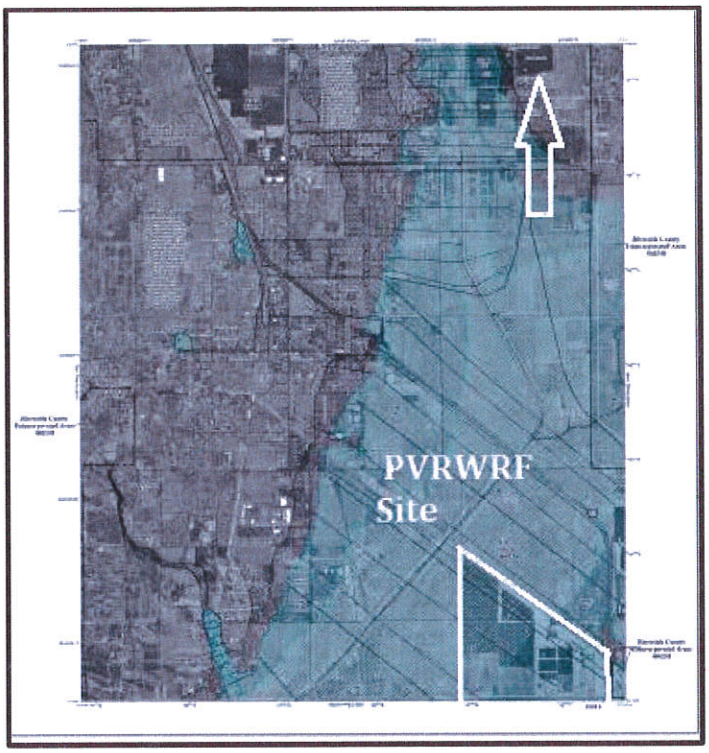

Figure 10-4 Firm Panel 06065C1440G showing the PVRWRF Site

As shown on Figure 10-4, the Perris Valley Regional Water Reclamation Facility site, which includes the Case Road and Watson Road Recycled Water Storage Ponds, is also within the 100-year floodplain.

Winchester Recycled Water Storage Ponds

The Winchester Recycled Water Storage Ponds site is shown on two FIRM Panels. They are:

- 06065C2060G, and
- 06065C2080G.

Those two panels showing the location of the Winchester Recycled Water Storage Ponds site are provided on Figures 10-5 and 10-6.

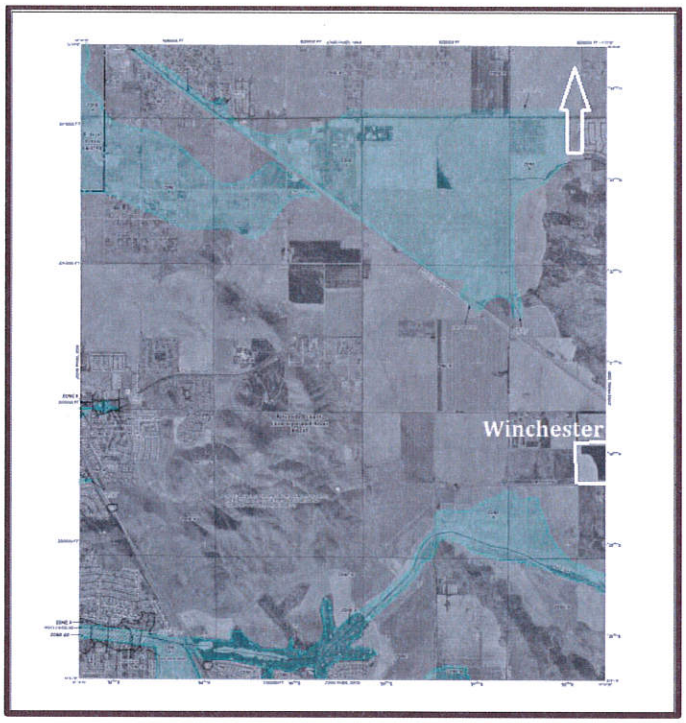

Figure 10-5 Firm Panel 06065C2060G showing Winchester Ponds

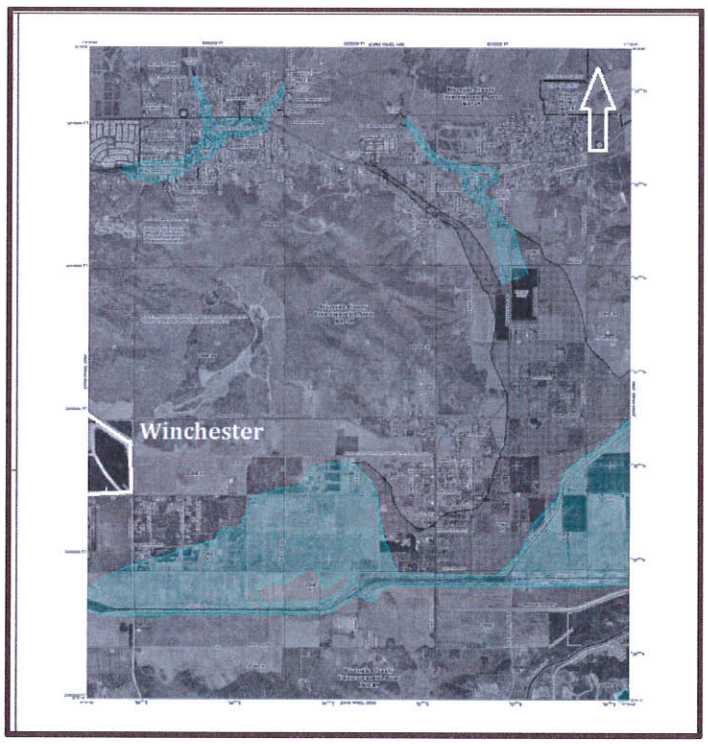

Figure 10-6 Firm Panel 06065C2080G showing Winchester Ponds

As shown on Figures 10-5 and 10-6, the Winchester Recycled Water Storage Ponds site is not within a 100-year floodplain.

11 Migratory Bird Treaty Act

As stated in Section 3 of this CEQA Plus Document, The Migratory Bird Treaty Act (MBTA) regulates or prohibits taking, killing, possession of, or harm to migratory bird species listed in Title 50 Code of Federal Regulations (CFR) Section 10-13. The MBTA is an international treaty for the conservation and management of bird species that migrate through more than one country and is enforced in the United States by the USF&WS. Hunting of specific migratory game birds is permitted under the regulations listed in Title 50 CFR 20. The MBTA was amended in 1972 to include protection for migratory birds of prey (raptors). Six families of raptors occurring in North America were included in the amendment:

- Accipitridae (kites, hawks, and eagles);
- Catharidae (New World vultures);
- Falconidae (falcons and caracaras);
- Pandionidae (ospreys);
- Strigidae (typical owls); and
- Tytonidae (barn owls).

All species and subspecies of the families listed above are protected under the amendment.

Also as shown in Section 3, implementation of the Recycled Water Ponds Expansion and Optimization Project will not affect protected migratory birds that are known, or have a potential, to occur onsite, in the surrounding area, or in the service area.

12 Protection of Wetlands

As stated previously, there are no federally protected wetlands as defined by Section 404 of the Clean Water Act on the Project sites. Therefore, no impacts are anticipated and no mitigation is required.

13 Wild and Scenic Rivers

The Recycled Water Ponds Expansion and Optimization Project sites are within the San Jacinto River Watershed which is not on the Wild and Scenic Rivers list.

14 Safe Drinking Water Act Sole Source Aquifer Protection

Only nine sole source aquifers have been designated by the U.S. Environmental Protection Agency in Region 9 which includes the Project site. None of the nine are near the Project site.

15 Environmental Justice

Executive Order 12898, Federal Activities to Address Environmental Justice in Minority Populations and Low-Income Populations, dated February 11, 1994, requires agencies to identify and address disproportionately high and adverse human health or environmental effects of their actions on minorities and low-income populations and communities as well as the equity of the distribution of the benefits and risks of their decisions. Environmental justice addresses the fair treatment of people of all races and incomes with respect to actions affecting the environment. Fair treatment implies that no group of people should bear a disproportionate share of negative impacts from an environmental action.

To comply with the environmental justice policy established by the Secretary, all U.S. Department of the Interior agencies are to identify and evaluate any anticipated effects, direct or indirect, from the proposed project, action, or decision on minority and low-income populations and communities, including the equity of the distribution of the benefits and risks.

In addition, California Senate Bill 115 (Solis) (Government Code Section 65040.12 (c)) established the Governor's Office of Planning and Research (OPR) as the coordinating agency in State government for environmental justice programs. As defined by SB 115, environmental justice is "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation and enforcement of environmental laws and policies."

Under the legislation, the following activities should be subjected to Environmental Justice review by approving agencies:

- Determination of or underwriting land use decisions,
- Approval of permitting decisions,
- Creation or adoption of regulations that may impact the environment or environmental laws or policies,
    - Engaging in public interactions that may result in impacts to the environment or upon environmental laws or polices,
    - Approving funds for activities that may impact the environment or environmental laws or policies, or
    - Initiating discretionary decisions actions that may have impacts on the environment or upon environmental laws or policies.

In addition to the State's environmental justice requirements for State agencies, many state and local government agencies have additional responsibilities under Title VI of the Civil Rights Act (42 USC Section2000d). Title VI requires recipients of federal funds to conduct their activities and/or programs in a nondiscriminatory manner. Many of the programs and activities described above are funded, at least in part, with federal funds.

Most frequently, adverse environmental justice effects have been associated with environmental insults thrust upon communities involving the siting or continued existence of operations involving the use, manufacture, storage, or disposal of hazardous materials. Another common form of insult is the development of environmentally beneficial benevolent projects that impose aesthetic or use limitation burdens upon selected communities or neighborhoods. The proposed temporary soil stockpile would pose aesthetic impacts to those residents that live just east of Sherman Road.

Appendix A

Biological Resources Assessment

Biological Assessment

Recycled Water Ponds Expansion and Optimization Project

(SCH No. 2010081044)

Prepared for:

Eastern Municipal Water District
2270 Trumble Road
Perris, California 92570

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March 2013

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Biological Resources Assessment

Introduction

The following biological resources assessment was prepared by K.S. Dunbar & Associates, Inc., for insertion into the Draft Environmental Impact Report for Eastern Municipal Water District's Recycled Water Ponds Expansion and Optimization Project (State Clearinghouse No. 2010081044).

As part of its Recycled Water Pond Expansion and Optimization Project, EMWD is planning on the construction, operation and maintenance of additional recycled water storage facilities at its North Trumble Recycled Water Storage Ponds Site. In addition, EMWD is planning on optimization projects at two of its existing facilities: 1) Case Road and Watson Road Recycled Water Storage Ponds at the Perris Valley Regional Water Reclamation Facility (PVRWRF) and 2) Winchester Recycled Water Storage Facility.

Environmental Setting

The results of special-status species and habitat surveys conducted at the sites of the proposed Recycled Water Ponds Expansion and Optimization Project sites (i.e., North Trumble Recycled Water Storage Ponds, Case and Watson Road Recycled Water Storage Ponds and Winchester Recycled Water Storage Ponds) are described below. Both a literature review and field reconnaissance survey were performed. Descriptive data for undeveloped land parcels traversed at the Project sites were obtained from the online County of Riverside, Transportation and Land Management Agency's Land Information Geographic Information System (RCTLMA GIS; http://www3.tlma.co.riverside.ca.us/pa/rclis/). Soils data for the Project sites were obtained from the online U.S. Department of Agriculture, Natural Resources Conservation Service, National Cooperative Soil Survey, Web Soil Survey (http://websoilsurvey.nrcs.usda.gov/app/). Species-specific habitat requirements were obtained from online sources, including the U.S. Fish and Wildlife Service's (USFWS) Information, Planning and Conservation System (IPaC), the California Department of Fish and Game's (CDFW) California Natural Diversity Database (CNDDB; http://www.dfg.ca.gov/biogeodata/cnddb/), the County of Riverside's, Transportation and Land Management Agency's Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP; http://www.rctlma.org/mshcp/volume1/index.html), and the CalFlora database (http://www.calflora.org/). Data sources for special-status flora and fauna in the Project areas included the CNDDB; the USFWS's Riverside County list of threatened and endangered species (Appendix A), the CDFW's several lists of special plants and animals (http://www.dfg.ca.gov/wildlife/nongame/list.html), the CalFlora database, and the survey requirements for specific land parcels identified in the MSHCP. The MSHCP identifies special survey requirements for the western burrowing owl, criteria area species and narrow endemic species. Specifically, the North Trumble Recycled Water Storage Ponds Project site and the Case and Watson

Road Recycled Water Storage Ponds Optimization Project site are located in the Mead Valley Area Plan. The North Trumble Recycled Water Storage Ponds Project site is also is within cell 3279. The Winchester Recycled Water Storage Ponds Optimization Project site is within the Harvest Valley/Winchester Area Plan.

The MSHCP has habitat assessment survey requirements for certain plant, bird, mammal, and amphibian species. These are listed below for the Recycled Water Ponds Expansion and Optimization Project sites.

Project Site	Amphibia Species	Burrowing Owl	Criteria Area Species	Mammalian Species	Narrow Endemic Plant Species	Special Linkage Area
North Trumble	No	Yes	Yes	Yes	Yes	No
Case & Watson	No	Yes	No	No	Yes	No
Winchester	No	Yes	No	No	Yes	No

At the North Trumble Recycled Water Storage Ponds site, the criteria species include: San Jacinto Valley crownscale, Parish's brittlescale, Davidson's saltscale, thread-leaved brodiaea, smooth tarplant, round-leaved filaree, Coultier's goldfields, little mousetail, and mud nama. The mammalian species include the Los Angeles pocket mouse. At all sites, the narrow endemic plant species include the Munz's onion, San Diego ambrosia, many-stemmed dudleya, spreading navarretia, California Orcutt grass, and Wright's trichocoronis.

The foregoing list of MSHCP species and the special-status flora and fauna identified from the sources listed above are presented in Tables 1 and 2 below, followed by a narrative for each species and the results of the field surveys conducted on the Project sites.

Table 1
Special-Status Fauna with the Potential to Occur at the Project Sites

Special-Status Fauna	Scientific Name	Listing Status
Crustaceans: Order Anostraca (Fairy Shrimp)		
Riverside fairy shrimp	*Streptocephalus woottoni*	FE Critical Habitat: Final designation
Vernal pool fairy shrimp	*Branchinecta lynchi*	FT Critical Habitat: Final designation
Insects: Order Lepidoptera (Butterflies and Moths Family)		
Quino checkerspot butterfly	*Euphydryas editha quino*	FE Critical Habitat: Final designation
Birds: Family Strigidae (Owl Family)		
Western burrowing owl	*Athene cunicularia hypugaea*	DFG; SSC MSHCP: Burrowing Owl Survey
Birds: Family Sylviidae (Gnatcatcher Family)		
Coastal California gnatcatcher	*Polioptila californica californica*	FT DFG: SSC Critical Habitat: Final designation
Birds: Family Tyrannidae (Tyrant Flycatcher Family)		
Southwestern willow flycatcher	*Empidonax traillii extimus*	FE SE Critical Habitat: Final designation
Birds: Family Vireonidae (Vireo Family)		

Least Bell's vireo	*Vireo bellii pusillus*	FE SE Critical Habitat: Final designation
Mammals: Family Heteromyidae (Kangaroo Rats, Pocket Mice, and Kangaroo Mice Family)		
Los Angeles pocket mouse	*Perognathus longimembris brevinasus*	DFG: SSC MSHCP: Mammal Species Assessment
San Bernardino kangaroo rat	*Dipodomys merriami parvus*	FE DFG: SSC Critical Habitat: Final Designation
Stephens' kangaroo rat	*Dipodomys stephensi*	FE ST Critical Habitat: Not designated

FE = Federally Endangered; FT = Federally Threatened.
SE = State Endangered; ST = State Threatened.
DFG: SSC = California Department of Fish and Game Species of Special Concern.
MSHCP = Western Riverside County Multiple Species Habitat Conservation Plan.
Critical Habitat = Status of federally designated critical habitat.

Table 2
Special-Status Flora with the Potential to Occur at the Project Sites

Special-Status Flora	Scientific Name	Listing Status
Alliaceae (Onion Family)		
Munz's onion	*Allium fimbriatum* var. *munzii*	FE ST CNPS 1B.1 MSHCP: Narrow Endemic Species Critical Habitat: Final designated
Asteraceae (Sunflower Family)		
Coulter's goldfields	*Lasthenia glabrata* ssp. *coulteri*	CNPS 1B.1 MSHCP: Criteria Area Species
San Diego ambrosia	*Ambrosia pumula*	FE CNPS 1B.1 MSHCP: Narrow Endemic Species Critical Habitat: Final designated
Smooth tarplant	*Centromadia pungens* var. *laevis*	CNPS 1B.1 MSHCP: Criteria Area Species
Wright's trichocoronis	*Trichocoronis wrightii* var. *wrightii*	CNPS 2.1 MSHCP: Narrow Endemic Species
Boraginaceae (Borage Family)		
Mud nama	*Nama stenocarpum*	CNPS 2.2 MSHCP: Criteria Area Species
Chenopodiaceae (Goosefoot Family)		
Davidson's saltscale	*Atriplex serenana* var. *davidsonii*	CNPS 1B.2 MSHCP: Criteria Area Species
Parish's brittlescale	*Atriplex parishii*	CNPS 1B.1 MSHCP: Criteria Area Species
San Jacinto Valley crownscale	*Atriplex coronate* var. *notatior*	FE CNPS 1B.1 MSHCP: Criteria Area Species Critical Habitat: Final designated
Crassulaceae (Orpine Family)		
Many-stemmed dudleya	*Dudleya multicaulis*	CNPS 1B.2 MSHCP: Narrow Endemic Species
Geraniaceae (Cranesbill Family)		

Special-Status Flora	Scientific Name	Listing Status
Round-leaved filaree	*Erodium macrophyllum*	CNPS 1B.1 MSHCP: Criteria Area Species
Poaceae (Grass Family)		
California Orcutt grass	*Orcuttia californica*	FE SE CNPS 1B.1 MSHCP: Narrow Endemic Species Critical Habitat: Not designated
Polemoniaceae (Phlox Family)		
Spreading navarretia	*Navarretia fossalis*	FT CNPS 1B.1 MSHCP: Narrow Endemic Species Critical Habitat: Final designated
Ranunculaceae (Buttercup Family)		
Little mousetail	*Myosurus minimus* spp. *apus*	CNPS 3.1 MSHCP: Criteria Area Species
Themidaceae (Brodiaea Family)		
Thread-leaved brodiaea	*Brodiaea filifolia*	FT SE CNPS 1B.1 MSHCP: Criteria Area Species Critical Habitat: Final designated

Scientific names based on The Jepson Manual Vascular Plants of California, Second Edition, Bruce G. Baldwin (Editor), Douglas H. Goldman (Editor), David J Keil (Editor), Robert Patterson (Editor), Thomas J. Rosatti (Editor). U.C. Press, Berkeley, CA. January 2012.

Abbreviations:

FE = Federally Endangered; FT = Federally Threatened.

SE = State Endangered; ST = State Threatened.

CNPS 1B.1 = California Native Plant Society rare or endangered in California and elsewhere. Seriously endangered in California; CNPS 1B.2 = rare or endangered in California and elsewhere. Fairly endangered in California; CNPS 2.1 = rare, threatened, or endangered in California, but more common elsewhere. Seriously endangered in California; CNPS 2.2 = rare, threatened, or endangered in California, but more common elsewhere. Fairly endangered in California; CNPS 3.1 = plants about which we need more information. Seriously endangered in California.

MSHCP = Western Riverside County Multiple Species Habitat Conservation Plan.

Critical Habitat = Status of federally designated critical habitat.

A brief description of these sensitive species and the potential for them to occur on the Project sites follows.

Riverside Fairy Shrimp

The Riverside fairy shrimp *(Streptocephalus woottoni)* is federally endangered but not listed under the California Endangered Species Act (CESA). This species is narrowly distributed in the MSHCP Area. It is know from five localities in deep vernal pools. In the Plan Area, vernal pools supporting Riverside fairy shrimp have been identified on Murrieta stony clay loams, Los Posas series, Wyman clay loams, and Willows soils. They are located on the Santa Rosa Plateau, Skunk Hollow, Murrieta, and Lake Elsinore Back Basin.

No suitable habitat exists at the Project sites and no shrimp were observed.

Vernal Pool Fairy Shrimp

Vernal pool fairy shrimp *(Branchinecta lynchi)* is a federally threatened species with no status under the CESA. The vernal pool fairy shrimp is restricted to vernal pools. They prefer cool-water pools that have low to moderate dissolved solids. The vernal pool fairy shrimp are known from four locations in Western Riverside County: Skunk Hollow, the Santa Rosa Plateau, Salt Creek, and the vicinity of the Pechanga Indian Reservation.

No suitable habitat exists at the Project sites and no shrimp were observed.

Quino Checkerspot Butterfly

The Quino checkerspot [butterfly] *(Euphydryas editha quino)*, a federally endangered species, but without state CESA status, is narrowly distributed at relatively few locations within the MSHCP Plan Area. The core populations occur in the southwestern portion of the Riverside Basin in the south and southeastern portions of the Plan Area from the vicinity of Diamond Valley Lake trending to the south and east into the Anza Valley.

No suitable habitat exists at the Project sites and no butterflies were observed.

Burrowing Owl

The western burrowing owl *(Athene cunicularia hypugaea)* is a CDFW Species of Special Concern. Because the owls are protected under the federal Migratory Bird Treaty Act, killing or possessing burrowing owls or destruction of their nests with eggs or young is prohibited. The MSHCP requires that the burrowing owl be surveyed for in areas supporting suitable habitat. The burrowing owl is narrowly distributed at relatively few locations within the MSCHP area in suitable habitat. Although the preferred habitat, grassland and some forms of agricultural land, is well distributed, the recent locations of the burrowing owl are clumped in only a few locations. Because this species requires specific soil and micro-habitat conditions, occurs in few locations within a broad habitat category, requires a relatively large home range to support its life history requirements, occurs in relatively low numbers, and is semi-colonial, the burrowing owl will require site-specific considerations and management conditions.

The burrowing owl occurs in shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), prairies, coastal dunes, desert floors, and some artificial, open areas as a year-long resident. They may also use golf courses, cemeteries, road allowances within cities, airports, vacant lots in residential areas and university campuses, fairgrounds, abandoned buildings and irrigation ditches. They may also occur in forb and open shrub stages of pinyon-juniper and ponderosa pine habitats. They require large open expanses of sparsely vegetated areas on gentle rolling or level terrain with an abundance of active small mammal burrows. As a critical habitat feature need, they require the use of rodent or other burrows for roosting and nesting cover. They may also dig their own burrows in soft, friable soil (as found in Florida) and may also use pipes, culverts, and nest boxes where burrows are

scarce. The mammal burrows are modified and enlarged. One burrow is typically selected for use as the nest, however, satellite burrows are usually found within the immediate vicinity of the nest burrow within the defended territory of the owl.

Within Western Riverside County, the burrowing owl occurs within the central portion within the open lowlands. It has a sparsely scattered distribution throughout the Area Plan outside of the montane areas. Breeding and burrow locations have not been identified within the University of California, Riverside (UCR) database, although most observations that have been recorded are probably located near a burrow due to the relatively sedentary habits of the species.

The species has been detected east of the Jurupa Mountains, along the Santa Ana River, at Lake Mathews, at Good Hope, Alberhill, Murrieta, March Air Reserve Base, the Lake Perris/Mystic Lake area, the Badlands, within the vicinity of Beaumont and Banning, San Jacinto, Valle Vista, between San Jacinto River and Lakeview Mountains, west of Hemet, the area around Diamond Valley Lake, east and south of Lake Skinner area, along Santa Gertrudis Creek and Tucalota Creek, in Long Canyon, and along De Portola Road as documented in the UCR database and from other sources.

The Project sites do not provide suitable foraging or nesting habitat for the burrowing owl. There is essentially no vegetation to provide opportunities for foraging. In addition, no ground squirrel burrows or other suitable burrows were observed in the immediate area of the Project sites. Burrowing owls were not observed on the sites.

Coastal California Gnatcatcher

The coastal California gnatcatcher *(Polioptila californica californica)* is a federally threatened species, but has no state status under the CESA. It is recognized by the CDFW as a Species of Special Concern. This bird is a small blue gray songbird which measures only 4.5 inches (11 centimeters) in length and weighs 0.2 ounces (6 grams). It has dark gray feathers on its back and grayish-white feathers on its underside. The wings have a brownish wash to them. Its long tail is mostly black with white outer tail feathers. They have a thin, small bill. The males have a black cap during the summer which is absent during the winter. Both males and females have a white ring around their eyes.

The primary habitat for the coastal California gnatcatcher includes coastal sage scrub, desert scrubs, and Riversidian alluvial fan scrub within the Riverside lowlands and San Jacinto foothills bioregions.

No suitable habitat exists at the Project sites and no birds were observed.

Southwestern Willow Flycatcher

The southwestern willow flycatcher *(Empidonax traillii extimus)* is both state and federally endangered. It is restricted to riparian woodlands along streams and rivers with mature, dense stands of willows *(Salix* spp.*),* cottonwoods *(Populus* spp.*)* or smaller spring fed or boggy areas with willows or alders *(Alnus* spp.*)*. Riparian habitat provides both breeding and foraging habitat for the species.

No suitable habitat exists at the Project sites and no birds were observed.

Least Bell's Vireo

Least Bell's vireos *(Vireo bellii pusillus)* is listed as both state and federally endangered. These small birds are only 4.5 to 5.9 inches (11.5 to 12.5 centimeters) in length. They have short rounded wings and short, straight bills. There is a faint white eye ring. Feathers are mostly gray above and pale below. This is a common protective marking in birds. Seen from below, the bird blends into the clouds and seen from above it blends into the landcover.

The least Bell's vireo occupies a more restricted nesting habitat than the other subspecies of Bell's vireo. Least Bell's vireos primarily occupy riverine riparian habitats that typically feature dense cover within 3 to 7 feet (1 to 2 meters) of the ground and a dense stratified canopy. It inhabits low, dense riparian habitat along water or along dry parts of intermittent streams. Typically it is associated with southern willow scrub, cottonwood forest, mule fat, wild blackberry or mesquite in desert locations.

No suitable habitat exists at the Project sites and no birds were observed.

Los Angeles Pocket Mouse

The Los Angeles pocket mouse *(Perognathus longimembris brevinasus)* has no federal status but is a CDFW Species of Special Concern. It is also on the *Additional Survey Needs and Procedures* list in the MSHCP.

The Los Angeles pocket mouse is widely distributed in the eastern two-thirds of the MSHCP area, but recent known localities are sparsely scattered throughout this area. This species appears to be limited to sparsely vegetated habitat areas in patches of fine sandy soils associated with washes or of aeolian (windblown) origin, such as dunes. The current status of populations in the Plan Area is unknown, but some biologists believe that the Los Angeles pocket mouse is in serious decline in the region because it is seldom trapped and much of its suitable habitat has been lost to agriculture and urban development.

No suitable habitat exists at the Project sites and no animals were observed.

San Bernardino Merriman's Kangaroo Rat

The San Bernardino Merriman's kangaroo rat *(Dipodomys merriami parvus)* is not state listed pursuant to the CESA, but is federally listed as endangered. . It is recognized by the CDFW as a Species of Special Concern. It is typically found in Riversidian alluvial fan sage scrub, but may occur at lower densities in Riversidian upland sage scrub, chaparral, and grassland in uplands and tributaries in proximity to Riversidian alluvial fan sage scrub habitats. The key populations of the San Bernardino kangaroo rat are located along the San Jacinto River and Bautista Creek in the San Jacinto, Hemet, and Valley Vista areas.

No suitable habitat exists at the Project sites and no kangaroo rats were observed.

Stephens' Kangaroo Rat

The Stephens' kangaroo rat *(Dipodomys stephensi)* is federally listed as endangered and state listed as threatened. This rodent species occurs in a patchy distribution in western Riverside County, ranging from the Corona/Norco Hills just west of Highway 91 in the west to the Anza Valley in the east and to Temecula in the south and the Badlands in the north. Key populations occur in the Lake Mathews-Estelle Mountain Reserve, Lake Skinner-Domenigoni Valley Reserve, San Jacinto Wildlife Area-Lake Perris Reserve, Motte-Rimrock Reserve, Sycamore Canyon-March Air Reserve Base Reserve, Steele Peak, Kabian Park, Anza/Cahuilla valleys, Potrero/Badlands area, and patches scattered throughout Wilson Creek, Sage, Lewis Valley, Vail Lake, and Aguanga areas.

No suitable habitat exists on the Project sites and no animals were observed.

Munz's Onion

Munz's onion *(Allium munzii)* is a federal endangered species and a state threatened species. It is endemic to southwestern Riverside County. This species is restricted to heavy clay soils which are scattered in a band several miles wide and extending some 40 miles southeast from Corona through Temescal Canyon and along the Elsinore Fault Zone to the southwestern foothills of the San Jacinto Mountains from 985 to 3,280 feet (300 to 1,000 meters) elevation.

Munz's onion is restricted to clay soils. A bulb-bearing perennial, this species often does not flower in very dry years and may be difficult to locate during surveys. Flowering may also be suppressed by heavy infestations of weedy grasses. Like other bulb-bearing perennials, this species is probably susceptible to damage from ground disturbance activities (e.g., discing).

No suitable habitat exists at the Project sites and no plants were observed.

Coultier's Goldfields

Coultier's goldfields *(Lasthenia glabrata* spp. *coulteri)* has no federal or state status but is listed as 1.B.1 by the California Native Plant Society (CNPS), which indicates that it is considered endangered in California and elsewhere. It is usually found on alkaline soils in playas, sinks and grasslands.

No suitable habitat exists at the Project sites and no plants were observed.

San Diego Ambrosia

San Diego ambrosia *(Ambrosia pumila)* is a federally listed endangered species, but it is not listed under the CESA. It is recognized by the CNPS as a 1B.1 species. It occurs in open habitats in coarse substrates near drainages, and in upland areas on clay slopes or on the dry margins of vernal pools. This species occurs in a variety of associations that are dominated by sparse grasslands or marginal wetland habitats such as river terraces, pools, and alkali playas. In Riverside County, San Diego ambrosia is associated

with open, gently-sloped grasslands and is generally associated with alkaline soils. Riverside County localities for this plant are found in close proximity to silty, alkaline soils of the Willows series.

Only three populations of San Diego ambrosia have been mapped in Riverside County. One population is known from Skunk Hollow (Murrieta Hot Springs), a second from Nichols Road north of Lake Elsinore. The Skunk Hollow population is relatively small but the Nichols Road population in one of the largest in the United States. A third population has been reported for the City of Riverside based on a 1941 collection. The current status of this latter population is unknown but it is likely extirpated.

No suitable habitat exists at the Project sites and no plants were observed.

Smooth Tarplant

Smooth tarplant *(Centromadia pungens* spp. *laevis)* has no state status or federal status; however, it is on the CNPS's List 1B.1. Smooth tarplants occur in a variety of habitats including alkali scrub, alkali playas, riparian woodland, watercourses, and grasslands with alkaline affinities. The majority of the populations in western Riverside County are associated with alkali vernal plains.

The most important populations are located at Salt Creek, along the San Jacinto River, Temecula Creek, and northwest Hemet. Other locations include Sycamore Canyon Park, south of Lake Elsinore, within the City of San Jacinto, French Valley, Moreno Valley, Lake Skinner, Clinton Keith Road east of Deer Creek Development, and Potrero Creek near Beaumont. Large populations in the Domenigoni Valley have been inundated by Diamond Valley Lake. This species is also known to occur at Lake Matthews and along the Santa Ana River. It is also known to occur in the alkaline swales near Alberhill Creek, Murietta, and Goodhope.

No suitable habitat exists at the Project sites and no plants were observed.

Wright's Trichocoronis

Wright's trichocoronis *(Trichocoronis wrightii* var. *wrightii)* has no federal or state status by it is considered to be fairly endangered in California by the CNPS. In western Riverside County, Wright's trichocoronis is found in the alkali vernal plains and associated with alkali playa, alkali annual grassland, and alkali vernal pool habitats.

This species is known only from four locations along the San Jacinto River from the vicinity of the Ramona Expressway and San Jacinto Wildlife Area and along the northern shore of Mystic Lake. Only two locations on either side of the Ramona Expressway have been seen in recent years. This species may have once occurred at Salt Creek and possibly in the alkali wetlands near Nichols Road in the vicinity of Lake Elsinore.

No suitable habitat exists at the Project sites and no plants were observed.

Mud Nama

Mud nama *(Nama stenocarpum)* has no federal or state status but is on the CNPS's List 2B.2, indicating that it is still considered endangered in California. This tiny annual herb grows on the muddy embankments of ponds and lakes. It is also reported to utilize river embankments.

No suitable habitat exists at the Project sites and no plants were observed.

Davidson's Saltscale

Davidson's saltscale *(Atriplex serenana* var. *davidsonii)* has no federal or state status but is listed as 1B.2 by the CNPS [fairly endangered in California (20-80% of occurrences threatened)]. This plant typically grows in coastal bluff scrub and in alkaline coastal scrub habitats at elevations between 30 and 660 feet (9 to 201 meters).

No suitable habitat exists at the Project sites and no plants were observed.

Parish's Brittlescale

Parish's brittlescale *(Atriplex parishii)* has no federal or state status but is listed as 1B.1 [seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)] by the California Native Plant Society. It is native to central and southern California where it can occasionally be found between the immediate coastline and the Mojave Desert. This is a plant of saline and alkaline soils, such as those on dry lakebeds and ephemeral vernal pools.

No suitable habitat exists at the Project sites and no plants were observed.

San Jacinto Valley Crownscale

San Jacinto Valley crownscale *(Atriplex coronata* var. *notatior)* is a federal endangered species. It occurs primarily in floodplains (seasonal wetlands) dominated by alkali scrub, alkali playas, vernal pools, and to a lesser extent, alkali grasslands. San Jacinto Valley crownscale is restricted to highly alkaline, silty-clay soils in association with the Traver-Domino-Willows soil association; the majority (approximately 80%) being associated with the Willows soil series.

San Jacinto Valley crownscale is endemic to Western Riverside County and is restricted to the San Jacinto, Perris, Menifee, and Elsinore Valleys. In Western Riverside County, San Jacinto Valley crownscale occurs as 11 loosely-defined populations that are primarily associated with Mystic Lake, the San Jacinto River and Salt Creek tributary drainages. One small, isolated population has recently been observed on Willows soils at Alberhill Creek near Lake Elsinore. The majority of the populations of San Jacinto Valley crownscale are located on privately owned lands. Three populations are on state land (San Jacinto Wildlife Area), one population is partially on county lands (Riverside County Habitat

Conservation Agency along the San Jacinto River), and one population is on a private preserve managed by The Metropolitan Water District of Southern California.

The key populations of San Jacinto Valley crownscale are located along the San Jacinto River from the vicinity of Mystic Lake to the vicinity of Perris and in the upper Salt Creek drainage west of Hemet.

No suitable habitat exists at the Project sites and no plants were observed.

Many-stemmed Dudleya

Many-stemmed dudleya *(Dudleya multicaulis)* has no federal or state status; however, it is listed as a 1B.2 species by the CNPS. It is often associated with clay soils in barrens, rocky places, or thinly vegetated openings in chaparral, coastal sage scrub, and southern needlegrass grasslands. The majority of populations are associated with coastal sage scrub or open coastal sage scrub.

Many-stemmed dudleya is endemic to southwestern California from western Los Angeles County south through extreme southwestern San Bernardino, Orange, and western Riverside counties south to extreme northern San Diego County. About ten populations of many-stemmed dudleya have been reported in western Riverside County. These populations are known from the vicinity of Santa Ana Canyon, the Temescal Canyon, Estelle Mountain and Lake Mathews, Alberhill near Lake Elisinore, Oak flats in the San Mateo Wilderness, and at Vail Lake.

No suitable habitat exists at the Project sites and no plants were observed.

Round-Leaved Filaree

Round-leaved filaree *(Erodium macrophyllum)* has no federal or state status but is listed as 1B.1 (rare, threatened or endangered in California and elsewhere) by the CNPS. It occurs in grasslands on friable clay soils although it may have historically been common on other soil types.

No suitable habitat exists at the Project sites and no plants were observed.

California Orcutt Grass

Listed as endangered under both the state and federal endangered species acts, the California Orcutt grass *(Orcuttia californica)* has limited geographic distribution and special habitat requirements. This species is primarily restricted to the southern basaltic claypan vernal pools at the Santa Rosa Plateau and alkaline vernal pools at Skunk Hollow and at Salt Creek west of Hemet.

No suitable habitat exists at the Project sites and no plants were observed.

Spreading Navarretia

Spreading navarretia *(Navarretia fossalis)*, a federally threatened species not listed under the state CESA, but a CNPS 1B.1 species, is a low, spreading or ascending annual herb. Stems are 4 to 6 inches (10 to 15 centimeters) long, mostly bare on the lower portions. Leaves are soft and finely divided into linear segments they become spine tipped when dry. Flowers (April – June) have linear, white to pale lavender petals and are borne in small, flat-topped, leafy clusters. Fruits are two-celled capsules with reddish-brown seeds.

Plants are found in vernal pool, alkali playa, and alkali sink habitats. They are occasionally found in ditches and other man-made depressions that mimic vernal pools. They are found on flat to gently sloping terrain. Soils have a clay component or an impermeable surface or subsurface layer that supports the vernal pool habitat. Spreading navarretia requires areas that are (ephemerally) wet in winter and spring but dry in summer and fall.

There is designated critical habitat to the north and west of the Project site. However, no suitable habitat exists on the Project sites and no plants were observed.

Little Mousetail

Little mousetail *(Myosurus minimus* ssp. *apus)* is not well known but it is considered a criteria area species by the MSHCP when conducting surveys at the North Trumble Recycled Water Storage Ponds Project site . This plant occurs at vernal pools. Typically this cryptic species grows in the deeper portions of vernal pool basins sprouting immediately after the surface water has evaporated.

No suitable habitat exists at the Project sites and no plants were observed.

Thread-Leaved Brodiaea

Thread-leaved brodiaea *(Brodiaea filifolia)* is a federally threatened species and state endangered species. It is also listed as 1B.1 by the CNPS. Vernally moist grasslands and the periphery of vernal pools are the typical locales where this species has been found.

No suitable habitat exists at the Project sites and no plants were observed.

Survey Results For Special-Status Plants, Animals, And Habitats

A pedestrian field survey of the Project sites was conducted on August 24, 2012.

As shown previously on Figure 3-1 the North Trumble Recycled Water Storage Ponds Project site is a commercial agricultural field that had been planted with silage (corn) prior to the August 24, 2012 field inspection. The primary soil on the project site is Pachappa fine sandy loam, 0 to 2 percent slopes (45.8%). Other soils include Willows silty clay, deep, strongly saline-alkaline (21.7%); Domino silt loan, saline-alkali (12.3%); Exeter very fine sandy loam, 0 to 5 percent slopes (7.0%); Exeter very fine sandy

loam, deep, 0 to 5 percent slopes (6.2%); Greenfield sandy loam, 0 to 2 percent slopes (5.1%); and Ramona sandy loam, 0 to 2 percent slopes (1.9%).

Because active agricultural practices have disturbed the North Trumble Recycled Water Storage Ponds Project site, no special-status species of flora or fauna, special-status habitats, designated critical habitats, wetlands, or waters of the state or United States occur onsite.

The other two Project sites are existing recycled water storage facilities. The man-made embankments which will be disturbed during construction are maintained in a vegetative free state. Therefore, no special-status species of flora or fauna, special-status habitats, designated critical habitats, wetlands, or waters of the state or United States occur on these sites.

There is designated critical habitat for the spreading navarretia *(Navarretia fossalis)* north of the North Trumble Recycled Water Storage Ponds site and north of the Case and Watson Road Recycled Water Storage Ponds Optimization Project site, as well as designated critical habitat for the coastal California gnatcatcher *(Polioptila californica californica).* However, no designated critical habitats would be impacted by the proposed Project.

Regulatory Setting

U.S. Fish and Wildlife Service

Endangered Species Act

Projects that would result in adverse effects on federally listed threatened or endangered species are required to consult with and mitigate through consultation with the U.S. Fish and Wildlife Service (USFWS). The objective of consultation is to determine whether the project would impact a protected species or designated critical habitat, and to identify mitigation measures that would be required to avoid or reduce impacts to the species. This consultation can be pursuant to either Sections 7 or 10 of the Endangered Species Act (ESA). Section 7 consultation is required when a federal agency is involved in project approval, funding, or permitting. Section 10 consultation is required when no federal agencies are involved with the project.

The federal ESA of 1973[1] provides legal protection for plant and animal species in danger of extinction, and requires definitions of critical habitat and development of recovery plans for specific species. Section 7 of the ESA requires federal agencies to make a finding on the potential to jeopardize the continued existence of any listed species potentially impacted by all federal actions, including the approval of a public or private action. Section 9 of the ESA prohibits the take of any member of an endangered species. Take is defined in the ESA as "... to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." USFWS has further defined the terms harass and harm. Harass is defined as follows:

[1] The federal Endangered Species Act of 1973, as amended (16 USC 1531 et seq.), Sections 7, 9, and 10.

> "... an intentional or negligent act or omission that creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns that include, but are not limited to, breeding, feeding, or sheltering."

Harm is defined as follows:

> "... significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering."

Section 10(a) of the ESA permits the incidental take of listed species if the take is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.

Section 3 of the ESA defines an endangered species as any species, including subspecies, in danger of extinction throughout all or a significant portion of its range. This section defines threatened species as any species "likely to become endangered within the foreseeable future throughout all or a significant portion of its range". Federally listed or "listed" indicates that a species has been designated as endangered or threatened through publication of a final rule in the *Federal Register*. Designated endangered and threatened species, listed under Section 4 of the ESA, receive the full protection of the ESA. Proposed endangered and threatened species are those for which a proposed regulation, but not a final rule, has been published in the *Federal Register.* Proposed species are granted limited protection, while candidate species and species of special concern are afforded no protection under the ESA.

Migratory Bird Treaty Act—1936

The Migratory Bird Treaty Act (MBTA) regulates or prohibits taking, killing, possession of, or harm to migratory bird species listed in Title 50 Code of Federal Regulations (CFR) Section 10-13. The MBTA is an international treaty for the conservation and management of bird species that migrate through more than one country and is enforced in the United States by the USFWS. Hunting of specific migratory game birds is permitted under the regulations listed in Title 50 CFR 20. The MBTA was amended in 1972 to include protection for migratory birds of prey (raptors). Six families of raptors occurring in North America were included in the amendment:

- Accipitridae (kites, hawks, and eagles);
- Catharidae (New World vultures);
- Falconidae (falcons and caracaras);
- Pandionidae (ospreys);
- Strigidae (typical owls); and
- Tytonidae (barn owls).

All species and subspecies of the families listed above are protected under the amendment.

California Department of Fish and Wildlife

California Endangered Species Act

The California Department of Fish and Wildlife (CDFW) administers a number of laws and programs designed to protect fish and wildlife resources. Principal of these is the California Endangered Species Act of 1984 (CESA;Fish and Game Code Section 2050), which regulates the listing and take of state-endangered and state-threatened species. CESA declares that deserving species will be given protection by the state because they are of ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the state. CESA established that it is state policy to conserve, protect, restore, and enhance endangered species and their habitats.

Species listed under CESA cannot be taken without adequate mitigation and compensation. The definition of take under CESA is the same as described above for the federal ESA. However, based on findings of the California Attorney General's office, take under CESA does not prohibit indirect harm by way of habitat modification. Typically, CDFW implements endangered species protection and take determinations by entering into management agreements (Section 2018 Management Agreements) with project applicants.

CDFW maintains lists for Candidate-Endangered Species and Candidate-Threatened Species. California candidate species are given equal protection to the law as listed species have. CDFW also lists Species of Special Concern based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. Species of special concern do not receive protection under the CESA or any section of the California Fish and Game Code and do not necessarily meet CEQA Guidelines Section 15380 criteria as rare, threatened, endangered, or of other public concern. Like federal species of concern, the determination of significance for California species of special concern must be made on a case-by-case basis. Designation of Species of Special Concern is intended by CDFW to be used as a management tool for consideration in future land use decisions.

Fish and Game Code – Sections 3503, 3503.5 and 3513

California Fish and Game Code Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Fish and Game Code Section 3503.5 protects birds-of-prey (raptors) and their eggs and nests. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the Migratory Bird Treaty Act. These regulations could require that elements of a proposed project (particularly vegetation removal or construction near nest trees) be reduced or eliminated during critical phases of the nesting cycle unless surveys by a qualified biologist demonstrate that nests, eggs, or nesting birds will not be disturbed, subject to approval by CDFWWand/or USF&WS.

Fish and Game Code – Sections 3511, 4700, 5050, and 5515

California Fish and Game Code Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians) and 5515 (fish) designate certain species as "fully protected". Fully protected species, or parts thereof,

may not be taken or possessed at any time, and no provision of the Code or any other law may be construed to authorize the issuance of permits or licenses to take any fully protected species. No such permits or licenses heretofore issued may have any force or effect for any such purpose, except that the California Fish and Game Commission may authorize the collecting of such species for necessary scientific research. Section 3511 of the Code may authorize the live capture and relocation of fully protected birds pursuant to a permit for the protection of livestock. Legally imported and fully protected species or parts thereof may be possessed under a permit issued by CDFW.

Streambed Alteration Agreements

Under sections 1600-1607 of the California Fish and Game Code, the CDFW regulates activities that would alter the flow, bed, channel, or bank of streams and lakes. The limits of CDFW's jurisdiction are defined in the code as the . . . "bed, channel or bank of any river, stream, or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit..."

This broad definition gives the CDFW great flexibility in deciding what constitutes a river, stream, or lake. The CDFW defines streams under the jurisdictions of sections 1600-1607 as follows:

1. The term "stream" can include intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams [United States Geological Survey (USGS) maps], and water courses with subsurface flows. Canals, aqueducts, irrigation ditches, and other means of water conveyance can also be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife.

2. Biological components of any stream may include aquatic and riparian vegetation, all aquatic animals including fish, amphibians, reptiles, invertebrates, and terrestrial species that derive benefits from the stream systems.

3. As a physical system, a stream not only includes water (at least on an intermittent or ephemeral basis), but also a bed or channel, a bank and/or levee, instream features such as logs or snags, and various floodplains depending on the return frequency of the flood event being considered.

4. The lateral extent of a stream can be measured in several ways depending on a particular situation and the type of fish and wildlife resource at risk. The following criteria are present in order from the most inclusive to the least inclusive:

    a. The floodplain of a stream can be the broadcast measurement of a stream's lateral extent depending on the return frequency of the flood event used. For most flood control purposes, the 100-year flood event is the standard measurement. However, because it may include significant amounts of upland or urban habitat, in many cases the 100-year floodplain may not be appropriate.

b. The outer edge of riparian vegetation is generally used as the line of demarcation between riparian and upland habitats and is therefore a reasonable and identifiable boundary for the lateral extent of a stream. In most cases, the use of this criterion should result in protecting the fish and wildlife resources at risk.

c. Most streams have a natural bank which confines flows to the bed or channel except during flooding. In some instances, particularly on smaller streams or dry washes with little or no riparian habitat, the bank should be used to mark the lateral extent of a stream.

d. A levee or other artificial stream bank could also be used to mark the lateral extent of a stream. However, in many instances, there can be extensive areas of valuable riparian habitat located behind a levee.

In practice, the CDFW usually marks its jurisdictional limit at the top of the stream or bank, or at the outer edge of the riparian vegetation, whichever is wider.

Riverside County

Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) encompasses 1,966 square miles of western Riverside County including approximately 842,500 acres of unincorporated County land west of the crest of the San Jacinto Mountains to the Orange County line, as well as approximately 372,700 acres within the jurisdictional areas of cities. The MSHCP provides for the creation of a conservation area that protects and manages 500,000 acres of habitat for covered species (146 species). The MSHCP provides for habitat conservation, species protection and management, program costs, and development certainty to the County and cities; State and federal wildlife agencies; development, agriculture, and environmental communities; and the public at large. The goal of the MSHCP is to target the highest quality habitats for preservation, while allowing development of less important habitat areas.

Riverside County Ordinance No. 663.10, Stephens' Kangaroo Rat Mitigation Fee Ordinance

The purpose of this ordinance is to finance the preparation, development and implementation of a Habitat Conservation Plan, including the acquisition of habitat reserve sites, and the application for a Section 10(a) permit under the federal ESA. It is the further purpose of this ordinance to provide a method for mitigation of impacts to the Stephens' kangaroo rat caused by the loss of its habitat due to development during the preparation and implementation of a Habitat Conservation Plan and provide for habitat mitigation to be identified in the Habitat Conservation Plan. Mitigation of impacts to the Stephens' kangaroo rat will be accomplished through the review of each proposed development project within the Fee Assessment Area to determine whether on-site mitigation through the reservation or addition of lands included within or immediately adjacent to a potential habitat reserve site or payment

of the Mitigation Fee or a combination of both is appropriate and furthers the ultimate Habitat Conservation Plan objectives. A proposed development project may be referred, for review, to federal and state resource agencies based upon criteria which may be established and agreed upon by the county and the agencies.

This ordinance provides for the establishment of this review process and satisfaction of on-site mitigation to protect potential habitat reserve sites or payment of the Mitigation Fee or a combination of both, which upon implementation will satisfy USFWS, CDFW, as well as Riverside County mitigation requirements for the Stephens' kangaroo rat and its habitat which may occur within designated unincorporated areas of the county.

Data used for this section were obtained from various sources including the U.S. Fish and Wildlife Service, California Natural Diversity Data Base and Western Riverside County Multiple Species Habitat Conservation Plan. Full bibliography entries for all reference material are contained at the end of this section.

Environmental Impact Analysis

Threshold Criteria

The following thresholds of significance are based on Appendix G of the 2012 State CEQA Guidelines. For purposes of this DEIR, implementation of the proposed project may have a significant adverse impact if it would result in any of following:

- 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.
- 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.
- 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.
- 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.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

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

Environmental Analysis

Potential Impact. *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.*

Based on literature searches, analysis of aerial photographs and a field survey, there are no special-status species that would be impacted by implementation of the Recycled Water Ponds Expansion and Optimization Project.

Significance of Impact:

No impact.

Mitigation Measures:

None required.

Potential Impact. *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.*

Based on literature searches, analysis of aerial photographs and a field survey, there are no riparian habitats or other sensitive natural communities that would be impacted by implementation of the Recycled Water Ponds Expansion and Optimization Project.

Significance of Impact:

No impact.

Mitigation Measures:

None required.

Potential Impact. *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.*

Based on literature searches, analysis of aerial photographs and a field survey, there are no federally protected wetlands that would be impacted by implementation of the Recycled Water Ponds Expansion and Optimization Project.

Significance of Impact:

No impact.

Mitigation Measure:

None required.

Potential Impact. *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.*

The proposed Project would not interfere with any migratory activities or impact migratory corridors because there are none in the Project area. Reviews of General Plans and the MSHCP show no active habitat linkages or corridors, habitat does not support such linkages, and no nursery sites exist within the Project area.

Significance of Impact:

No impact.

Mitigation Measure:

None required.

Potential Impact. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*

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.

Significance of Impact:

No impact.

Mitigation Measure:

None required.

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

As shown above, implementation of the proposed project would not conflict with the provisions of the Western Riverside County Multiple Species Habitat Conservation Plan.

Significance of Impact:

No Impact.

Mitigation Measure:

None required.

References

Association of Environmental Professionals. 2012. *2012 California Environmental Quality Act (CEQA) Statute and Guidelines.*

California Natural Diversity Data Base. 2012. California Department of Fish and Game. Biogeographic Data Branch. Commercial Version – Dated July 2012. U.S. Geological Survey topographic map at 1:24,000 for Perris and Winchester.

Riverside County Board of Supervisors. 2012. Riverside County Land Information System.

Riverside County Board of Supervisors. Western Riverside County Multiple Species Habitat Conservation Plan.

Riverside County Board of Supervisors. Riverside County Ordinance No. 663.10, Stephens' Kangaroo Rat Mitigation Fee Ordinance.

United States Department of the Interior, Fish and Wildlife Service. 2012. *Endangered Species Act Species List, North Trumble Recycled Water Storage Ponds.* September 8.

Appendix

U.S. Fish and Wildlife Service's Trust Resources

U.S. Fish & Wildlife Service

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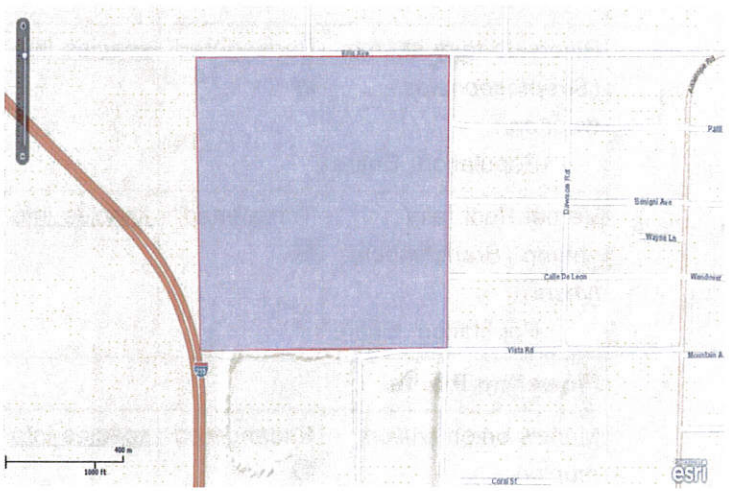
6010 HIDDEN VALLEY ROAD, SUITE 101
CARLSBAD, CA 92011
(760) 431-9440
http://www.fws.gov/carlsbad/

Project Location Map:



Note: The map reflects the map extent and map layers selected on Step 1 Location page. To change what appears on this map, return to the Location page and adjust the map extent or

map layers.

Project Counties:
Riverside, CA

Project type: Wastewater Facility

Endangered Species Act Species List (USFWS Endangered Species Program).

There are a total of **11** threatened, endangered, or candidate species, and/or designated critical habitat on your species list. Species on this list are the species that may be affected by your project and could include species that exist in another geographic area. For example, certain fishes may appear on the species list because a project could cause downstream effects on the species. Please contact the designated FWS office if you have questions.

Species that may be affected by your project:

Birds	Status	Species Profile	Contact
Coastal California gnatcatcher (*Polioptila californica californica*) Population: Entire	Threatened	species info	Carlsbad Fish And Wildlife Office
Least Bell's vireo (*Vireo bellii pusillus*) Population: Entire	Endangered	species info	Carlsbad Fish And Wildlife Office
Southwestern Willow flycatcher (*Empidonax traillii extimus*) Population: Entire	Endangered	species info	Carlsbad Fish And Wildlife Office
Crustaceans			
Riverside fairy shrimp (*Streptocephalus woottoni*) Population: Entire	Endangered	species info	Carlsbad Fish And Wildlife Office
Vernal Pool fairy shrimp (*Branchinecta lynchi*) Population: Entire	Threatened	species info	Carlsbad Fish And Wildlife Office
Flowering Plants			
Munz's onion (*Allium munzii*)	Endangered	species info	Carlsbad Fish And Wildlife Office
San Jacinto Valley crownscale (*Atriplex coronata var. notatior*)	Endangered	species info	Carlsbad Fish And Wildlife Office
Spreading navarretia (*Navarretia fossalis*)	Threatened	species info	Carlsbad Fish And Wildlife Office

Thread-Leaved brodiaea (*Brodiaea filifolia*)	Threatened	species info	Carlsbad Fish And Wildlife Office
Mammals			
San Bernardino Merriam's kangaroo rat (*Dipodomys merriami parvus*) Population: Entire	Endangered	species info	Carlsbad Fish And Wildlife Office
Stephens' kangaroo rat (*Dipodomys stephensi*) Population: Entire	Endangered	species info	Carlsbad Fish And Wildlife Office

Don't see a species you expect to see?

FWS National Wildlife Refuges (USFWS National Wildlife Refuges Program).

There are no National Wildlife Refuges found within the vicinity of your project.

FWS Migratory Birds (USFWS Migratory Bird Program).

Most species of birds, including eagles and other raptors, are protected under the Migratory Bird Treaty Act (16 U.S.C. 703). Bald eagles and golden eagles receive additional protection under the Bald and Golden Eagle Protection Act (16 U.S.C. 668). The Service's Birds of Conservation Concern (2008) report identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

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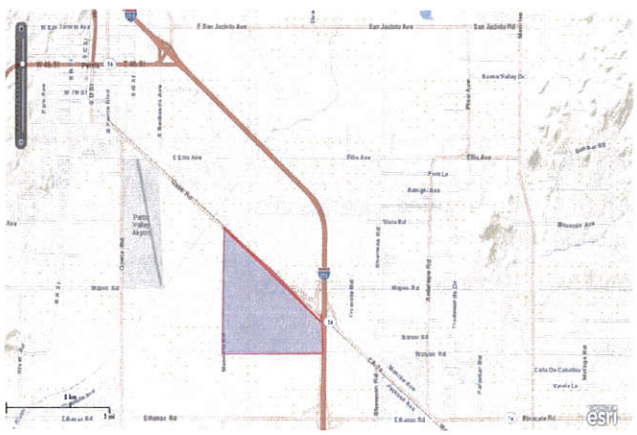
CARLSBAD, CA 92011

(760) 431-9440

http://www.fws.gov/carlsbad/

Project Location Map:



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Project Counties:
Riverside, CA

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Species that may be affected by your project: (View all critical habitat on one map)

Birds	Status	Species Profile	Contact

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Least Bell's vireo (*Vireo bellii pusillus*) Population: Entire	Endangered	species info		Carlsbad Fish And Wildlife Office
Southwestern Willow flycatcher (*Empidonax traillii extimus*) Population: Entire	Endangered	species info		Carlsbad Fish And Wildlife Office
Crustaceans				
Riverside fairy shrimp (*Streptocephalus woottoni*) Population: Entire	Endangered	species info		Carlsbad Fish And Wildlife Office
Vernal Pool fairy shrimp (*Branchinecta lynchi*) Population: Entire	Threatened	species info		Carlsbad Fish And Wildlife Office
Flowering Plants				
Munz's onion (*Allium munzii*)	Endangered	species info		Carlsbad Fish And Wildlife Offi
San Jacinto Valley crownscale (*Atriplex coronata var. notatior*)	Endangered	species info		Carlsbad Fish And Wildlife Office
Spreading navarretia (*Navarretia fossalis*)	Threatened	species info	Final designated critical habitat	Carlsbad Fish And Wildlife Office
Thread-Leaved brodiaea (*Brodiaea filifolia*)	Threatened	species info		Carlsbad Fish And Wildlife Offi
Mammals				
San Bernardino Merriam's kangaroo rat (*Dipodomys*	Endangered	species info		Carlsbad Fish And Wildlife Offi

merriami parvus) Population: Entire				
Stephens' kangaroo rat (*Dipodomys stephensi*) Population: Entire	Endangered	species info		Carlsbad Fish And Wildlife Office

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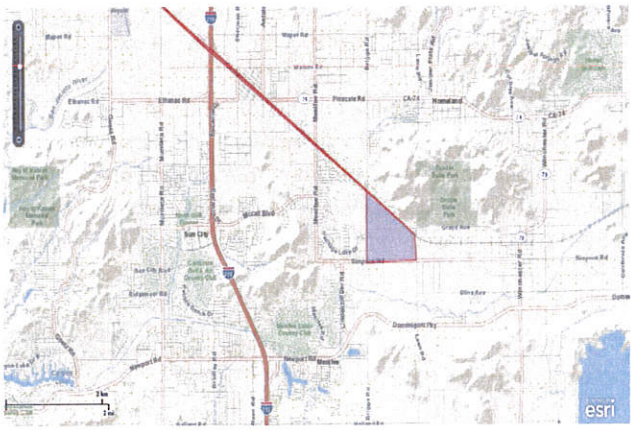

Note: The map reflects the map extent and map layers selected on Step 1 Location page. To change what appears on this map, return to the Location page and adjust the map extent or map layers.

Project Counties:
Riverside, CA

Project type: Wastewater Facility

Endangered Species Act Species List (USFWS Endangered Species Program).

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Crustaceans				
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Vernal Pool fairy shrimp (*Branchinecta lynchi*) Population: Entire	Threatened	species info		Carlsbad Fish And Wildlife Office
Flowering Plants				
California Orcutt grass (*Orcuttia californica*)	Endangered	species info		Carlsbad Fish And Wildlife Office
Munz's onion (*Allium munzii*)	Endangered	species info		Carlsbad Fish And Wildlife Office
San Jacinto Valley crownscale (*Atriplex coronata var. notatior*)	Endangered	species info		Carlsbad Fish And Wildlife Office
Spreading navarretia (*Navarretia fossalis*)	Threatened	species info	Final designated critical habitat	Carlsbad Fish And Wildlife Office
Thread-Leaved brodiaea (*Brodiaea filifolia*)	Threatened	species info		Carlsbad Fish And Wildlife Office
Insects				
Quino	Endangered	species info		Carlsbad Fish And Wildlife Office

Checkerspot butterfly (*Euphydryas editha quino*) Population: Entire				
Mammals				
San Bernardino Merriam's kangaroo rat (*Dipodomys merriami parvus*) Population: Entire	Endangered	species info		Carlsbad Fish And Wildlife Office
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Appendix B

Cultural Resources Supporting Information

CULTURAL RESOURCES ASSESSMENT
RECYCLED WATER PONDS EXPANSION AND OPTIMIZATION PROJECT
RIVERSIDE COUNTY, CALIFORNIA

Prepared by

Peak & Associates, Inc.
3941 Park Drive, Suite 20, #329
El Dorado Hills, CA 95762

Prepared for

K.S. Dunbar & Associates, Inc.
Environmental Engineering
45375 Vista Del Mar
Temecula, California 92590-4314

February 11, 2013
(Job #12-088)

INTRODUCTION

In 2010, Peak & Associates, Inc., was retained by KS Dunbar & Associates, Inc. to conduct a cultural resources assessment related to Eastern Municipal Water District's plans to expand the pond area at its Trumble Road facility. Since then, two other facilities have been added to the project, Case and Watson Roads and Winchester.

The Trumble project is located near Romoland just east of Interstate 215 (Map 1). It is in Section 3 of T5S, R3W and is mapped on the Perris 7.5' series USGS topographic map. The North Trumble site is open land but the EMWD headquarters and residential development border it on two sides. The work proposed at this location involves excavation of a new pond.

The Case and Watson project area is located just over a mile southwest of Trumble in Sections 4 and 9 (Map 1) bordered by Watson Road, Interstate 215 and the railroad. The work proposed at these sites will involve new pumping, piping and valves and perhaps an increase in pond capacity.

The Winchester pond is about two miles west of the town of Winchester in T5S, R2W, Section 30 (Map 2) north of Winchester Road and cut by the BNSF railroad. Proposed work here involves additional piping and pumping capacity and, perhaps, an increase in pond capacity.

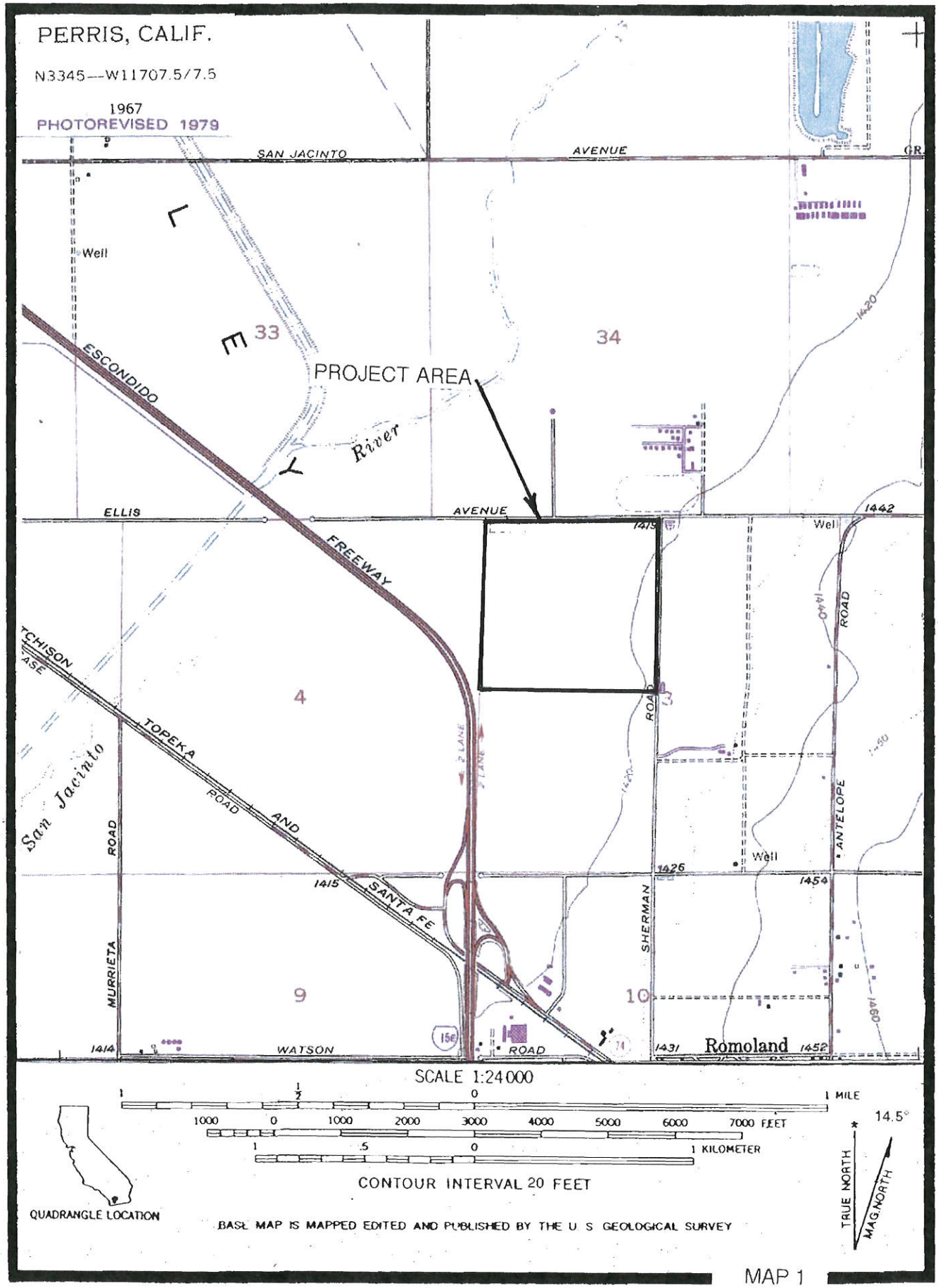
Peak & Associates conducted a record search with the Eastern Information Center in 2010 and 2012, made Native American contacts and conducted a field inspection of the project areas in order to identify any cultural resources that might be effected by the proposed project. A field survey of the Trumble Road site was done by Senior Archeologist Robert Gerry of Peak & Associates, Inc. on August 10, 2010. At the other two project components, the work is confined to previously disturbed areas that had already been surveyed by others. The overall cultural resources work was supervised by Melinda Peak, President of Peak & Associates, Inc.

No cultural resources were identified in the project areas. This report is submitted to support a finding of "no effect" in terms of the National Historic Preservation Act and to document the absence of cultural resources under the California Environmental Quality Act.

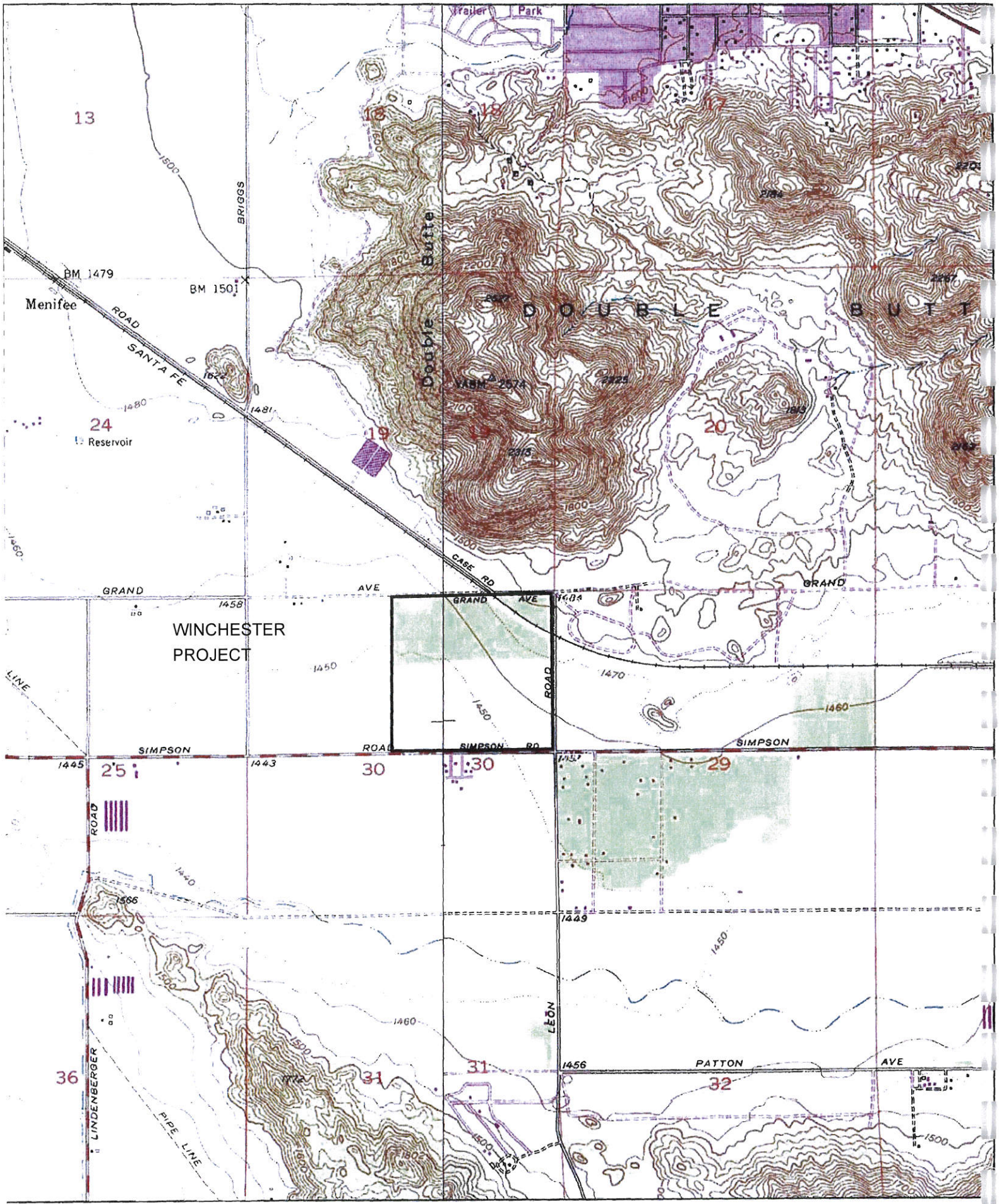
REGULATORY CONTEXT

The Section 106 review process is implemented using a five step procedure: 1) identification and evaluation of historic properties; 2) assessment of the effects of the undertaking on properties that are eligible for the National Register; 3) consultation with the State Historic Preservation Office (SHPO) and other agencies for the development of a memorandum of agreement (MOA) that addresses the treatment of historic properties; 4) receipt of Advisory Council on Historic Preservation comments on the MOA or results of consultation; and 5) the project implementation according to the conditions of the MOA.

The Section 106 compliance process may not consist of all the steps above, depending on the situation. For example, if identification and evaluation result in the documented


PERRIS, CALIF.
N3345—W11707.5/7.5
1967
PHOTOREVISED 1979
SAN JACINTO
AVENUE
Well
33
34
PROJECT AREA
ESCONDIDO
FREEWAY
River
ELLIS
AVENUE
1415
1442
Well
1440
ROAD
4
3
TOPEKA
ROAD
AND
SANTA FE
San Jacinto
ROAD
MURRIETA
1415
1426
Well
1454
SHERMAN
ANTELOPE
9
10
1414
WATSON
ROAD
1431
Romoland
1452
SCALE 1:24000
1 MILE
7000 FEET
1 KILOMETER
CONTOUR INTERVAL 20 FEET
QUADRANGLE LOCATION
BASE MAP IS MAPPED EDITED AND PUBLISHED BY THE U. S. GEOLOGICAL SURVEY
14.5°
TRUE NORTH
MAG. NORTH

MAP 1



Name: WINCHESTER
Date: 9/10/2012
Scale: 1 inch equals 2000 feet

Location: 11 488701 E 3730222 N
Caption: EMWD Winchester
Project Area

MAP 2

conclusion that no properties included in or eligible for inclusion are present, the process ends with the identification and evaluation step.

FRAMEWORK FOR EVALUATION

Decisions regarding management of cultural resources hinge on determinations of their significance (36 CFR 60.2). As part of this decision-making process the National Park Service has identified components which must be considered in the evaluation process, including:

- criteria for significance;
- historic context; and
- integrity.

Criteria for Significance

Significance of cultural resources is measured against the National Register criteria for evaluation:

The quality of significance in American history, architecture, archeology, 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,

(a) that are associated with events that have made a significant contribution to the broad patterns of our history; or

(b) that are associated with the lives of persons significant in our past; or

(c) that embody the distinctive characteristics of a type, period, or method of construction, 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) that have yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

Historic Context

The historic context is a narrative statement "that groups information about a series of historic properties based on a shared theme, specific time period, and geographical area." To evaluate resources in accordance with federal guidelines, these sites must be examined to determine whether they are examples of a defined "property type." The property type is a "grouping of individual properties based on shared physical or associative

characteristics." Through this evaluation, each site is viewed as a representative of a class of similar properties rather than as a unique phenomenon.

A well-developed historical context helps determine the association between property types and broad patterns of American history. Once this linkage is established, each resource's potential to address specific research issues can be explicated.

Integrity

For a property to be eligible for listing in the National Register it must meet one of the criteria for significance (36 CFR 60.4 [a, b, c, or d]) and retain integrity. Integrity is defined as "the authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during the property's historic or prehistoric period."

The following discussion is derived from National Register Bulletin 15 ("How to Apply the National Register Criteria for Evaluation").

Within the concept of integrity, there are seven aspects or qualities that define integrity in various combinations. The seven aspects are: location, design, setting, materials, workmanship, feeling, and association. To retain historic integrity, a property will possess several or usually most of these aspects. The retention of specific aspects is necessary for a property to convey this significance. Determining which of the seven aspects are important involves knowing why, where and when the property is significant.

The prescribed steps in assessing integrity are as follows:

- define the essential physical features that must be present for a property to represent its significance;
- determine whether the essential physical features are visible enough to convey their significance;
- determine whether the property needs to be compared with similar properties; and,
- determine, based on the significance and essential physical features, which aspects of integrity are particularly vital to the property being nominated and if they are present.

Ultimately, the question of integrity is answered by whether or not the property retains the identity for which it is significant.

All properties change over time. It is not necessary for a property to retain all its historic physical features or characteristics. However, the property must retain the essential physical features that enable it to convey its historic identity. The essential physical features are those features that define why a property is significant.

A property's historic significance depends on certain aspects of integrity. Determining which of the aspects is most important to a particular property requires an understanding of the property's significance and its essential physical features. For example, a property's historic significance can be related to its association with an important event, historical

pattern or person. A property that is significant for its historic association is eligible for listing if it retains the essential physical features that made up its character or appearance during the period of its association with the important event, historical pattern, or person.

A property important for association with an event, historical pattern, or person ideally might retain some features of all seven aspects of integrity. Integrity of design and workmanship, however, might not be as important to the significance, and would not be relevant if the property were an archeological site. A basic integrity test for a property associated with an important event or person is whether a historical contemporary would recognize the property as it exists today. For archeological sites that are eligible under criteria a and b, the seven aspects of integrity can be applied in much the same way as they are to buildings, structures, or objects.

In sum, the assessment of a resource's National Register eligibility hinges on meeting two conditions:

- the site must possess the potential to be eligible for listing in the National Register under one of the evaluation criteria either individually or as a contributing element of a district based on the historic context that is established; and

- the site must possess sufficient integrity, i.e. it must retain the qualities that make it eligible for the National Register.

For the National Register, "a district possesses a significant concentration, linkage, or continuity of ... objects united historically or aesthetically by plan or physical development." The identity of a district derives from the relationship of its resources, which can be an arrangement of functionally related properties.

California Register of Historical Resources

For the purposes of CEQA, an historical resource is a resource listed in, or determined eligible for listing in the California Register of Historical Resources. When a project will impact a site, it needs to be determined whether the site is an historical resource, which is defined as any site which:

(A) Is historically or archeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political or cultural annals of California; and

(B) 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.

CULTURAL HISTORY

Ethnography

According to Bean and Shipek (1978) the project area is within the area controlled, at the time of Spanish and Euro-American contact by the Cahuilla. We have recently received a copy of a lengthy communication from the Pechanga Band of the Luiseño Mission Indians arguing from various ethnographic sources, historic sources and tribal lore that the project is in Luiseño traditional territory. The boundaries between groups were subject to change over time and, in some cases, the bands that ethnographers identified with one tribal division or another could change. In any event, we will continue with a brief Luiseño ethnographic summary, noting that the Cahuiilla have not responded.

The Luiseño are named from their proximity to the Mission San Luis Rey. The fact that they are named for the mission is an indicator of their early acculturation and the minimal surviving knowledge or their original ways of life. In fact, the early ethnographies of California Native Americans (c.f. Kroeber 1925) separated the Luiseño from the Juaneño, named for the Mission San Juan Capistrano. More recent studies indicate that there is no reason in language or culture to separate these two neighboring populations into separate tribes (Bean and Shipek 1978: 550.) The language of both groups is part of the Cupan group of the Takic subfamily of the Uto-Aztecan family.

Luiseño territory covered approximately 1,500 square miles. Along the coast it extended from about Agua Hedionda Creek on the south to near Aliso Creek on the northwest. The boundary extended inland to Santiago Peak, then southward to the east of Palomar Mountain, then around the southern slope above the valley of San Jose. From this point the boundary turned west and returned to the sea along Agua Hedionda Creek (Bean and Shipek 1978:550-551). Note, however, that these boundaries are subject to interpretation.

Village groups had hunting, collecting, and fishing areas that were carefully defined and respected by neighboring goups. Villages were often located in sheltered coves or canyons, or on the side of slopes in a warm thermal zone, near good water supplies. Easily defended locations were often selected, particularly in border areas. The population of each main village was a "tribelet," a patrilineally related clan who owned an area in common and who were politically and economically autonomous. The village chiefs held an administrative position that combined and controlled religious, economic, and warfare powers. The village chief also supervised specific areas for group hunting and gathering. The produce from these areas was under the chief's control and was used for public occasions. This position was hereditary (Bean and Shipeck 1978:555).

The Luiseño shared boundaries with the Cahuilla, Cupeño, Ipai, and Gabrielino peoples but they tended to isolate themselves unless they were expanding which they did through warfare and marriage. Their neighbors considered them dangerous and warlike expansionists. This view is supported by the relatively elaborate warfare structure that included an initiated warrior class (Bean and Shipek 1978:550).

The main animal sources of food for the Luiseño were deer, rabbit, jackrabbit, woodrat, mice, and ground squirrels, antelope, valley and mountain quail, doves, ducks, and other birds. Coastal marine foods included sea mammals, fish, crustaceans, and mollusks (especially abalone). Trout and other freshwater fish were caught in mountain springs. In addition to animal food sources, the Luiseño also relied on six species of acorns and numerous varieties of seeds including manzanita, sunflower, and sage among others. To add to the staple crop of seeds, they also collected bulbs, roots, cactus pods, and various fruits such as wild strawberries, grapes, and elderberries (Bean and Shipeck 1978:552).

Older men were most active in rituals and ceremonial affairs. They created most of the ceremonial paraphernalia used by the tribe. While the chief controlled religious powers, he had an assistant who had important ritual duties and an advisory council of ritual specialists and shamans. These shamans each had his own special area of knowledge about the environment or ritual magic. These positions were hereditary with each man training his own successor from his own lineage who showed the proper innate abilities. These specialists were also members of the cultic organization of Chingichngish and shared special access to ritual and supernatural power forms. In addition to these spiritual roles, the shamans also had ritualistic tools including soapstone or clay pipes for smoking, purification, and sucking disease rituals (Bean and Shipeck 1978:555).

History

Most of the following is derived from the City of Perris web site and Kyle (1990).

Perris is named in honor of Fred T. Perris, chief engineer of the California Southern Railroad. The California Southern connected through the city in the 1880s to build a rail connection between Barstow and San Diego. Prior to this, the bulk of Euro-American occupation of the area was in the Pinacate mining district. The CSR purchased land from Southern Pacific Railroad in the Pinacate area for a town site on the new railroad. Local citizens offered to erect a depot, dig a well, and donate a number of lots to the railroad in exchange for establishing a station at the new town site.

The Perris station came online in April 1886. By 1887, six passenger trains and two freight trains stopped at Perris daily and rapid growth followed for several years. After storms repeatedly washed out the tracks in the Temecula Gorge, service to San Diego through this route ended.

With rapid access to markets assured by the railroad the new town soon relied on agriculture over mining as the primary economic basis for the community. Because of limited groundwater, dry grain farming was the main crop before water was brought to the valley by the Eastern Municipal Water District in the early 1950's. Alfalfa, the King potato (which would produce two crops a year), and still later, sugar beets became the mainstay of farming the Perris Valley. Perris officially incorporated as a city in 1911.

With the construction of Lake Perris, the terminous of the California Water Project, in the late 1960's and early 70's, Perris saw a population jump due to recreational opportunities and as a retirement area.

Romoland was named by Greek immigrant Romonio Homonicholai. The town itself began in the 1890s, planned by the Santa Fe Railroad. In the early 1900s, large numbers of railroad workers from Mexico arrived to become a near dominant ethnic group. They

created shops, schools, recreational facilities and churches that catered to a Spanish speaking community.

The first blood oranges grown in the United States were cultivated in Romoland in the 1920s. In an attempt to build a larger market for the oranges, the Romoland Fruit Co. began in 1936 to market its blood oranges as "citrus tomatoes" on the idea that the word "blood" discouraged buyers. However, "citrus tomatoes" proved unsuccessful, and the Romoland Fruit Co. returned to marketing its oranges as "blood oranges" in 1937. On October 1, 2008, a significant portion of Romoland was annexed by the City of Menifee.

The Winchester vicinity did not see such an expansion of agriculture until the San Jacinto Valley Railway was constructed in 1888. The railroad was bankrolled by C.W. Smith, F.T. Perris and J.A. Green and incorporated in 1887 for the purpose of expanding agricultural potential farther east from Perris Valley. The SJVR looped from Perris (and a connection with the mainline) east and northeast to San Jacinto. Winchester and Hemet were established as communities and stations on the railroad. The SJVR provided farmers in this vicinity with the same ready access to market for fresh produce as the CSR provided for Perris Valley.

The railroad did not last for long as an independent operation. In 1889 it was consolidated with numerous other small railroads in the general area into the Southern California Railway Company. This, in turn, was absorbed by the Atchison, Topeka and Santa Fe upon its formation in 1895 (Atchison, Topeka and Santa Fe 1902). This has since become the Burlington Northern and Santa Fe.

Because of limited groundwater, dry grain farming was the main agricultural pursuit before water was brought to the area by the Eastern Municipal Water District in the early 1950's. Until recent years, when there has been an influx of commuters to the Los Angeles area, the region has remained largely agrarian.

INFORMATION CENTER RECORD SEARCH

A review of records maintained by the Eastern Information Center of the California Historical Resources Information System was conducted by center staff for the Trumble Road Pond area on July 22, 2010. This was repeated in 2012 for all three pond locations. Copies of this communication may be found in Appendix A.

According to the Eastern Information Center files, the entire Trumble Road project area was surveyed for cultural resources with negative results. The survey was conducted in 1988 by archeologists from the Archaeological Research Unit, University of California, Riverside (Swope 1988).

The Case and Watson project area had also been completely surveyed in the past (Wilmoth 1976, Tang, Hogan and Wetherbee 2004) with negative results other than the BNSF Railroad line adjacent to the project area. This was recorded as CA-RIV-8196 (P-33-015743) since it follows the route of the original San Jacinto Valley RR. A large area of land surrounding the project was also surveyed with no sites recorded in the immediate vicinity of the project area.

The bulk of the Winchester project area was surveyed by Bissell and Morgan (1990), who recorded no sites in the project area.except the railroad. The only part of the Winchester site not covered by this survey was the triangle of land north of the railroad, which will not be affected by the proposed project. This also has been surveyed, but years ago (Wells 1975). There have been numerous other surveys in the area surrounding the project, but none have recorded resources in the immediate vicinity.

The Information Center supplied copies of USGS maps from 1901 and 1943 that covered the project areas. None of these indicated the presence of historic features near the proposed project. As would be expected from the historic background above, the land use in the region was agricultural, except for the railroad and later highways.

NATIVE AMERICAN CONTACTS

The Native American Heritage Commission was contacted by Peak & Associates to request a review of their Sacred Lands File, and to provide the names of individuals and/or organizations in the area that may have knowledge concerning cultural resources in the project vicinity.

Peak & Associates sent letters with accompanying maps to the Cahuilla Band of Indians, the Pechanga Band of Mission Indians, the Ramona Band of Mission Indians, the Soboba Band of Mission Indians, the Santa Rosa Band of Mission Indians and the Morongo Band of Mission Indians, requesting any information they may have concerning cultural resources located in the project vicinity. The Soboba Band of Luiseño Indians responded that they wished to continue as a consulting tribal entity as the Trumble Road project was within their traditional use areas. They also requested tribal monitors during earth moving activities. The letter from the Pechanga Band noted earlier was addressed to EMWD.

FIELD INSPECTION

Since the project areas had already been surveyed by qualifed archeologists with negative results, a field inspection of the Trumble Road project area was conducted simply to determine if the result seemed reasonable. The project area is an active agricultural field, although not planted at the time of the survey, thus, surface visibility was excellent. The land is flat, as irrigated farmland would be, but inspection of surrounding lands indicates that this was always flat land or nearly so. There is no rock anywhere on the property and no natural water. It is a highly unlikely place for prehistoric occupation. No artifacts or other evidence of Native American occupation or use of the project areas was observed.

The project area is only about one quarter mile from the San Jacinto River. This suggests that any village in the vicinity would have been located at the river and exploitation of resources in the project area would have been conducted from there. This would leave little or no archeological evidence in the project area.

Evidence of historic use of the vicinity was restricted to the farm roads and irrigation ditches. There are no structures or foundations.

Since all work at the other sites would be confined to area already highly disturbed by pond construction and previously surveyed, we did not repeat field studies at these locations.

CONCLUSIONS

The only cultural resource identified in all the previous studies was the current use railroad, which will not be affected by the current project. The follow-up inspection at Trumble revealed no artifacts on the surface, and they tend to be brought to the surface by plowing when present. We conclude that a finding of no effect regarding historic properties is appropriate.

RECOMMENDATIONS

As with any surface inspection, there is always a remote possibility that previous activities (both natural and cultural) have obscured prehistoric or historic period artifacts or habitation areas, leaving no surface evidence to identify the resources. If, during construction activities, artifacts or non-native stone (obsidian, fine-grained silicates, basalt) are exposed or if unusual amounts of bone or shell are observed or if areas that contain dark-colored sediment that do not appear to have been created through natural processes are discovered, then work should cease in the immediate area of the discovery and a professionally qualified archeologist should be contacted immediately for a on-site inspection of the discovery. If any bone is uncovered that appears to be human, then state law requires that the Riverside County Coroner must be contacted. If the coroner determines that the bone most likely represents a Native American interment, then he must contact the Native American Heritage Commission in Sacramento so that they can identify the most likely descendants.

CITED REFERENCES

Atchison, Topeka and Santa Fe
1902 *Atchison, Topeka and Santa Fe Railway and Auxilliary Companies, Manual No. 7.* Privately printed.

Bean, Lowell John and Florence C. Shipek
1978 Luiseño. In *California*, edited by Robert F. Heizer, pp. 550-563. Handbook of North American Indians, vol. 8, William G. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Bissell, Ronald M. And Marilyn Morgan
1990 *Cultural Resources Recannaisance of the winchester Hills project Area, 2900 Acres in Riverside County.* MS on file: Eastern Information Center, Riverside.

Kyle, Douglas E.
1990 *Historic Spots In California*. (Fourth Edition) Stanford University Press, Palo Alto

Swope, Karen K.
1988 *An Archaeological Assessment of the Homeland/Green Acres Sewer Facility Project Located near Perris in Riverside County.* MS on file: Eastern Information Center, Riverside.

Tang, Bai, Michael Hogan and Matthew Wetherbee
2004 *Historical/Archaeological Resources Survey Report: Perris Valley RWRF Expansion in the City of Perris, Riverside County, CA.* MS on file: Eastern Information Center, Riverside.

Wells, Helen
1975 *Archaeological Impact Report: Eastern Municipal Water District, Riverside County, County, California. PL984 Water Systems Addition.* MS on file: Eastern Information Center, Riverside.

Wilmoth, Stan C.
1976 *Environmental Impact Evaluation: Archaeological Survey of Case Water Systems Addition, Eastern Municipal Water District, Riverside County, County, California.* MS on file: Eastern Information Center, Riverside.

APPENDIX A

Information Center Communication

EASTERN INFORMATION CENTER

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

Department of Anthropology, University of California, Riverside, CA 92521-0418

(951) 827-5745 - Fax (951) 827-5409 - eickw@ucr.edu

Inyo, Mono, and Riverside Counties

September 24, 2012
EIC- RIV-ST-1966

Melinda A. Peak
Peak & Associates, Inc.
3941 Park Drive, Suite 20, No. 329
El Dorado Hills, CA 95762

Re: Cultural Resources Records Search for the Three EMWD Project Areas

Dear Ms. Peak:

We received your request on September 11, 2011, for a cultural resources records search for the Three EMWD Project Areas in Riverside County. We have reviewed our site records, maps, and manuscripts against the location maps you provided.

Winchester Project Area: located in Section 30, T.6S, R.2W, SBBM, in the area between Sun City and Homeland.

Our records indicate that 15 cultural resources studies have been conducted within or adjacent to your project area. Two of these studies involved the project area. Six additional studies provide overviews of cultural resources in the general project vicinity

One cultural resource property involved a portion of the project area.

North Trumble Project Area: located in Section 3, T.4S, R.3W, SBBM, near the City of Perris.

Our records indicate that two cultural resources studies have been conducted within or adjacent to your project area. One of these studies involved the project area.

No cultural resource properties involved or are adjacent to the project area.

Case/Watson Roads Project Areas: located in section 9, T.5S, R.3W, SBBM, near the City of Perris.

Our records indicate that five cultural resources studies have been conducted within or adjacent to your project area. Three of these studies involved the project area.

One cultural resource property involved a portion of the project area.

All of these reports are listed on the attachment entitled "Eastern Information Center Report Listing" and are available upon request at 15¢/page plus $40/hour. A copy of the record is included for your reference.

The above information is reflected on the enclosed maps. Areas that have been surveyed are highlighted in yellow. Numbers marked in blue ink refer to the report number (RI #). Cultural resources properties are marked in red; numbers in black refer to Trinomial designations, those in green to Primary Number designations.

Additional sources of information consulted are identified below.

National Register of Historic Places: no listed properties are located within the boundaries of the project area.

Office of Historic Preservation (OHP), Archaeological Determinations of Eligibility (ADOE): no listed properties are located within the boundaries of the project area.

Office of Historic Preservation (OHP), Historic Property Directory (HPD): no listed properties are located within the boundaries of the project area.

Note: not all properties in the California Historical Resources Information System are listed in the OHP ADOE and HPD; the ADOE and HPD comprise lists of properties submitted to the OHP for review.

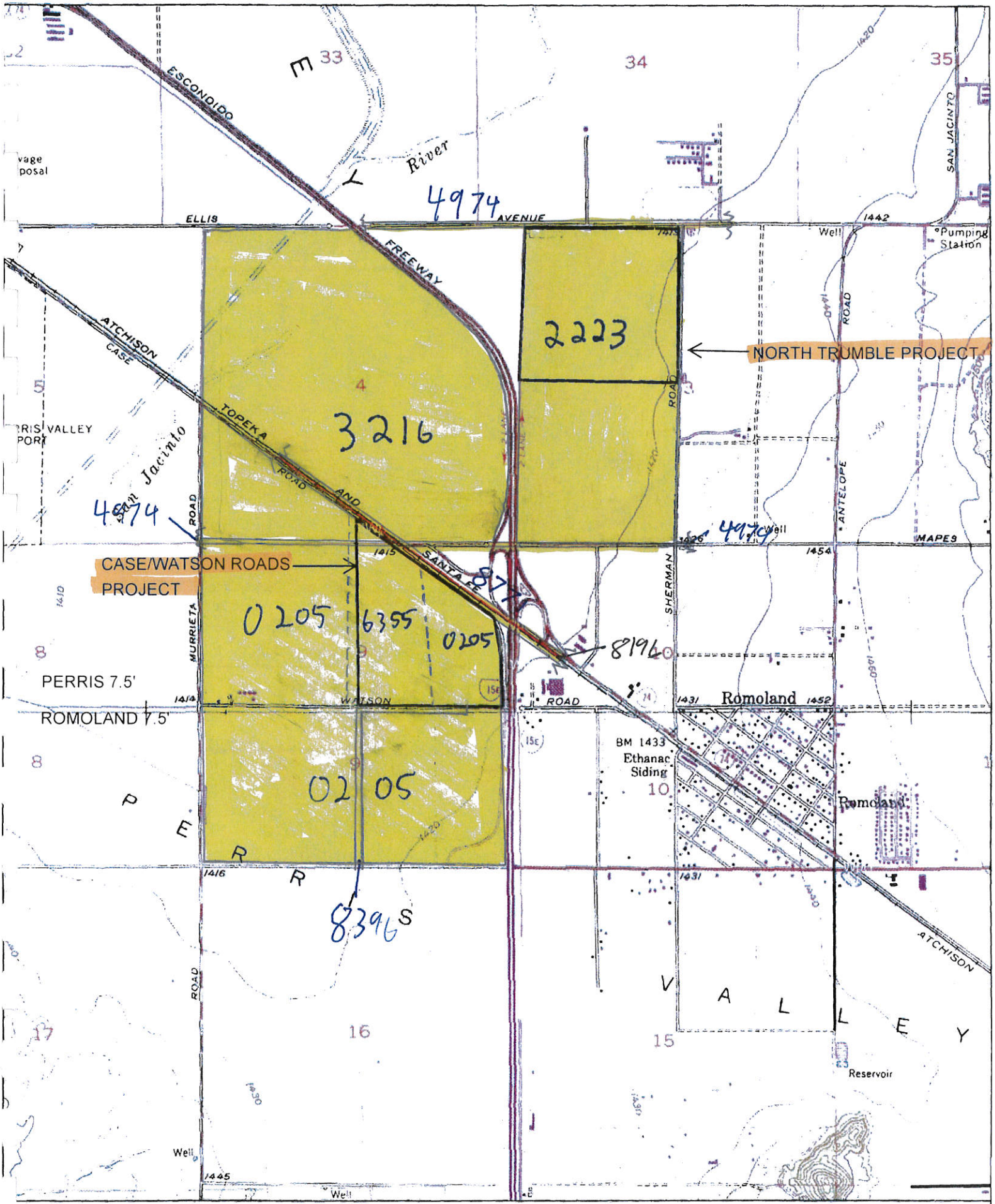
Copies of the relevant portions of the 1943 USGS Perris 15' and the 1901 USGS Elsinore 30' topographic maps are included for your reference.

As the Information Center for Riverside County, it is necessary that we receive a copy of <u>all</u> cultural resources reports and site information pertaining to this county in order to maintain our map and manuscript files. Confidential information provided with this records search regarding the location of cultural resources outside the boundaries of your project area should not be included in reports addressing the project area.

Sincerely,

Michael P. Loyd
Information Officer

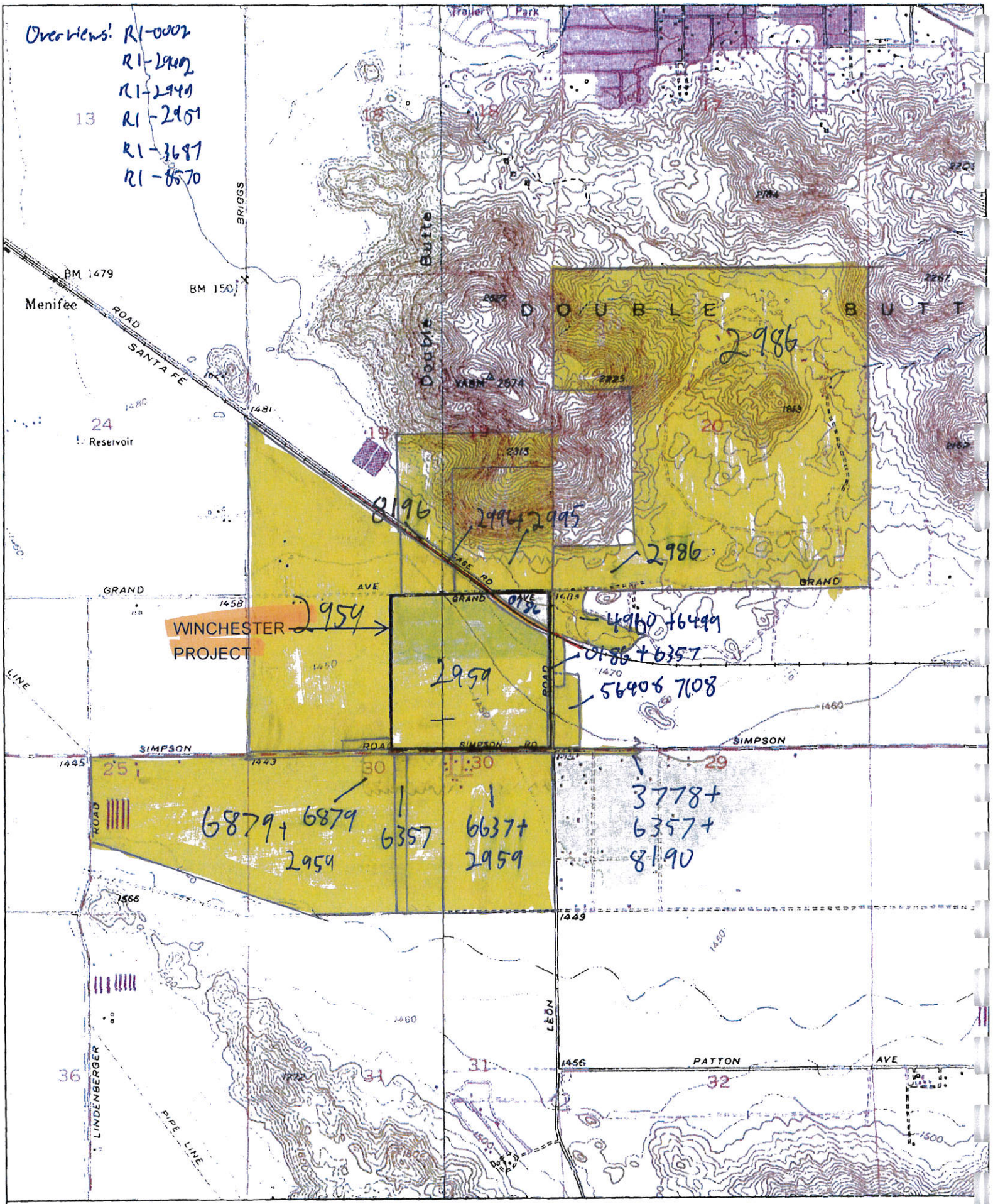
Enclosures



Name: PERRIS
Date: 9/10/2012
Scale: 1 inch equals 2000 feet

Location: 11 482481 E 3734806 N
Caption: EMWD North Trumble and Case/Watson Roads Project Areas

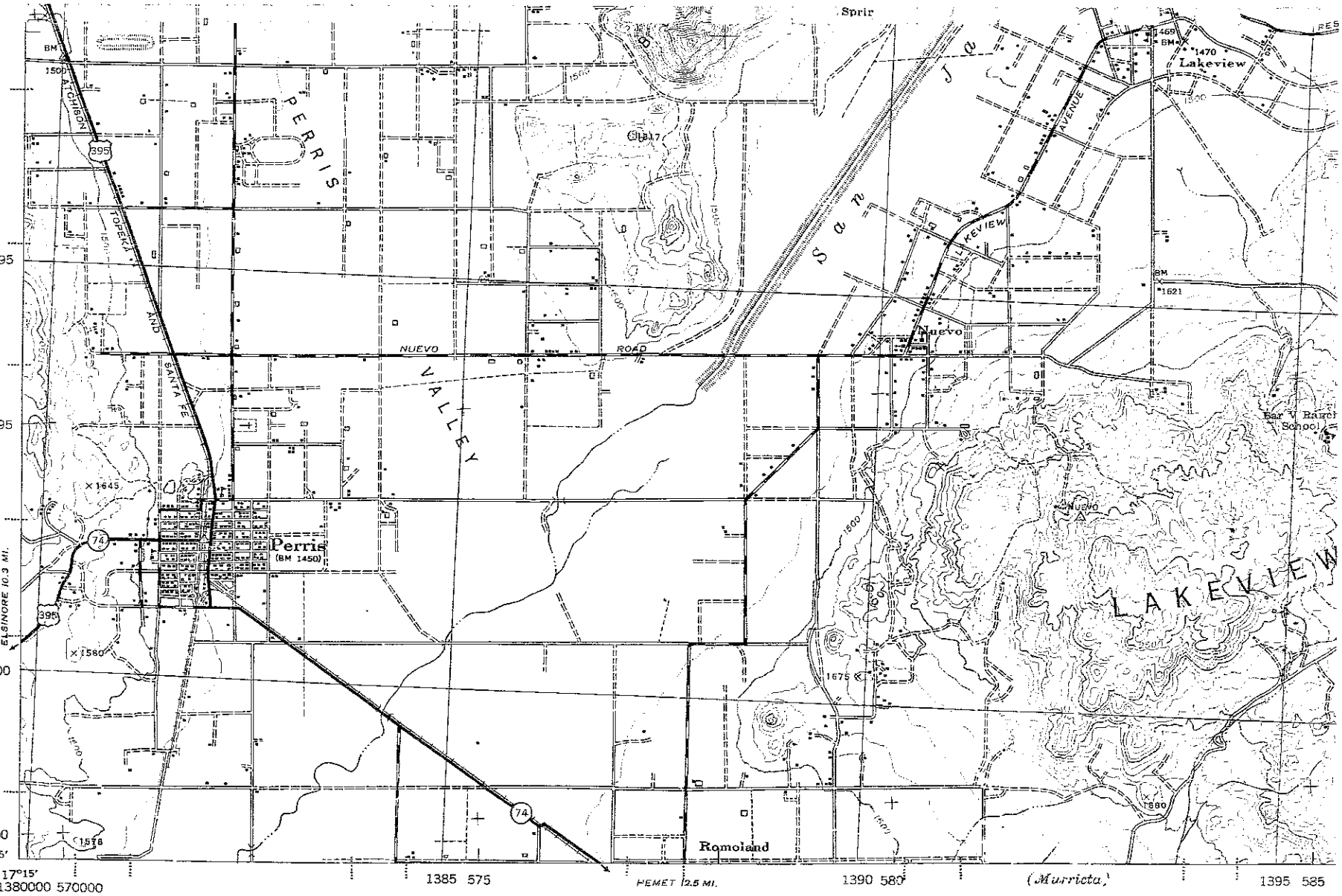
MAP1



Name: WINCHESTER
Date: 9/10/2012
Scale: 1 inch equals 2000 feet

Location: 11 488701 E 3730222 N
Caption: EMWD Winchester Project Area

MAP 2



15'
1943
Perris

Prepared under the direction of the Chief of Engineers, U. S. Army, 1942.
Horizontal control by U. S. Coast and Geodetic Survey, 1931 and 29th Engineers, U. S. Army, 1940.
Vertical control by U. S. Geological Survey, 1900, U. S. Coast and Geodetic Survey, 1927, 1935, 1939 and 29th Engineers, U. S. Army, 1940.
Topography by 29th Engineers, U. S. Army, 1942, utilizing multiplex aero-projectors from Tandem T-3A (5 lens) aerial photographs.
Photography by 91st Observation Squadron, Air Corps, U. S. Army, 1939.
Polyconic Projection; North American 1927 Datum.

ROAD CLASSIFICATIONS

Dependable hard surface, heavy duty road.
Loose surface graded, dry weather road.
U. S. Route 395
Secondary, hard surface, all weather road.
Dirt road.
State Route 79
More than two lanes indicated by note with tick at point of change. 3 LANE | 4 LANE

Road Data 1942

BRUSH

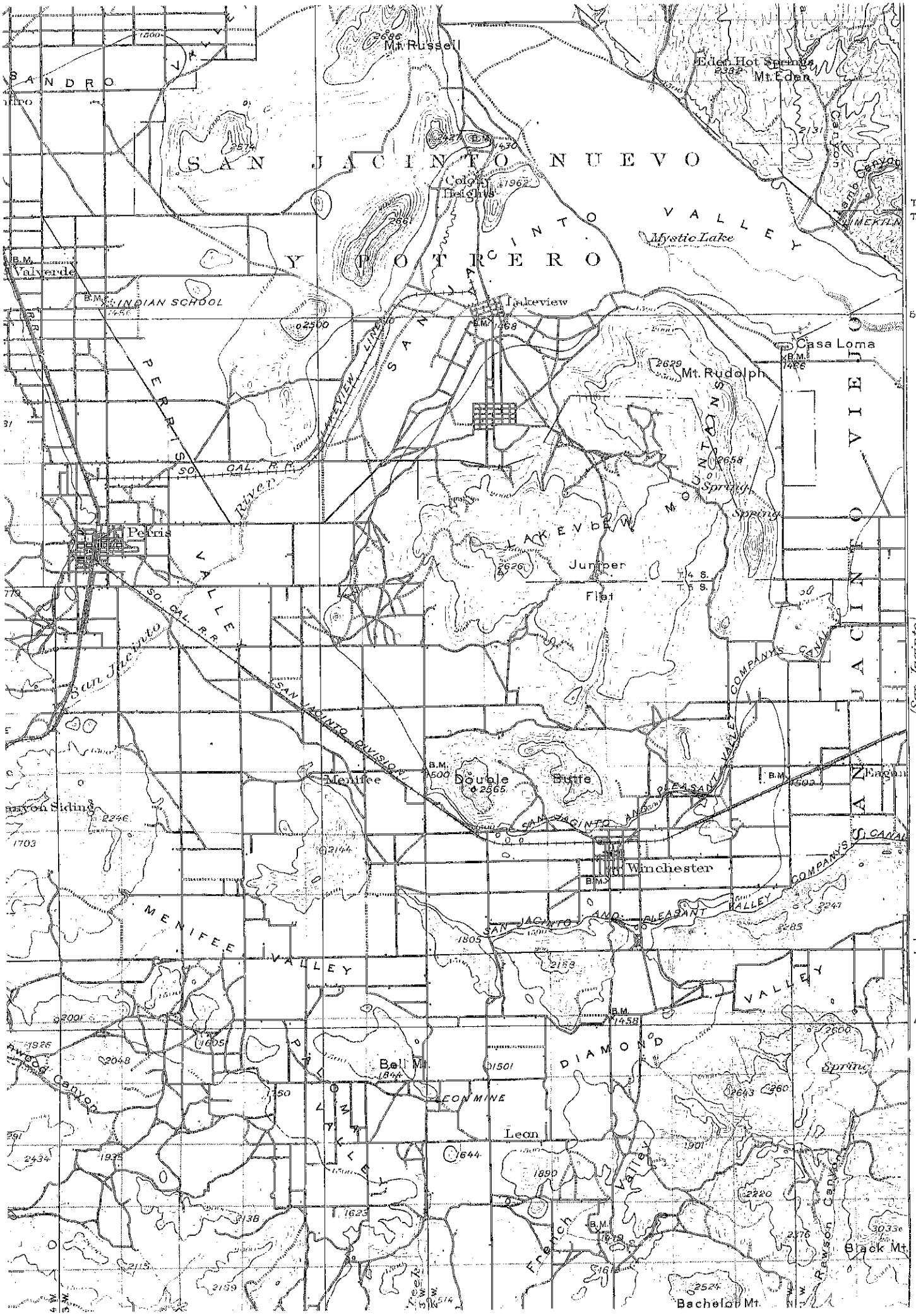
Scale 1/62500

Contour interval 50 feet

Datum is mean sea level (1929 Adj.)

FIVE THOUSAND YARD GRID COMPUTED FROM "GRID SYSTEM FOR PROGRESSIVE MAPS IN THE U. S." C. & G. S. SPECIAL PUBLICATION NO. 59
(THE LAST THREE DIGITS OF THE GRID NUMBERS ARE OMITTED)

NOTE: OFFICERS USING THIS MAP WILL MARK HEREON CORRECTIONS AND ADDITIONS WHICH COME TO THEIR ATTENTION AND MAIL DIRECT TO "THE CHIEF OF ENGINEERS, WASHINGTON, D. C."


Mt. Russell
Eden Hot Springs
Mt. Eden
SAN JACINTO NUEVO Y POTRERO
SAN JACINTO VALLEY
Mystic Lake
Colony Heights
Valverde
INDIAN SCHOOL
Lakeview
Casa Loma
Mt. Rudolph
PERRIS VALLEY
SO. CAL. R.R.
Perris
River
LAKEVIEW MOUNTAINS
Spring
Juniper Flat
San Jacinto
SAN JACINTO BRANCH
Menifee
Double Butte
SAN JACINTO AND PLEASANT VALLEY COMPANY'S CANAL
Winchester
MENIFEE VALLEY
Ball Mt.
LEON MINE
Leon
DIAMOND VALLEY
French Valley
Ramson Canyon
Black Mt.
Bachelor Mt.
T. 3 S.
T. 4 S.
T. 5 S.
T. 6 S.
50'
40'

Eastern Information Center Report Listing

Report No.	Year	Author(s)	Title	Affiliation	Pages	Resources	Acreage — Survey	Acreage — Monitoring
RI-00002	1953	Malcolm J. Rogers	Miscellaneous Field Notes - Riverside County. San Diego Museum of Man	San Diego Musue of Man	236	0	0.00	0.00
RI-00186	1975	Helen Wells	Archaeological Impact Report: Eastern Municipal Water District, Riverside County, California: PL 984 Water Systems Addition	Archaeological Research Unit, U.C. Riverside	18	1	~94.55	0.00
RI-00205	1976	Stan C. Wilmoth	Environmental Impact Evaluation: Archaeological Survey of Case Water Systems Addition, Eastern Municipal Water District, Riverside County, California.	Archaeological Research Unit, U.C. Riverside	6	0	690.00	0.00
RI-02223	1988	SWOPE, KAREN K.	AN ARCHAEOLOGICAL ASSESSMENT OF THE HOMELAND/GREEN ACRES SEWER FACILITY PROJECT LOCATED NEAR PERRIS IN RIVERSIDE COUNTY	ARCHAEOLOGICAL RESEARCH UNIT, U.C. RIVERSIDE	6	0	320.00	0.00
RI-02942	1988	SCIENTIFIC RESOURCE SURVEYS, INC.	CULTURAL RESOURCES INVESTIGATION OF THE EASTERN RESERVOIR STUDIES PROJECT AREA, WESTERN RIVERSIDE COUNTY	SCIENTIFIC RESOURCE SURVEYS, INC.	219	0	0.00	0.00
RI-02949	1993	GOLDBERG, SUSAN K. and OTHERS	METROPOLITAN WATER DISTRICT DOMENIGONI VALLEY RESERVOIR PROJECT: HISTORIC PROPERTIES TREATMENT PLAN	INFOTEC AND GREENWOOD	308	0	0.00	0.00
RI-02951	1994	GREENWOOD, ROBERTA S., JOHN M. FOSTER, and MARK SWANSON	HISTORY AND HISTORICAL ARCHAEOLOGY OF THE DOMENIGONI VALLEY, VOLUME I: HISTORICAL OVERVIEW AND RESEARCH IMPLICATIONS, FINAL REPORT	GREENWOOD AND ASSOCIATES	173	0	0.00	0.00
RI-02959	1990	BISSELL, RONALD M. and MARILYN MORGAN	CULTURAL RESOURCES RECONNAISANCE OF THE WINCHESTER HILLS PROJECT AREA 2900 ACRES IN RIVERSIDE COUNTY, CALIFORNIA.	RMW PALEO ASSOCIATES	43	36	0.00	0.00
RI-02996	1992	DE BARROS, PHILIP	A CULTURAL RESOURCE ASSESSMENT OF A 160-ACRE PARCEL NEAR WINCHESTER, RIVERSIDE COUNTY, CALIFORNIA, KNOWN AS THE WINCHESTER FACILITY PROJECT	CHAMBERS GROUP, INC., ARCHAEOLOGY DIVISION	40	2	160.00	0.00
RI-03216	1991	BECKER, KENNETH M.	A CULTURAL RESOURCES RECONNAISSANCE OF THE RIVERGLEN SPECIFIC PLAN, APPROXIMATELY 332 ACRES IN THE CITY OF PERRIS, RIVERSIDE COUNTY, CALIFORNIA	RMW PALEO ASSOCIATES	20	4	0.00	0.00

Eastern Information Center Report Listing

Report No.	Year	Author(s)	Title	Affiliation	Pages	Resources	Acreage ----- Survey	Acreage ----- Monitoring
RI-03687	1994	FOSTER, JOHN M., DANIEL L. LANDIS, GWENDOLYN R. ROMANI, R. PAUL HAMPSON, and VICKI L. SOLHEID	HISTORY AND HISTORICAL ARCHAEOLOGY OF THE DOMENIGONI VALLEY, TESTING AND EVALUATION REPORT NUMBER 6: MUD, STONE, ROCK, AND WATER UTILIZATION IN THE DOMENIGONI VALLEY	GREENWOOD AND ASSOCIATES, Pacific Palisades, CA	418	7	0.00	0.00
RI-03778	1994	DROVER, CHRISTOPHER	ENVIRONMENTAL IMPACT EVALUATION: A CULTURAL RESOURCES IMPACT ASSESSMENT OF THE PROPOSED REACH 3 RECLAIMED WATER TRANSMISSION FACILITIES PIPELINE ALIGNMENT, SIMPSON ROAD BETWEEN LEON AND WARREN ROADS	AUTHOR	9	0	16.00	0.00
RI-04960	2005	TANG, BAI, MICHAEL HOGAN, CASEY TIBBET, and DANIEL BALLESTER	ADDENDUM TO HISTORICAL/ARCHAEOLOGICAL RESOURCES SURVEY REPORT: WINCHESTER HILLS COMMUNITY FACILITES DISTRICT INFRASTRUCTURE IMPROVEMENT PROJECT	CRM TECH, Riverside, CA	26	7	~151.00	0.00
RI-04974	2005	HOOVER, ANNA M and WILLIAM R. GILLEAN	A PHASE IA RCHAEOLOGICAL SURVEY REPORT FOR THE PHASE II PERRIS DESALTER TRANSMISSION PIPELINE PROJECT, NEAR PERRIS, RIVERSIDE COUNTY, CALIFORNIA.	L&L ENVIRONMENTAL, INC.	63	0	~42.18	0.00
RI-05640	2003	WHITE, ROBERT S. and LAURA S. WHITE	A CULTURAL RESOURCES ASSESSMENT OF TENTATIVE TRACT 30989, A 58.3 ACRE PARCEL LOCATED NORTHEAST OF THE INTERSECTION OF LEON AND SIMPSON ROADS, WINCHESTER, UNINCORPORATED RIVERSIDE COUNTY	ARCHAEOLOGICAL ASSOCIATES	33	6	58.30	0.00
RI-06355	2004	TANG, BAI, MICHAEL HOGAN, and MATTHEW WETHERBEE	HISTORICAL/ARCHAEOLOGICAL RESOURCES SURVEY REPORT: PERRIS VALLEY RWRF EXPANSION, IN THE CITY OF PERRIS, RIVERSIDE COUNTY, CA	CRM TECH	19	0	150.00	0.00
RI-06357	2004	HOGAN, MICHAEL, BAI TANG, CASEY TIBBET, and JOHN EDDY	HISTORICAL/ARCHAEOLOGICAL RESOURCES SURVEY REPORT: WINCHESTER HILLS COMMUNITY FACILITIES DISTRICT INFRASTRUCTURE IMPROVEMENT PROJECT, WINCHESTER AREA, RIVERSIDE COUNTY, CALIFORNIA	CRM TECH, Riverside, CA	30	6	182.82	0.00

Eastern Information Center Report Listing

Report No.	Year	Author(s)	Title	Affiliation	Pages	Resources	Acreage ---- Survey	Acreage ---- Monitoring
RI-06499	2005	HOGAN, MICAHEL and BAI TANG	LETTER REPORT: ADDENDUM TO HISTORICAL/ARCHAEOLOGICAL RESOURCES SURVEY REPORT, WINCHESTER HILLS COMMUNITY FACILITIES DISTRICT INFRASTRUCTURE IMPROVEMENT PROJECT, WINCHESTER AREA, RIVERSIDE COUNTY, CA	CRM TECH. Riverside, CA	5	1	~90.00	0.00
RI-06879	2006	Joan C. Brown	Archaeological Literature Review for the Polley and Sattler Property Located Near Winchester, Riverside County, California	SWCA Environmental Consultants, Mission Viego, CA	23	11	~0.00	0.00
RI-07108	2007	Hoover, Anna M. and Hugh M. Wagner	A Phase I Archaeological and Paleontological Survey Report for, APN 462-020-051, TR 34842, EA 40875, A +/- 10 Acre Property, Winchester, County of Riverside, California.	L&L Environmental, Inc., Corona, CA	76	0	~10.00	0.00
RI-08190	1993	William G. White	Simpson Road Reclaimed Water Transmission Main, Phase I and II, Reach 6 Eastern Municipal Water District	Bureau of Reclamation Lower Colorado Region, Boulder City, Nevada	8	0	0.00	0.00
RI-08396	2010	Joan George and Dennid McDougall	Cultural Resources Report for the Sun City Force Main and Recycled Water Project, Riverside County, California.	Applied EarthWorks, Inc.	47	0	~21.75	0.00
RI-08570	2003	Jeanette A. McKenna	Letter Report: Winchester Valley 85 Review	McKenna et al.	4	11	85.00	0.00

Eastern Information Center Resource Listing

Primary No.	Trinomial	Other IDs	Reports
P-33-015743	CA-RIV-8196		RI-07528, RI-07833

APPENDIX B

Native American Communication

PEAK & ASSOCIATES, INC.
CONSULTING ARCHEOLOGY
30 Years: 1975-2005

September 10, 2010

Ms. Debbie Pilas-Treadway
Native American Heritage Commission
915 Capitol Mall, Room 288
Sacramento, CA 95814

Dear Ms. Treadway:

Peak & Associates, Inc. has contracted with Dunbar and Associates to perform a cultural resources assessment of the proposed expansion of the Trumble Road Pond Expansion for Eastern Municipal Water District. This involves a parcel of about 150 acres adjacent to the existing water treatment plant and EMWD headquarters near Perris, Riverside County. The project area lies in T3S, R3W, Section 3 and is mapped on the Perris 7.5' USGS quadrangle, which is the base for the attached map.

Because of federal matching funds this is a federal undertaking. In accordance with the Secretary of the Interior's Guidelines for implementing Section 106, we are requesting a list of appropriate Native American contacts for the project area. We also request a check of the Sacred Lands Inventory for any potential conflicts.

Thank you for your assistance.

Sincerely,

Robert A. Gerry
Consulting Archeologist

//RG
Encl.

■ 3941 Park Drive, Suite 20, #329, El Dorado Hills, CA 95762/Phone: (916)939-2405/Fax: 939-2406/email: peakinc@sbcglobal.net
□ 3161 Godman Avenue, Suite A, Chico, CA 95973/Phone: (530)342-2800/Fax: 342-0273/email: peakinc@cmc.net

PEAK & ASSOCIATES, INC.
CONSULTING ARCHEOLOGY

September 10, 2010

Dear :

Peak & Associates, Inc. has contracted with Dunbar and Associates to perform a cultural resources assessment of the proposed expansion of the Trumble Road Pond Expansion for Eastern Municipal Water District. This involves a parcel of about 150 acres adjacent to the existing water treatment plant and EMWD headquarters near Perris, Riverside County. The project area lies in T3S, R3W, Section 3 and is mapped on the Perris 7.5' USGS quadrangle, which is the base for the attached map.

The attached map indicates the general location of construction. The final project may not use all of the property. The record search revealed that the property had been surveyed by a team from U.C. Riverside in 1988, with no resources identified.

We are contacting individuals identified by the Native American Heritage Commission as persons who might have information to contribute regarding potential Native American concerns in the project area. Any information or concerns that you may have regarding village sites, traditional properties or modern Native American uses in any portion of the project vicinity will be welcomed. If you know other individuals who are familiar with the vicinity, we would welcome this information as well.

We recognize that much of the information about protected and sacred sites may be confidential within your community and cannot be shared with those outside of your community. We will work with you to minimize impact on your cultural resources. Please contact me to discuss how we can accomplish protection of your cultural resources within your limits of confidentiality and the needs of the project. Any confidential information you share will be kept confidential, so long as you make it clear which information is confidential and to what extent. We will have to communicate to our client that an area must be avoided, but we do not have to go into detail as to why.

Thank you for your assistance.

Sincerely,

Robert A. Gerry
Consulting Archeologist

RG//
Encl.

■ 3941 Park Drive, Suite 20-329, El Dorado Hills, CA 95762/Phone: (916)939-2405/Fax: 939-2406/email: peakinc@jps.net
□ 3161 Godman Avenue, Suite A, Chico, CA 95973/Phone: (530)342-2800/Fax: 342-0273/email: peakinc@cmc.net

MAILING LIST

Pechanga Band of Mission Indians
Mr. Paul Macarro, Cultural Resource Center
PO Box 1477
Temecula, CA 92593

Ramona Band of Mission Indians
Mr. Joseph Hamilton, Chairman
PO Box 391670
Anza, CA 92539

Morongo Band of Mission Indians
Mr. Michael Contreras, Cultural Heritage Program Coordinator
12700 Pumarra Road
Banning, CA 92220

Soboba Band of Luiseno Indians
Mr. Joseph Ontiveros, Cultural Resources Manager
PO Box 487
San Jacinto, CA 92581

Cahuilla Band of Indians
Mr. Luther Salgado, Sr.
PO Box 391760
Anza, CA 92539

Pechanga Cultural Resources Department
Ms. Anna Hoover, Cultural Analyst
PO Box 2183
Temecula, CA 92593

Santa Rosa Band of Mission Indians
Mr. John Marcus, Chairman
PO Box 609
Hemet, CA 92546

APPENDIX C

Resumés of Investigators

PEAK & ASSOCIATES, INC.
RESUME

MELINDA A. PEAK
Senior Historian/Archeologist
3941 Park Drive, Suite 20 #329
El Dorado Hills, CA 95762
(916) 939-2405

January 2011

PROFESSIONAL EXPERIENCE

Ms. Peak has served as the principal investigator on a wide range of prehistoric and historic excavations throughout California. She has directed laboratory analyses of archeological materials, including the historic period. She has also conducted a wide variety of cultural resource assessments in California, including documentary research, field survey, Native American consultation and report preparation.

In addition, Ms. Peak has developed a second field of expertise in applied history, specializing in site-specific research for historic period resources. She is a registered professional historian and has completed a number of historical research projects for a wide variety of site types.

Through her education and experience, Ms. Peak meets the Secretary of Interior Standards for historian, architectural historian, prehistoric archeologist and historic archeologist.

EDUCATION

M.A. - History - California State University, Sacramento, 1989
Thesis: *The Bellevue Mine: A Historical Resources Management Site Study in Plumas and Sierra Counties, California*
B.A. - Anthropology - University of California, Berkeley

RECENT PROJECTS

Ms. Peak completed the cultural resource research and contributed to the text prepared for the DeSabla-Centerville PAD for the initial stage of the FERC relicensing. She also served cultural resource project manager for the FERC relicensing of the Beardsley-Donnells Project. For the South Feather Power Project and the Woodleaf-Palermo and Sly Creek Transmission Lines, her team completing the technical work for the project.

In recent months, Ms. Peak has completed several determinations of eligibility and effect documents in coordination with the Corps of Engineers for projects requiring federal permits, assessing the eligibility of a number of sites for the National Register of Historic Places. She has also completed historical research projects on a wide variety of topics for a number of projects including the development of navigation and landings on the Napa River, farmhouses dating to the 1860s, bridges, an early roadhouse, Folsom Dam and a section of an electric railway line.

In recent years, Ms. Peak has prepared a number of cultural resource overviews and predictive models for blocks of land proposed for future development for general and

specific plans. She has been able to direct a number of surveys of these areas, allowing the model to be tested.

She served as principal investigator for the multi-phase Twelve Bridges Golf Club project in Placer County. She served as liaison with the various agencies, helped prepare the historic properties treatment plan, managed the various phases of test and data recovery excavations, and completed the final report on the analysis of the test phase excavations of a number of prehistoric sites. She is currently involved as the principal investigator for the Clover Valley Lakes project adjacent to Twelve Bridges in the City of Rocklin, coordinating contacts with Native Americans, the Corps of Engineers and the Office of Historic Preservation.

Ms. Peak has served as project manager for a number of major survey and excavation projects in recent years, including the many surveys and site definition excavations for the 172-mile-long Pacific Pipeline proposed for construction in Santa Barbara, Ventura and Los Angeles counties. She also completed an archival study in the City of Los Angeles for the project. She also served as principal investigator for a major coaxial cable removal project for AT&T.

Additionally, she completed a number of small surveys, served as a construction monitor at several urban sites, and conducted emergency recovery excavations for sites found during monitoring. She has directed the excavations of several historic complexes in Sacramento, Placer and El Dorado Counties.

Ms. Peak is the author of a chapter and two sections of a published history (1999) of Sacramento County, *Sacramento: Gold Rush Legacy, Metropolitan Destiny*. She served as the consultant for a children's book on California, published by Capstone Press in 2003 in the land of Liberty series.

PEAK & ASSOCIATES, INC.
RESUME

ROBERT A. GERRY
Senior Archeologist
3941 Park Drive, Suite 20, #329
El Dorado Hills, CA 95762
(916) 939-2405

December 2011

PROFESSIONAL EXPERIENCE

Mr. Gerry has forty years of extensive experience in both the public and private sectors. He has directed all types of cultural resource-related projects, including field survey, test excavations, data recovery programs, intensive archival research, cultural resource management and monitoring. He has completed archeological work in most cultural areas of California and the western Great Basin.

EDUCATION

Graduate studies - Anthropology - California State University, Sacramento
B.A. - Anthropology - University of Illinois, Chicago Circle

RECENT PROJECTS

Mr. Gerry was field director for a cultural resources survey of the Diamond Valley Project in Alpine County, California. The project involved an overview and survey of an extensive plan area, recording and evaluation of resources and presenting the results to local Native Americans and helping to conduct a field tour with them. He also directed field survey of the Van Vleck Ranch, a large property in Sacramento County being put into a conservation easement.

He was field director and primary report writer on several linear surveys of considerable length--including the San Joaquin Valley Pipeline, the Point Arena-Dunnigan fiber optic cable, and the Medford, Oregon, to Redding, California fiber optic cable. He has also developed a specialty in bridge replacement evaluations, completing five such studies in Tuolumne County, two in Santa Barbara County, two in Amador County and eleven others in various areas of California. He has conducted surveys throughout California related to low income housing development.

Mr. Gerry has directed test excavations for evaluation of significance at a number of sites, both historic and prehistoric. In the field of historical resources, Mr. Gerry has prepared site records and significance evaluations for numerous historical buildings throughout California. The bulk of these have been single family residences, but industrial, commercial and multi-family residences also were addressed. He has directed excavations for evaluation of historical archeological potential at potential historical archeological sites and monitored construction work in areas of known historical sensitivity.

Appendix C

Air Quality Supporting Information

11/5/2012 11:21:25 AM

Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name:

Project Name: North Trumble Recycled Water Storage Ponds

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 (Annual Tons Per Year, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
2014	3.65	31.35	13.31	0.00	0.00	1.16	1.16	0.00	1.07	1.07	4,581.23
Mass Grading 07/01/2014-02/29/2016	3.65	31.35	13.31	0.00	0.00	1.16	1.16	0.00	1.07	1.07	4,581.23
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	3.63	31.32	12.79	0.00	0.00	1.16	1.16	0.00	1.06	1.06	4,499.18
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.02	0.03	0.52	0.00	0.00	0.00	0.01	0.00	0.00	0.00	82.05
2015	6.79	56.19	24.98	0.00	0.01	2.06	2.07	0.00	1.90	1.90	9,058.33
Mass Grading 07/01/2014-02/29/2016	6.79	56.19	24.98	0.00	0.01	2.06	2.07	0.00	1.90	1.90	9,058.33
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	6.76	56.14	24.03	0.00	0.00	2.06	2.06	0.00	1.89	1.89	8,896.11
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.03	0.05	0.95	0.00	0.01	0.00	0.01	0.00	0.00	0.01	162.22

2016	1.29	10.11	4.82	0.00	0.00	0.37	0.37	0.00	0.34	0.34	1,873.46
Mass Grading 07/01/2014-02/29/2016	1.04	8.18	3.86	0.00	0.00	0.30	0.30	0.00	0.28	0.28	1,457.66
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	1.04	8.17	3.71	0.00	0.00	0.30	0.30	0.00	0.28	0.28	1,431.56
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.10
Building 03/01/2016-07/31/2016	0.25	1.93	0.96	0.00	0.00	0.07	0.07	0.00	0.06	0.06	415.80
Building Off Road Diesel	0.25	1.93	0.96	0.00	0.00	0.07	0.07	0.00	0.06	0.06	415.80
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: Mass Grading 7/1/2014 - 2/29/2016 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 0

Maximum Daily Acreage Disturbed: 0

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

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

6 Crawler Tractors (550 hp) operating at a 0.64 load factor for 8 hours per day

4 Excavators (476 hp) operating at a 0.57 load factor for 8 hours per day

1 Generator Sets (549 hp) operating at a 0.74 load factor for 4 hours per day

2 Graders (259 hp) operating at a 0.61 load factor for 8 hours per day

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

2 Rollers (904 hp) operating at a 0.56 load factor for 8 hours per day

10 Scrapers (330 hp) operating at a 0.72 load factor for 8 hours per day

1 Sweepers/Scrubbers (500 hp) operating at a 0.68 load factor for 8 hours per day

6 Tractors/Loaders/Backhoes (801 hp) operating at a 0.55 load factor for 8 hours per day

1 Trenchers (63 hp) operating at a 0.75 load factor for 4 hours per day

1 Welders (175 hp) operating at a 0.45 load factor for 4 hours per day

2 Water Trucks (500 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 3/1/2016 - 7/31/2016 - Default Building Construction Description

Off-Road Equipment:

1 Air Compressors (175 hp) operating at a 0.48 load factor for 4 hours per day

1 Bore/Drill Rigs (291 hp) operating at a 0.75 load factor for 4 hours per day

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

1 Excavators (476 hp) operating at a 0.57 load factor for 8 hours per day

1 Generator Sets (549 hp) operating at a 0.74 load factor for 4 hours per day

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

1 Sweepers/Scrubbers (500 hp) operating at a 0.68 load factor for 4 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 5 hours per day

1 Welders (175 hp) operating at a 0.45 load factor for 4 hours per day

1 Water Trucks (500 hp) operating at a 0.5 load factor for 2 hours per day

11/5/2012 11:19:38 AM

Urbemis 2007 Version 9.2.4

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

File Name:

Project Name: North Trumble Recycled Water Storage Ponds

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 7/1/2014-12/31/2014 Active Days: 132	**55.25**	**474.99**	**201.66**	**0.01**	**0.06**	**17.56**	**17.62**	**0.02**	**16.15**	**16.17**	**69,412.59**
Mass Grading 07/01/2014-02/29/2016	55.25	474.99	201.66	0.01	0.06	17.56	17.62	0.02	16.15	16.17	69,412.59
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	55.03	474.56	193.81	0.00	0.00	17.52	17.52	0.00	16.12	16.12	68,169.40
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.23	0.44	7.86	0.01	0.06	0.04	0.10	0.02	0.03	0.05	1,243.19
Time Slice 1/1/2015-12/31/2015 Active Days: 261	52.03	430.55	191.43	**0.01**	**0.06**	15.80	15.86	**0.02**	14.53	14.56	69,412.48
Mass Grading 07/01/2014-02/29/2016	52.03	430.55	191.43	0.01	0.06	15.80	15.86	0.02	14.53	14.56	69,412.48
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	51.82	430.15	184.12	0.00	0.00	15.76	15.76	0.00	14.50	14.50	68,169.40
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.21	0.40	7.32	0.01	0.06	0.04	0.10	0.02	0.03	0.05	1,243.08

Time Slice 1/1/2016-2/29/2016 Active Days: 42	49.59	389.48	183.62	0.01	0.06	14.37	14.42	0.02	13.21	13.23	69,412.33
Mass Grading 07/01/2014-02/29/2016	49.59	389.48	183.62	0.01	0.06	14.37	14.42	0.02	13.21	13.23	69,412.33
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	49.40	389.11	176.78	0.00	0.00	14.33	14.33	0.00	13.18	13.18	68,169.40
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.19	0.37	6.83	0.01	0.06	0.04	0.10	0.02	0.03	0.05	1,242.94
Time Slice 3/1/2016-7/29/2016 Active Days: 109	4.52	35.39	17.66	0.00	0.00	1.25	1.25	0.00	1.15	1.15	7,629.40
Building 03/01/2016-07/31/2016	4.52	35.39	17.66	0.00	0.00	1.25	1.25	0.00	1.15	1.15	7,629.40
Building Off Road Diesel	4.52	35.39	17.66	0.00	0.00	1.25	1.25	0.00	1.15	1.15	7,629.40
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: Mass Grading 7/1/2014 - 2/29/2016 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 0

Maximum Daily Acreage Disturbed: 0

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

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

6 Crawler Tractors (550 hp) operating at a 0.64 load factor for 8 hours per day

4 Excavators (476 hp) operating at a 0.57 load factor for 8 hours per day

1 Generator Sets (549 hp) operating at a 0.74 load factor for 4 hours per day

2 Graders (259 hp) operating at a 0.61 load factor for 8 hours per day

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

2 Rollers (904 hp) operating at a 0.56 load factor for 8 hours per day

10 Scrapers (330 hp) operating at a 0.72 load factor for 8 hours per day

1 Sweepers/Scrubbers (500 hp) operating at a 0.68 load factor for 8 hours per day

6 Tractors/Loaders/Backhoes (801 hp) operating at a 0.55 load factor for 8 hours per day

1 Trenchers (63 hp) operating at a 0.75 load factor for 4 hours per day
1 Welders (175 hp) operating at a 0.45 load factor for 4 hours per day
2 Water Trucks (500 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 3/1/2016 - 7/31/2016 - Default Building Construction Description
Off-Road Equipment:
1 Air Compressors (175 hp) operating at a 0.48 load factor for 4 hours per day
1 Bore/Drill Rigs (291 hp) operating at a 0.75 load factor for 4 hours per day
1 Cranes (399 hp) operating at a 0.43 load factor for 1 hours per day
1 Excavators (476 hp) operating at a 0.57 load factor for 8 hours per day
1 Generator Sets (549 hp) operating at a 0.74 load factor for 4 hours per day
2 Off Highway Trucks (479 hp) operating at a 0.57 load factor for 4 hours per day
1 Sweepers/Scrubbers (500 hp) operating at a 0.68 load factor for 4 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 5 hours per day
1 Welders (175 hp) operating at a 0.45 load factor for 4 hours per day
1 Water Trucks (500 hp) operating at a 0.5 load factor for 2 hours per day

11/7/2012 9:03:29 AM

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\North Trumble Phase 2.urb924

Project Name: North Trumble Recycled Water Storage Ponds

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 7/2/2018-12/31/2018 Active Days: 131	**45.40**	**371.92**	**168.63**	**0.00**	**0.00**	**12.64**	**12.64**	**0.00**	**11.63**	**11.63**	**66,742.84**
Building 07/01/2018-02/29/2020	45.40	371.92	168.63	0.00	0.00	12.64	12.64	0.00	11.63	11.63	66,742.84
Building Off Road Diesel	45.40	371.92	168.63	0.00	0.00	12.64	12.64	0.00	11.63	11.63	66,742.84
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
Time Slice 1/1/2019-12/31/2019 Active Days: 261	43.28	341.48	162.93	**0.00**	**0.00**	11.60	11.60	**0.00**	10.67	10.67	**66,742.84**
Building 07/01/2018-02/29/2020	43.28	341.48	162.93	0.00	0.00	11.60	11.60	0.00	10.67	10.67	66,742.84
Building Off Road Diesel	43.28	341.48	162.93	0.00	0.00	11.60	11.60	0.00	10.67	10.67	66,742.84
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
Time Slice 1/1/2020-2/28/2020 Active Days: 43	40.94	313.14	158.54	**0.00**	**0.00**	9.92	9.92	**0.00**	9.12	9.12	**66,742.84**
Building 07/01/2018-02/29/2020	40.94	313.14	158.54	0.00	0.00	9.92	9.92	0.00	9.12	9.12	66,742.84
Building Off Road Diesel	40.94	313.14	158.54	0.00	0.00	9.92	9.92	0.00	9.12	9.12	66,742.84
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 7/1/2018 - 2/29/2020 - Default Mass Site Grading/Excavation Description

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Off-Road Equipment:

1 Air Compressors (175 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
6 Crawler Tractors (550 hp) operating at a 0.64 load factor for 8 hours per day
4 Excavators (476 hp) operating at a 0.57 load factor for 8 hours per day
1 Generator Sets (549 hp) operating at a 0.74 load factor for 4 hours per day
2 Graders (259 hp) operating at a 0.61 load factor for 8 hours per day
2 Off Highway Trucks (479 hp) operating at a 0.57 load factor for 4 hours per day
2 Rollers (904 hp) operating at a 0.56 load factor for 8 hours per day
6 Rubber Tired Loaders (801 hp) operating at a 0.54 load factor for 8 hours per day
10 Scrapers (330 hp) operating at a 0.72 load factor for 8 hours per day
1 Sweepers/Scrubbers (500 hp) operating at a 0.68 load factor for 4 hours per day
1 Trenchers (63 hp) operating at a 0.75 load factor for 4 hours per day
1 Welders (175 hp) operating at a 0.45 load factor for 8 hours per day
2 Water Trucks (500 hp) operating at a 0.5 load factor for 8 hours per day

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Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name:

Project Name: Case and Watson Road Recycled Water Storage Ponds

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 (Annual Tons Per Year, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
2014	0.76	6.63	2.74	0.00	0.00	0.24	0.24	0.00	0.22	0.22	1,067.13
Mass Grading 07/01/2014-10/31/2014	0.65	5.65	2.35	0.00	0.00	0.20	0.20	0.00	0.19	0.19	902.89
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	0.64	5.64	2.22	0.00	0.00	0.20	0.20	0.00	0.19	0.19	882.14
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.00	0.01	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.75
Building 11/01/2014-02/28/2015	0.11	0.98	0.40	0.00	0.00	0.04	0.04	0.00	0.03	0.03	164.24
Building Off Road Diesel	0.11	0.98	0.40	0.00	0.00	0.04	0.04	0.00	0.03	0.03	164.24
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
2015	0.10	0.84	0.38	0.00	0.00	0.03	0.03	0.00	0.03	0.03	160.42
Building 11/01/2014-02/28/2015	0.10	0.84	0.38	0.00	0.00	0.03	0.03	0.00	0.03	0.03	160.42
Building Off Road Diesel	0.10	0.84	0.38	0.00	0.00	0.03	0.03	0.00	0.03	0.03	160.42
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: Mass Grading 7/1/2014 - 10/31/2014 - Default Mass Site Grading/Excavation Description

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Total Acres Disturbed: 0

Maximum Daily Acreage Disturbed: 0

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Air Compressors (175 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 Crawler Tractors (550 hp) operating at a 0.64 load factor for 8 hours per day

2 Excavators (476 hp) operating at a 0.57 load factor for 8 hours per day

1 Generator Sets (549 hp) operating at a 0.74 load factor for 4 hours per day

1 Graders (259 hp) operating at a 0.61 load factor for 8 hours per day

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

1 Rollers (904 hp) operating at a 0.56 load factor for 8 hours per day

1 Sweepers/Scrubbers (500 hp) operating at a 0.68 load factor for 4 hours per day

2 Tractors/Loaders/Backhoes (801 hp) operating at a 0.55 load factor for 8 hours per day

1 Trenchers (63 hp) operating at a 0.75 load factor for 4 hours per day

1 Welders (175 hp) operating at a 0.45 load factor for 4 hours per day

1 Water Trucks (500 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 11/1/2014 - 2/28/2015 - Default Building Construction Description

Off-Road Equipment:

1 Air Compressors (175 hp) operating at a 0.48 load factor for 4 hours per day

1 Bore/Drill Rigs (291 hp) operating at a 0.75 load factor for 4 hours per day

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

1 Excavators (479 hp) operating at a 0.57 load factor for 8 hours per day

1 Generator Sets (549 hp) operating at a 0.74 load factor for 4 hours per day

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

1 Sweepers/Scrubbers (500 hp) operating at a 0.68 load factor for 4 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 5 hours per day

1 Welders (175 hp) operating at a 0.45 load factor for 4 hours per day

1 Water Trucks (500 hp) operating at a 0.5 load factor for 2 hours per day

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Urbemis 2007 Version 9.2.4

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

File Name:

Project Name: Case and Watson Road Recycled Water Storage Ponds

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 7/1/2014-10/31/2014 Active Days: 89	**14.57**	**126.96**	**52.77**	**0.00**	**0.02**	**4.58**	**4.60**	**0.01**	**4.21**	**4.22**	**20,289.59**
Mass Grading 07/01/2014-10/31/2014	14.57	126.96	52.77	0.00	0.02	4.58	4.60	0.01	4.21	4.22	20,289.59
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	14.49	126.79	49.82	0.00	0.00	4.57	4.57	0.00	4.20	4.20	19,823.39
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.09	0.16	2.95	0.00	0.02	0.01	0.04	0.01	0.01	0.02	466.20
Time Slice 11/3/2014-12/31/2014 Active Days: 43	5.17	45.37	18.40	0.00	0.00	1.64	1.64	0.00	1.51	1.51	7,639.17
Building 11/01/2014-02/28/2015	5.17	45.37	18.40	0.00	0.00	1.64	1.64	0.00	1.51	1.51	7,639.17
Building Off Road Diesel	5.17	45.37	18.40	0.00	0.00	1.64	1.64	0.00	1.51	1.51	7,639.17
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
Time Slice 1/1/2015-2/27/2015 Active Days: 42	4.81	40.16	18.02	0.00	0.00	1.46	1.46	0.00	1.34	1.34	7,639.17
Building 11/01/2014-02/28/2015	4.81	40.16	18.02	0.00	0.00	1.46	1.46	0.00	1.34	1.34	7,639.17
Building Off Road Diesel	4.81	40.16	18.02	0.00	0.00	1.46	1.46	0.00	1.34	1.34	7,639.17
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: Mass Grading 7/1/2014 - 10/31/2014 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 0

Maximum Daily Acreage Disturbed: 0

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Air Compressors (175 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 Crawler Tractors (550 hp) operating at a 0.64 load factor for 8 hours per day

2 Excavators (476 hp) operating at a 0.57 load factor for 8 hours per day

1 Generator Sets (549 hp) operating at a 0.74 load factor for 4 hours per day

1 Graders (259 hp) operating at a 0.61 load factor for 8 hours per day

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

1 Rollers (904 hp) operating at a 0.56 load factor for 8 hours per day

1 Sweepers/Scrubbers (500 hp) operating at a 0.68 load factor for 4 hours per day

2 Tractors/Loaders/Backhoes (801 hp) operating at a 0.55 load factor for 8 hours per day

1 Trenchers (63 hp) operating at a 0.75 load factor for 4 hours per day

1 Welders (175 hp) operating at a 0.45 load factor for 4 hours per day

1 Water Trucks (500 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 11/1/2014 - 2/28/2015 - Default Building Construction Description

Off-Road Equipment:

1 Air Compressors (175 hp) operating at a 0.48 load factor for 4 hours per day

1 Bore/Drill Rigs (291 hp) operating at a 0.75 load factor for 4 hours per day

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

1 Excavators (479 hp) operating at a 0.57 load factor for 8 hours per day

1 Generator Sets (549 hp) operating at a 0.74 load factor for 4 hours per day

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

1 Sweepers/Scrubbers (500 hp) operating at a 0.68 load factor for 4 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 5 hours per day

1 Welders (175 hp) operating at a 0.45 load factor for 4 hours per day

1 Water Trucks (500 hp) operating at a 0.5 load factor for 2 hours per day

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Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name:

Project Name: Winchester Recycled Water Storage Ponds

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

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CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
2014	0.39	3.38	1.46	0.00	0.00	0.13	0.13	0.00	0.12	0.12	461.82
Mass Grading 11/01/2014-02/28/2015	0.39	3.38	1.46	0.00	0.00	0.13	0.13	0.00	0.12	0.12	461.82
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	0.38	3.37	1.39	0.00	0.00	0.13	0.13	0.00	0.12	0.12	451.12
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.69
2015	0.85	7.16	3.22	0.00	0.00	0.26	0.26	0.00	0.24	0.24	1,240.19
Mass Grading 11/01/2014-02/28/2015	0.35	3.01	1.35	0.00	0.00	0.11	0.11	0.00	0.10	0.10	451.08
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	0.35	3.01	1.29	0.00	0.00	0.11	0.11	0.00	0.10	0.10	440.63
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.44
Building 03/01/2015-04/24/2016	0.49	4.15	1.87	0.00	0.00	0.15	0.15	0.00	0.14	0.14	789.12
Building Off Road Diesel	0.49	4.15	1.87	0.00	0.00	0.15	0.15	0.00	0.14	0.14	789.12
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
2016	0.17	1.35	0.68	0.00	0.00	0.05	0.05	0.00	0.04	0.04	291.86
Building 03/01/2015-04/24/2016	0.17	1.35	0.68	0.00	0.00	0.05	0.05	0.00	0.04	0.04	291.86
Building Off Road Diesel	0.17	1.35	0.68	0.00	0.00	0.05	0.05	0.00	0.04	0.04	291.86
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: Mass Grading 11/1/2014 - 2/28/2015 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 0

Maximum Daily Acreage Disturbed: 0

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Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Air Compressors (175 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

2 Crawler Tractors (550 hp) operating at a 0.64 load factor for 8 hours per day

1 Generator Sets (549 hp) operating at a 0.74 load factor for 4 hours per day

1 Graders (259 hp) operating at a 0.61 load factor for 8 hours per day

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

1 Rollers (904 hp) operating at a 0.56 load factor for 8 hours per day

4 Scrapers (330 hp) operating at a 0.72 load factor for 8 hours per day

1 Sweepers/Scrubbers (500 hp) operating at a 0.68 load factor for 4 hours per day

1 Trenchers (63 hp) operating at a 0.75 load factor for 4 hours per day

1 Welders (175 hp) operating at a 0.45 load factor for 4 hours per day

1 Water Trucks (500 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 3/1/2015 - 4/24/2016 - Default Building Construction Description

Off-Road Equipment:

1 Air Compressors (175 hp) operating at a 0.48 load factor for 4 hours per day

1 Bore/Drill Rigs (291 hp) operating at a 0.75 load factor for 4 hours per day

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

1 Excavators (476 hp) operating at a 0.57 load factor for 8 hours per day

1 Generator Sets (549 hp) operating at a 0.74 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 (500 hp) operating at a 0.68 load factor for 4 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 5 hours per day

1 Welders (175 hp) operating at a 0.45 load factor for 4 hours per day

1 Water Trucks (500 hp) operating at a 0.5 load factor for 4 hours per day

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Urbemis 2007 Version 9.2.4

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

File Name:

Project Name: Winchester Recycled Water Storage Ponds

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

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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 11/3/2014-12/31/2014 Active Days: 43	**17.91**	**157.14**	**67.96**	**0.01**	**0.02**	**5.94**	**5.96**	**0.01**	**5.46**	**5.47**	**21,479.82**
Mass Grading 11/01/2014-02/28/2015	17.91	157.14	67.96	0.01	0.02	5.94	5.96	0.01	5.46	5.47	21,479.82
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	17.82	156.97	64.82	0.00	0.00	5.92	5.92	0.00	5.45	5.45	20,982.55
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.09	0.17	3.14	0.01	0.02	0.01	0.04	0.01	0.01	0.02	497.28
Time Slice 1/1/2015-2/27/2015 Active Days: 42	16.79	143.47	64.34	**0.01**	**0.02**	5.36	5.39	**0.01**	4.93	4.94	21,479.78
Mass Grading 11/01/2014-02/28/2015	16.79	143.47	64.34	0.01	0.02	5.36	5.39	0.01	4.93	4.94	21,479.78
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	16.70	143.31	61.42	0.00	0.00	5.35	5.35	0.00	4.92	4.92	20,982.55
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.08	0.16	2.93	0.01	0.02	0.01	0.04	0.01	0.01	0.02	497.23
Time Slice 3/2/2015-12/31/2015 Active Days: 219	4.50	37.91	17.08	0.00	0.00	1.38	1.38	0.00	1.27	1.27	7,206.54
Building 03/01/2015-04/24/2016	4.50	37.91	17.08	0.00	0.00	1.38	1.38	0.00	1.27	1.27	7,206.54
Building Off Road Diesel	4.50	37.91	17.08	0.00	0.00	1.38	1.38	0.00	1.27	1.27	7,206.54
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
Time Slice 1/1/2016-4/22/2016 Active Days: 81	4.24	33.45	16.76	0.00	0.00	1.18	1.18	0.00	1.09	1.09	7,206.54
Building 03/01/2015-04/24/2016	4.24	33.45	16.76	0.00	0.00	1.18	1.18	0.00	1.09	1.09	7,206.54
Building Off Road Diesel	4.24	33.45	16.76	0.00	0.00	1.18	1.18	0.00	1.09	1.09	7,206.54
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: Mass Grading 11/1/2014 - 2/28/2015 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 0

Maximum Daily Acreage Disturbed: 0

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Air Compressors (175 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

2 Crawler Tractors (550 hp) operating at a 0.64 load factor for 8 hours per day

1 Generator Sets (549 hp) operating at a 0.74 load factor for 4 hours per day

1 Graders (259 hp) operating at a 0.61 load factor for 8 hours per day

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

1 Rollers (904 hp) operating at a 0.56 load factor for 8 hours per day

4 Scrapers (330 hp) operating at a 0.72 load factor for 8 hours per day

1 Sweepers/Scrubbers (500 hp) operating at a 0.68 load factor for 4 hours per day

1 Trenchers (63 hp) operating at a 0.75 load factor for 4 hours per day

1 Welders (175 hp) operating at a 0.45 load factor for 4 hours per day

1 Water Trucks (500 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 3/1/2015 - 4/24/2016 - Default Building Construction Description

Off-Road Equipment:

1 Air Compressors (175 hp) operating at a 0.48 load factor for 4 hours per day

1 Bore/Drill Rigs (291 hp) operating at a 0.75 load factor for 4 hours per day

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

1 Excavators (476 hp) operating at a 0.57 load factor for 8 hours per day

1 Generator Sets (549 hp) operating at a 0.74 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 (500 hp) operating at a 0.68 load factor for 4 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 5 hours per day

1 Welders (175 hp) operating at a 0.45 load factor for 4 hours per day

1 Water Trucks (500 hp) operating at a 0.5 load factor for 4 hours per day

XEROX REQUEST FORM

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Xerox Personnel

Status: PENDING Date Completed: Completed By:

File Location: \\webprod6\xerox\

Comments:

Requestor Information

Requested By: Helen Stratton Employee#: 1772 Department Name: ENVIRO/REG COMP 880

Extension Nbr: 4545 Email: strattoh@emwd.org Date/Time Submitted: 9/29/2014 8:17:00 AM

Date Due: 09/29/2014 Time Due: 01:00 PM

File And Additional Information

File: CEQA PLUS RECYCLED WATER PONDS_2014-09-29_081715.PDF

* Number Of Copies: 1 Request Seq# 3780

* Disposition: ○ Return To Requestor ○ Give To Mailroom For Distribution ◉ Hold For Pickup ○ Call When Ready

Finishing Options

*** One item minimum must be selected**

- ☐ Collate
- ☐ Staple
- ☑ Comb Binding
- ☑ Full Color Copies
- ☐ Padding
  - Sheets Per Pad:
- ☐ Cutting
  - Sheets Per Pad:
- ☐ Tape Binding
  - ☐ Black
- ☐ One Sided
- ☑ Two Sided
- ☐ Coil Binding
- ☐ Black And White Copies

Paper Options

*** One item minimum must be selected**

- ☑ 8.5 x 11
- ☐ 8.5 x 11 3-Hole
- ☐ 8.5 x 14
- ☐ 11 x 17
- ☐ CardStock
- ☐ Tabs
- ☐ 2 Part Carbonless
- ☐ 3 Part Carbonless
- ☐ 4 Part Carbonless

Other:

Additional Instructions

Paper Color Options

* One item minimum must be selected

☑ White	☐ Yellow
☐ GoldenRod	☐ Blue
☐ Pink	☐ Green
☐ Ivory	☐ Red
☐ Astro Pink	☐ Astro Green
☐ Astro Blue	☐ Astro Yellow

Other: