Table 4.2-7
Estimated Maximum Daily Construction Emissions (2013)
(pounds/day unmitigated)

	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Storm Drain Installation						
Excavation	4.5	37.81	22.71	0.04	13.95	3.12
Concrete for RCB installation	1.15	9.09	5.70	0.01	0.78	0.60
Backfill	3.18	24.95	17.22	0.03	11.18	1.43
Paving						
Paving	1.71	10.59	6.87	0.01	0.98	0.89
Concrete Rectangular Channel						
Excavation	3.45	32.74	20.02	0.04	4.30	1.60
Concrete for channel installation	1.15	9.09	5.70	0.01	0.78	0.60
Backfill/compaction	4.62	41.37	25.89	0.05	7.31	2.11
Debris Basin						
Excavation	9.63	82.64	42.15	0.08	8.65	4.86
Backfill/compaction	1.11	8.60	5.31	0.00	4.08	0.58
Water Quality Basin						
Excavation	14.44	114.65	59.06	0.13	21.50	6.19
Maximum daily emissions	**14.44**	**114.65**	**59.06**	**0.13**	**21.50**	**6.19**
Threshold	75	100	550	150	150	55
Threshold exceeded?	No	**Yes**	No	No	No	No

Source: See Appendix C for results.
Note: These estimates reflect control of fugitive dust required by Rule 403.

As shown above, daily construction emissions would not exceed the thresholds for VOCs, CO, SO_x, PM_{10}, or $PM_{2.5}$. The representative project, however, would exceed daily construction emissions thresholds for NO_x during construction of the water quality basin. As such, the representative project would result in a potentially significant impact to NO_x emissions, and it could be inferred that construction of future basins could also result in NO_x emissions above thresholds. During construction of the channel elements of Line N, Lateral N-1, and debris basin, emissions of all pollutants would be less than the significance thresholds as shown in Table 4.2-7.

Ground disturbances and equipment operation during construction activities would produce short-term PM_{10} and $PM_{2.5}$ emissions. Although such fugitive dust would be short term and would only last during the duration of grading activity, such PM_{10} and $PM_{2.5}$ emissions could be considered problematic since they could cause a public nuisance or further exacerbate the existing PM_{10} nonattainment situation in the SCAB. Implementation of the Project would generate construction-related air pollutant emissions from two general activity categories, entrained dust and vehicle emissions. Entrained dust results from the

exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. Vehicle exhaust results from internal combustion engines used by construction equipment and vehicles, which results in emissions of NO_x, VOCs, CO, PM_{10}, and $PM_{2.5}$.

As shown in Table 4.2-7, the maximum construction-generated PM_{10} emissions of approximately 22 pounds per day, which would occur during the water quality basin excavation phase, would not exceed the SCAQMD's quantitative significance threshold of 150 pounds per day. $PM_{2.5}$ maximum daily emissions of approximately 6 pounds per day would also be below the threshold of 55 pounds per day.

Future construction of MDP facilities would be subject to SCAQMD Rule 403 (Fugitive Dust), which sets forth general and specific requirements for all construction sites (as well as other fugitive dust sources) in the SCAQMD. The general requirement prohibits a person from causing or allowing emissions of fugitive dust from construction (or other fugitive dust sources) such that the presence of such dust remains visible in the atmosphere beyond the property line of the emissions source. Since the SCAB is in nonattainment for PM_{10} and $PM_{2.5}$, Mitigation Measure **(MM) AIR-1** would be implemented to reduce potential fugitive dust impacts on nearby sensitive receptors, as discussed in the LST analysis below. Although impacts related to anticipated PM_{10} and $PM_{2.5}$ emission levels during construction are below the threshold and considered less than significant, **MM AIR-1** would further reduce impacts and ensure less than significant impacts.

As shown in Table 4.2-7, the modeled maximum daily emissions of NO_x for the representative project of Line N and Lateral N-1 facilities would exceed the SCAQMD quantitative significance threshold of 100 pounds per day during excavation of the water quality basin only. During the water quality basin excavation phase, operation of off-road construction equipment would result in approximately 78 pounds per day of NO_x on site and haul trucks exporting excess excavated material would generate approximately 36 pounds per day of NO_x off site. **MM AIR-2** would help to reduce project-generated NO_x from construction equipment by requiring the use of lower-emitting engines (Tier 3 or better); however, potential emissions reductions cannot be quantified until equipment specifics are determined.

Representative project modeling assumed that construction of improvements (listed above in Table 4.2-7) would occur sequentially (i.e., one after another). In the event two construction phases would overlap, the combined emissions from both phases would not exceed the SCAQMD thresholds for criteria pollutants, with the exception of NO_x emissions. If the two phases that would generate the greatest amount of emissions (i.e., debris basin excavation and water quality basin excavation) were to occur simultaneously, then NO_x emissions could be as high as 197 pounds per day. Accordingly, based on the SCAQMD's quantitative significance thresholds and the maximum emissions presented in Table 4.2-7, if two construction phases were to occur concurrently, it would not result in new significant impacts that have not already been identified. Incorporation of **MM AIR-2** would reduce NO_x emissions associated with construction equipment operation; however, it is unlikely that this measure would reduce emissions below the level of significance if two construction phases involving substantial haul truck trips off site (e.g., debris

or water quality basin construction) were to occur concurrently. Accordingly, construction NO_x emissions would be **significant** if construction phases occurred concurrently, even with mitigation incorporated. Emissions of all other pollutants would remain **less than significant** in the event that two construction phases were to occur concurrently.

Operational Emissions

Once an MDP facility is constructed, it would require maintenance in order to retain flood control capacity. It is expected that the District would operate and maintain the MDP facilities. Maintenance of storm drains and concrete channels would typically consist of keeping those facilities and their side drains clear of debris and sediment, as well as repairing access roads and fences. On rare occasions, major repairs may be required following damaging storm events. Thus, major grading is not expected to routinely occur while maintaining the underground storm drains and concrete rectangular channels.

In addition to long-term maintenance activities required for the proposed storm drains and concrete channels, the routine maintenance of the concrete-lined rectangular channels and basins would likely require the removal of deposition, repair of eroded slopes, and reduction of fire hazard by annual mowing and application of herbicides. Vegetation would be removed or mowed annually, or as necessary, to provide the designed hydraulic capacity. Anticipated maintenance activities could require the temporary use of an excavator, small tractor, or loader, and operation of light-duty trucks utilized by maintenance workers. MDP facility operation and maintenance would be similar to existing conditions. As the Project does not propose a substantial change in the level of long-term maintenance activities, air quality impacts associated with operational air pollutant emissions would be **less than significant**.

Would the Project result in cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

The portion of the SCAB where the Project area is located is designated as a nonattainment area for O_3, PM_{10}, and $PM_{2.5}$ under state and federal standards. In addressing cumulative effects for air quality, the AQMP utilizes approved general plans and, therefore, is the most appropriate document to use to evaluate cumulative impacts of the Project because the AQMP evaluated air quality emissions for the entire region using a future development scenario based on general plan land use designations and set forth a comprehensive program that would lead the region, including the areas within the Project boundary, into compliance with all federal and state air quality standards. The Project is not a development project and does not conflict with the Riverside County General Plan, Lake Elsinore General Plan, or City of Wildomar General Plan.

As stated above, Riverside County is a nonattainment area for O_3, PM_{10}, and $PM_{2.5}$ under the NAAQS and/or CAAQS. The poor air quality in the SCAB is the result of cumulative emissions from motor vehicles, off-road equipment, commercial and industrial facilities, and other emission sources. Projects that emit these pollutants or their precursors (e.g., VOCs and NO_x for O_3) potentially contribute to poor air quality. Area growth and existing development generate both short-term (construction emissions) and long-term (operational) emissions, including vehicle emissions.

As indicated in Table 4.2-7, during construction of a representative water quality basin, the maximum construction emissions from the construction would be approximately 14 pounds per day of VOCs and 115 pounds per day of NO_x (O_3 precursors), 22 pounds per day of PM_{10}, and 6 pounds per day of $PM_{2.5}$. MDP facility operation and maintenance would not contribute to long-term cumulative vehicle emissions but would potentially contribute to cumulative construction emissions should construction of projects within the Project area and greater Riverside County occur concurrently with the proposed Project. Project-generated short-term construction impacts would be potentially significant since estimated NO_x emissions generated during excavation of the water quality basin would exceed SCAQMD significance thresholds.

Standard SCAQMD-required minimization measures, such as Rule 403, would further reduce exhaust emissions and fugitive dust generation and minimize the already less than significant construction-related PM_{10} impacts from the MDP facilities (**MM AIR-1**). NO_x and VOC emissions from construction equipment would also be reduced through implementation of SCAQMD-required minimization measures (**MM AIR-2**); however, maximum daily emissions would potentially exceed thresholds for of NO_x under the representative project scenario when all MDP facilities are built together. The majority of the NOx emissions are generated during the representative project construction by the heavy grading during the excavation phase for the water quality basin. Although **MM AIR-2**, relating to equipment-generated NO_x emissions, is required, implementation of mitigation would not fully reduce NO_x impacts associated with the construction of the entire representative project to a less than significant level compared to SCAQMD thresholds.

Construction activities of the MDP facilities and other area growth/existing development would be subject to standard SCAQMD measures that would minimize fugitive dust and PM_{10} and $PM_{2.5}$, NO_x, and VOC emissions from construction equipment, such as those included in **MM AIR-1** and **MM AIR-2**. Implementation of these measures would minimize project-specific and cumulative air quality impacts from construction; however, as the proposed representative basin projects would result in project-specific impacts related to construction-generated NO_x emissions, the Project's contribution to cumulative construction-related air quality impacts could be **potentially cumulatively considerable.**

Would the Project expose sensitive receptors to substantial pollutant concentrations?

Localized Significance Thresholds Analysis

As indicated in the discussion of the thresholds of significance, the SCAQMD also recommends the evaluation of localized NO_2, CO, PM_{10}, and $PM_{2.5}$ impacts to sensitive receptors in the immediate vicinity of the project site, referred to as an LST analysis, as a result of construction activities. Sensitive receptors include but are not limited to residential land uses, schools, open space and parks, recreational facilities, hospitals, resident care facilities, daycare facilities, or other facilities that may house individuals with health conditions that would be affected by poor air quality. Sensitive receptors within the Project boundary include schools, daycare facilities, and residences. The nearest off-site sensitive receptors to the proposed MDP facility improvements differs for each improvement; however, residences are potentially located as close as 25 meters to proposed MDP facilities. To analyze a worst-case exposure scenario, it was assumed that the closest off-site existing sensitive receptors (residences) are located immediately adjacent to each of the four types of MDP facilities analyzed in the representative project.

Future construction activities associated with the Project would result in temporary sources of fugitive dust and construction vehicle emissions. There would be no long-term operation of the Project improvements that would generate local emissions that could expose sensitive receptors to substantial pollutant concentrations. Maintenance activities would be temporary, generally less intense than the initial construction activity, and similar to current maintenance activities, and would not represent a long-term source of potential local emissions that would impact sensitive receptors within the Project boundary.

The proposed debris basins would be located at higher elevations than the other proposed linear improvements and would not be located near dense residential developments, as other improvements would be. Estimated maximum on-site emissions generated during excavation of the debris basins were used for the LST analysis included herein. Modeled emissions assumed equipment would consist of an excavator, dozer, two scrapers, a tractor/loader/backhoe, and a total disturbance area of 2.9 acres. For the purposes of the LST analysis, however, it is assumed that the debris basin site would be 1 acre in area[2] and the sensitive receptors would be located within 25 meters of construction activity.

The impacts were analyzed using methods consistent with those in the SCAQMD's LST Methodology (SCAQMD 2008). The allowable emission rates for Source–Receptor Area 25 (Lake Perris) from the SCAQMD LST Methodology's lookup tables are shown in Table 4.2-8 and compared to the maximum daily on-site construction emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ during construction of the representative project debris basin.

[2] While the actual construction area may be larger than 1 acre, using the smaller area results in a more conservative analysis because the LSTs for a 1-acre site are lower.

Table 4.2-8
Debris Basin Localized Significance Thresholds Analysis for Construction Emissions

Pollutant	Maximum Construction Emissions (pounds/day)[a]	LST Criteria (pounds/day)[b]	Exceeds LST?
NO_2	78	162	No
CO	42	661	No
Respirable Particulate Matter (PM_{10})	6	4	**Yes**
Fine Particulate Matter ($PM_{2.5}$)	5	3	**Yes**

Sources: See Appendix C for complete results; SCAQMD 2008.
Note: Construction emissions estimates rounded to nearest pound.

As shown in Table 4.2-8, construction activities associated with a typical debris basin would not generate emissions in excess of site-specific LSTs for NO_2 or CO, but construction-generated emissions would exceed LSTs for PM_{10} and $PM_{2.5}$.

An LST analysis for the water quality basin is also provided in Table 4.2-9. The modeled construction emissions for the water quality basin were based on assumptions for Line N WQ Basin located near Stoneman Street, which assumed a disturbance area of 3.7 acres and operation of equipment used during excavation of the water quality basin. Although the disturbance area is greater than 1 acre, a 1-acre area was assumed to conservatively analyze localized air quality impacts. In addition, the disturbance area of other proposed water quality basins sites could potentially be between 1 and 2 acres. For the purposes of the LST analysis, it is assumed that the sensitive receptors would be located within 25 meters of construction activity. This distance was selected because some residences are within 25 meters of the Line N facilities, and this distance is the closest distance to receptors in lookup tables in the SCAQMD LST Methodology. Thus, using 25 meters would result in a conservative analysis of localized impacts. The allowable emission rates for Source–Receptor Area 25 (Lake Perris) compared to the maximum daily on-site construction emissions during construction of the representative project water quality basin are listed in Table 4.2-9.

Table 4.2-9
Water Quality Basin Localized Significance Thresholds Analysis for Construction Emissions

Pollutant	Maximum Construction Emissions (pounds/day)	LST Criteria (pounds/day)	Exceeds LST?
NO_2	78	162	No
CO	39	661	No
Respirable Particulate Matter (PM_{10})	6	4	**Yes**
Fine Particulate Matter ($PM_{2.5}$)	5	3	**Yes**

Sources: For maximum construction emissions, see Appendix C for complete results; for LST criteria, see SCAQMD 2008.
Note: Construction emissions estimates rounded to nearest pound.

As shown in Table 4.2-9, construction activities associated with a typical water quality basin would not generate emissions in excess of site-specific LSTs for NO_2 or CO, but construction-generated emissions would exceed LSTs for PM_{10} and $PM_{2.5}$. The allowable emission rates for Source–Receptor Area 25, assuming an area of 2 acres and a 25-meter distance from sensitive receptors to the construction site, would be 7 pounds per day of PM_{10} (SCAQMD 2008). Accordingly, it is anticipated that construction of water quality basins 2 acres in area or larger would not exceed LSTs when operating the same construction equipment assumed for the Line N WQ Basin representative project.

The representative project storm drain construction was based on Line N and Lateral N-1 storm drain installation. The LST analysis assumed operation of an excavator, dozer, and a tractor/loader/backhoe, and a disturbance area of 2.1 acres. As with the LST analysis for the basins, it was assumed that sensitive receptors would be located within 25 meters of construction activity and the construction area would be 1 acre in size. Table 4.2-10 compares the allowable emission rates to the maximum daily on-site construction emissions during construction of the storm drain representative project.

Table 4.2-10
Storm Drain Localized Significance Thresholds Analysis for Construction Emissions

Pollutant	Maximum Construction Emissions (pounds/day)	LST Criteria (pounds/day)	Exceeds LST?
NO_2	33	162	No
CO	20	661	No
Respirable Particulate Matter (PM_{10})	4	4	No
Fine Particulate Matter ($PM_{2.5}$)	3	3	No

Sources: For maximum construction emissions, see Appendix C for complete results; for LST criteria, see SCAQMD 2008.
Note: Construction emissions estimates rounded to nearest pound.

As shown in Table 4.2-10, construction activities would not generate emissions in excess of site-specific LSTs during storm drain construction of the representative storm drain project. However, as the Project proposes over 21 new storm drains, some of which would be located near dense residential developments and schools, construction of storm drains could adversely affect nearby sensitive receptors.

The Project proposes five concrete-lined rectangular channels. The LST analysis for the Line N and Lateral N-1 representative project concrete rectangular channel assumes construction emissions generated during the backfill/compaction construction phase for the channel, which assumes operation of an excavator, a grader, and a tractor/loader/backhoe. Table 4.2-11 compares the allowable emission rates to the maximum daily on-site construction emissions during construction of the concrete rectangular channel representative project.

Table 4.2-11
Concrete Rectangular Channel Localized
Significance Thresholds Analysis for Construction Emissions

Pollutant	Maximum Construction Emissions (pounds/day)[a]	LST Criteria (pounds/day)[b]	Exceeds LST?
NO_2	20	162	No
CO	14	661	No
Respirable Particulate Matter (PM_{10})	1	4	No
Fine Particulate Matter ($PM_{2.5}$)	1	3	No

Sources: For maximum construction emissions, see Appendix C for complete results; for LST criteria, see SCAQMD 2008.
Note: Construction emissions estimates rounded to nearest pound.

As shown in Table 4.2-11, construction activities would not generate emissions in excess of site-specific LSTs during concrete rectangular channel construction.

As presented in Tables 4.2-8 through 4.2-11, SCAQMD LST thresholds for PM_{10} and $PM_{2.5}$ could be exceeded during construction of the water quality and debris basins, but not for the linear facilities such as the storm drains and concrete channels. There are sensitive receptors in proximity to the debris basins and water quality basins, and the above analysis shows that the debris basin and water quality basin construction could result in localized impacts related to particulate matter to sensitive receptors. However, with implementation of **MM AIR-1**, requiring that dust generated by grading and construction activities be kept to a minimum with a goal of retaining dust on the site, potential impacts to nearby sensitive receptors associated with project-generated particulate matter would be reduced or avoided. Therefore, with implementation of **MM AIR-1**, impacts related to exposure of sensitive receptors to PM_{10} and $PM_{2.5}$ levels are considered **less than significant**.

Carbon Monoxide Hotspots

Localized CO hotspots may occur when CAAQS for CO are exceeded at roadway intersections during times of peak traffic congestion. The Lake Elsinore monitoring station measures levels of CO, which are well below the state standards. The use of oxygenated fuels is a factor in low CO levels in the Riverside County region and the greater California area.

Future construction of MDP facilities would generate roadway traffic, when workers and trucks would be traveling to and from the project site, and during operation for periodic maintenance. The number of daily vehicle trips that would be generated during future construction and operation would not add a permanent increase to local traffic volumes because the Project does not propose MDP facilities that would generate a substantial number of routine vehicle trips. Thus, the Project would not contribute to traffic congestion at intersections in the Project area. As Riverside County ambient CO concentrations

are very low and the Project would not be expected to create or contribute substantially to regional ambient CO, potential impacts associated with CO hotspots would be **less than significant**.

4.2.6 Mitigation Measures

The CEQA Guidelines require an EIR to describe feasible mitigation measures that could minimize significant adverse impacts (14 CCR 15126.4). Mitigation measures were evaluated for their ability to reduce or eliminate impacts.

As discussed above, construction of a water quality basin would result in NO_x emissions above the SCAQMD threshold. For the construction of any water quality basin (or an activity of similar magnitude), implementation of **MM AIR-1** and **MM AIR-2** would be required in order to reduce the emissions of PM_{10} and $PM_{2.5}$ and NO_x, respectively. For all other components (i.e., channels, storm drains, debris basins) of the MDP, when they are constructed, only **MM AIR-1** shall be required.

MM AIR-1 For all MDP facilities, to minimize impacts related to particulate matter (PM_{10} and $PM_{2.5}$) generation from construction activities, consistent with SCAQMD Rule 403, the District shall ensure that fugitive dust generated by grading and construction activities will be kept to a minimum, with a goal of retaining dust on the site. The contractor shall be required to comply with the applicable provisions of SCAQMD Rule 403 and implement appropriate fugitive dust control measures that include watering, stabilized construction access to reduce tracking of mud or dirt onto public roads, covering trucks hauling loose materials off site, and street sweeping.

MM AIR-2 The following measures shall be adhered to by the District and its contractors during project grading and construction to reduce NO_x from construction equipment related to water quality basins (or an activity of similar magnitude):

a. All off-road construction equipment with engines rated at greater than 100 horsepower shall be equipped with California Air Resources Board certified Tier 3 or better engines. Records shall be maintained by the contractor and provided to the District to verify the horsepower, model year, and tier of all equipment engines.

b. The contractor shall maintain construction equipment in tune per the manufacturer's specifications and make available maintenance records to the District upon request.

4.2.7 Summary of Environmental Effects After Mitigation Measures Are Implemented

Implementation of the above mitigation measures will reduce air pollutant emissions generated during construction of the Project. Potentially significant impacts related to construction-generated NO_x emissions generated by water quality basin construction and potential localized impacts on sensitive

receptors would be reduced with implementation of **MM AIR-1** and **MM AIR-2**; however, impacts would remain significant and a Statement of Overriding Considerations would be required for the NO_x exceedance. Additionally, although construction of a representative project for the debris basins and water quality basins show that the LSTs for PM_{10} and $PM_{2.5}$ would be exceeded, with incorporation of **MM AIR-1**, impacts would be reduced to less than significant levels.

4.2.8 References

CARB. 2011. "Air Quality Data Statistics." Accessed December 14, 2011. http://arb.ca.gov/adam.

CARB. 2012. *Glossary of Air Pollutant Terms*. Accessed August 6, 2013. http://www.arb.ca.gov/html/gloss.htm.

CARB. 2013a. "2012 State Area Designations." Area Designations Maps / State and National. Page last reviewed April 22, 2013. Accessed August 6, 2013. http://www.arb.ca.gov/desig/adm/adm.htm.

CARB. 2013b. *Ambient Air Quality Standards.* June 4, 2013. Accessed August 6, 2013. http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

City-Data.com. 2011. "Lake Elsinore, California." http://www.city-data.com/city/Lake-Elsinore-California.html.

EPA. 2011. "AirData: Access to Air Pollution Data." Last updated October 2007. Accessed December 14, 2011. http://epa.gov/air/data.

EPA. 2013a. *Six Common Air Pollutants*. Last updated April 20, 2012. Accessed July 29, 2013. http://www.epa.gov/air/urbanair/.

EPA. 2013b. "Region 9: Air Programs, Air Quality Maps." Last updated August 6, 2013. Accessed July 30, 2013. http://www.epa.gov/region9/air/maps/maps_top.html.

SCAQMD (South Coast Air Quality Management District). 1993. *CEQA Air Quality Handbook*.

SCAQMD. 2008. *Final Localized Significance Threshold Methodology*. June 2003; revised July 2008. http://www.aqmd.gov/ceqa/handbook/lst/Method_final.pdf.

SCAQMD. 2011. "SCAQMD Air Quality Significance Thresholds." March 2011. Accessed December 28, 2011. http://www.aqmd.gov/CEQA/handbook/signthres.pdf.

4.3 Biological Resources

The focus of the following discussion and analysis, based on the initial study (IS), public scoping session, and comments received during the Notice of Preparation (NOP) public comment period, is related to the Project's potential impacts to wildlife movement, candidate, sensitive, and special status species, riparian habitat and other sensitive natural community, jurisdictional waters, native resident and migratory fish and wildlife species, conflicts with local policies or ordinances protecting biological resources, and potential impact on the relationship of the Project to an adopted habitat conservation plan.

Dudek reviewed the existing biological resources and species within the vicinity of the Project boundary using GIS tools that provided a compilation of the California Department of Fish and Game[1] (CDFG) California Natural Diversity Data Base (CDFG 2011), the California Native Plant Society Inventory of Rare and Endangered Species Plants (CNPS 2011), U.S. Fish and Wildlife Service (USFWS) data (USFWS 2011), and the *Western Riverside County Multiple Species Habitat Conservation Plan* (MSHCP; County of Riverside 2003a). Dudek biologists conducted a reconnaissance-level general assessment of biological resources of the Master Drainage Plan (MDP) facilities on January 11, 2011 (Dudek 2011).

4.3.1 Setting and Project Baseline

The watershed within the Project boundary includes existing residential, commercial, agriculture, and open space. The Project boundary is generally located within the eastern slopes of the Santa Ana Mountains, Lake Elsinore to the north, Bryant Street and Sheila Lane to the east, and Riverside Drive to the west (see Figure 4.3-1). The watershed within the Project boundary is composed of undeveloped natural slopes and drainages descending toward Lake Elsinore.

The Project area lies within the unincorporated County of Riverside, the City of Lake Elsinore, and the City of Wildomar. The climate is semiarid Mediterranean, characterized by hot summers, mild winters, and low humidity. The annual average measured precipitation at Lake Elsinore, which is a good representation of the Project area, is 12.09 inches.

Six vegetation communities (non-native grassland, Riversidean sage scrub, Diegan sage scrub, chaparral, coast live oak woodland, and residential/urban/exotic) have been identified within the Project boundary. Table 4.3-1 outlines the vegetation communities within the Project boundary (see also Figure 4.3-2).

[1] As of January 2013, the California Department of Fish and Game (CDFG) changed its name to the California Department of Fish and Wildlife (CDFW). Where referring to documents/guidance published before the official name change, CDFG is used in this document; for all references after 2012, CDFW is used.

Table 4.3-1
Existing On-Site Vegetation Communities and Land Covers

Vegetation Communities and Land Covers	Associated Species	Acreage
Non-native grassland	Shortpod mustard Filaree Telegraph weed Cheeseweed Fiddleneck Dove weed	178.5
Riversidean sage scrub	California buckwheat California sagebrush Hairy yerba santa Deerweed White sage Laurel sumac Elderberry Open herbaceous layer composed of filaree, tocolate, shortpod mustard, fiddleneck, and various bromes	165.3
Diegan sage scrub	California sagebrush California buckwheat White sage Laurel sumac Deerweed Tocolate	526.0
Chaparral	Chamise Laurel sumac White sage Black sage California buckwheat Ceanothus	4,263.4
Coast live oak woodland	Coast live oak California sycamore Laurel sumac Toyon Hairy yerba santa Holly-leaved redberry Sparse herbaceous understory including California croton, filaree, and tocolate	535.5
Urban/exotic/residential	Residential lots Exotic landscape species	2,340.9

Source: Dudek 2011.

A list of plant and wildlife species observed during the reconnaissance-level site review conducted by Dudek biologists on January 11, 2011, that are located within the Project boundary is outlined in Table 4.3-2 and Table 4.3-3.

Table 4.3-2
Existing On-Site Plant Species

Plant Species	
Adenostoma fasciculatum (chamise)	*Marah macrocarpus* var. *macrocarpus* (wild-cucumber)
Alnus rhombifolia (white alder)	*Mimulus aurantiacus* (bush monkey flower)
Amsinckia menziesii (Menzies's fiddleneck)	**Nicotiana glauca* (tree tobacco)
Artemisia californica (California sagebrush)	**Olea europaea* (olive)
Artemisia douglasiana (Douglas' mugwort)	*Opuntia littoralis* (coastal prickly-pear)
Baccharis salicifolia (mulefat)	*Paeonia californica* (California peony)
**Bromus madritensis* (foxtail chess)	*Platanus racemosa* (California sycamore)
**Centaurea melitensis* (tocalote)	*Quercus agrifolia* (coast live oak)
Croton californicus (California croton)	*Quercus kelloggii* (California black oak)
Croton setigerus (doveweed)	*Rhamnus ilicifolia* (holly-leaf redberry)
Cylindropuntia ramosissima (pencil cholla)	**Rumex crispus* (curly dock)
Eriogonum fasciculatum (California buckwheat)	*Salix lasiolepis* (arroyo willow)
**Erodium cicutarium* (redstem filaree)	**Salsola tragus* (Russian thistle)
**Eucalyptus* sp. (eucalyptus)	*Sambucus nigra* (blue elderberry)
Heteromeles arbutifolia (toyon)	*Salvia apiana* (white sage)
Heterotheca grandiflora	*Salvia mellifera* (black sage)
**Hirschfeldia incana* (shortpod mustard)	**Schinus molle* (Peruvian peppertree)
Lotus scoparius var. *scoparius* (deerweed)	*Solanum xanti* (chaparral nightshade)
Malosma laurina (laurel sumac)	**Washingtonia robusta* (Mexican fan palm)
**Malva parviflora* (cheeseweed)	—

Source: Dudek 2011.

Table 4.3-3
Existing On-Site Wildlife Species

Plant Species	
Buteo jamaicensis (red-tailed hawk)	*Dendroica coronata* (yellow-rumped warbler)
Psaltriparus minimus (bushtit)	*Polioptila caerulea* (blue-gray gnatcatcher)
Ardea alba (great egret)	*Chamaea fasciata* (wrentit)
Corvus corax (common raven)	*Calypte anna* (Anna's hummingbird)
Aphelocoma californica (western scrub-jay)	*Thryomanes bewickii* (Bewick's wren)
Melozone crissalis (California towhee)	*Troglodytes aedon* (house wren)
Passerculus sandwichensis (savannah sparrow)	*Sayornis nigricans* (black phoebe)
Pipilo maculatus (spotted towhee)	*Tyrannus vociferans* (Cassin's kingbird)

Table 4.3-3
Existing On-Site Wildlife Species

Plant Species	
Zonotrichia leucophrys (white-crowned sparrow)	*Canis latrans* (coyote)
Zonotrichia atricapilla (golden-crowned sparrow)	*Odocoileus hemionus* (mule deer)
Carpodacus mexicanus (house finch)	*Lynx rufus* (bobcat)
Spinus psaltria (lesser goldfinch)	*Thomomys bottae* (Botta's pocket gopher)
Tachycineta thalassina (violet-green swallow)	*Dipodomys* sp. (kangaroo rat)
Eremophila alpestris (horned lark)	*Sylvilagus audubonii* (desert cottontail)
Toxostoma redivivum (California thrasher)	*Microtus californicus* (California vole)
Callipepla californica (California quail)	*Spermophilus beecheyi* (California ground squirrel)
Baeolophus inornatus (oak titmouse)	—

Source: Dudek 2011.

The coastal sage scrub and chaparral areas contain suitable habitat for slender-horned spineflower and Parry's spineflower, which are sensitive plants known to occur in the area. The coastal sage scrub community also supports habitat for sensitive species such as California gnatcatcher, the annual grassland community supports potential habitat for burrowing owl, and the oak woodlands and riparian communities support potential habitat for nesting raptors and riparian birds such as least Bell's vireo, yellow-breasted chat, and yellow warbler.

Relationship to the MSHCP

The Project is located within the MSHCP Plan Area (Figure 4.3-3). Specifically, some of the MDP facilities are located within Criteria Cells 5038, 5140, 5240, and 5342 (refer to Table 4.3-4). Since the District is a Permittee, as described in Section 13.4 of the MSHCP Implementation Agreement, it is obligated to be an active participant in the MSHCP implementation process. Under the MSHCP, as long as a project is determined to be consistent with the MSHCP, impacts (i.e., "take"), are granted to any of the 146 species Covered by the MSHCP that may occur within the project footprint. This means that most of the species that may occur within the Project boundary do not have to be specifically surveyed or mitigated for, as long as future proposed MDP facilities can be deemed consistent with the MSHCP.

The MDP facilities are considered a Covered Activity pursuant to Section 7.3.7 of the MSHCP. As stated in Section 7.3.7 of the MSHCP, flood control facilities (improvements and new construction) that are undertaken by a Permittee (the District and the Cities of Lake Elsinore and Wildomar are all Permittees within the MSHCP) are Covered Activities. Covered Activities are those activities that were considered when the MSHCP was being prepared. The impacts associated with these activities have already been considered in the contemplated buildout of the MSHCP Reserve. Therefore, Covered Activities are not required to set aside land to be Conserved as part of the MSHCP Reserve. Since the Project is a

Covered Activity, the proposed MDP facilities would not be required to set aside lands that would contribute to the MSHCP Conservation Area.

The MDP facilities are located within Rough Step Unit 5 and Rough Step Unit 8 of the MSHCP. Rough Step is the tracking system built into the MSHCP to track how conservation efforts keep up with approved development. Rough Step tracking only applies within the Criteria Area, and as shown on Figure 4.3-3, there is a small area of the Project that is affected by the Criteria Area, and therefore by Rough Step.

Rough Step Unit 5 encompasses 91,734 acres within the southwestern corner of western Riverside County and includes the Santa Rosa Plateau, the Tenaja Corridor, and Murrieta Creek. Rough Step Unit 5 is bounded by Interstate 15 (I-15) to the northeast, San Diego County to the south, and the Santa Ana Mountains in the Cleveland National Forest to the west. Within Rough Step Unit 5, there are 24,326 acres within the Criteria Area. Key vegetation communities within Rough Step Unit 5 include coastal sage scrub; grasslands; riparian scrub, woodland, and forest; Riversidean alluvial fan sage scrub; and woodlands and forests. In 2011, all vegetation communities were "in" Rough Step except for coastal sage scrub, which is "out" of Rough Step by 1 acre.

Rough Step Unit 8 encompasses 50,408 acres within the west-central region of western Riverside County and includes the Cities of Lake Elsinore and Canyon Lake, the Alberhill Area, San Jacinto River, Horsethief Canyon, and Temescal Wash. Rough Step Unit 8 is bounded by the Santa Ana Mountains to the west, I-215 to the east, Bundy Canyon Road to the south, and Rough Step Unit 7 to the north. Within Rough Step Unit 8, there are 22,690 acres within the Criteria Area. Key vegetation communities within Rough Step Unit 8 include coastal sage scrub; grasslands; riparian scrub, woodland, and forest; and Riversidean alluvial fan sage scrub. In 2011, all vegetation communities were "in" Rough Step except for grasslands, which is "out" of Rough Step.

No specific development of the MDP facilities is proposed at this time. Most of the facilities are located within existing rights-of-way. Future proposed MDP facilities within a Criteria Cell would need to address whether development of the MDP facility would interfere with the status of Rough Step Unit 5 or Rough Step Unit 8 at the time the specific MDP facility is being proposed.

All MDP facilities are subject to compliance with Section 6.1.2 (impacts to riparian and/or riverine resources), Section 6.1.3 (impacts to any Narrow Endemic Plant Species Survey Area (NEPSSA)), Section 6.3.2 (impacts to any Criteria Area Species Survey Area (CASSA) and/or Burrowing Owl Survey Area), and Section 6.1.4 (conflicts with the Urban/Wildlands Interface Guidelines) of the MSHCP. Suitable habitat is present within the Project boundary for the following NEPSSA species: California Orcutt grass, many-stemmed dudleya, Munz's onion, Wright's trichocoronis, and San Diego ambrosia (see Figure 4.3-4a and Figure 4.3-4b). Suitable habitat is present within the Project boundary for the following CASSA species: Davidson's saltscale, little mousetail, Parish's brittlescale, smooth tarplant, and

San Jacinto Valley crownscale (see Figure 4.3-5a and Figure 4.3-5b). The Project boundary is also located within a Burrowing Owl Survey Area (see Figure 4.3-6a and Figure 4.3-6b).

Table 4.3-4 lists which MDP facility is located within a Criteria Cell, NEPSSA area, CASSA area, and/or Burrowing Owl Survey Area. When MDP facilities within a MSHCP Criteria Cell are proposed in the future, they will be required to submit a Joint Project Review (JPR) to the Western Riverside Regional Conservation Authority (RCA) for MSHCP Consistency compliance (see Figure 4.3-3). Requirements for focused surveys to be included in a JPR submittal will be outlined in Section 4.3.6, Mitigation Measures. For all MDP facilities, regardless if they are in a Criteria Cell, the District or project proponent will be required to demonstrate MSHCP Compliance and be required to prepare a biological resources report, as outlined in Section 4.3.6, Mitigation Measures, which could include focused surveys as well.

Table 4.3-4
MDP Facilities Relationship to MSHCP Requirements

Watershed	Proposed/ Existing	Facility Name	Facility Description	Within Criteria Cell	Within NEPSSA	Within CASSA	Within Burrowing Owl Survey Area/ Potential Burrowing Owl Habitat
A	Proposed	Line A	Line A system begins at the proposed Line A Debris Basin. The system consists of adding flood walls ranging from 0.5 to 1.5 ft in height to existing Lime Street Channel from upstream end of Line A to Laguna Avenue. Existing 42 in RCP in Hill Street will be removed and replaced with 72 in RCP.	No	No	No	No
		Line A WQ Basin	Located at the northwest corner of the intersection of Hill Street and Grand Avenue. The water quality basin would require a connection to the existing drainage system of the existing tract located at the southwest corner of the intersection of Grand Avenue and Hill Street.	No	No	No	No
	Existing	Line A (Lime Street Channel)	Upstream end of Lime Street Channel located approximately 330 ft west of the intersection of Jamieson and Orange Street, extending northeasterly to Laguna Avenue then transitioning into a 42 in RCP along Hill Street.	No	No	No	No
B	Proposed	Line B (Ortega Channel)	Line B system consists of adding 1 ft floodwalls to existing Ortega Channel Outlet, from Grand Avenue northeasterly to the Lake and a debris basin upstream of existing Ortega Channel.	No	No	No	No
		Line B WQ Basin	Located near the southwest corner of the intersection of Ortega Highway and Grand Avenue. The water quality basin would require a connection to the existing	No	No	No	No

Table 4.3-4
MDP Facilities Relationship to MSHCP Requirements

Watershed	Proposed/ Existing	Facility Name	Facility Description	Within Criteria Cell	Within NEPSSA	Within CASSA	Within Burrowing Owl Survey Area/ Potential Burrowing Owl Habitat
			drainage system of the tract located at southwest corner of the intersection of Grand Avenue and Ortega Highway.				
B	Existing	Ortega Channel	Upstream end located approximately 650 ft south of the intersection of Shoreline and Lighthouse Drive, extending northerly towards Ortega Highway, extending approximately 550 ft along Ortega Highway, then extending northwesterly approximately 850 ft parallel to Lake Terrace Drive, then extending northeasterly parallel to Serena Way.	No	No	No	No
C	Proposed	Line C	The most upstream portion of Line C is at the intersection of Grand Avenue and Windward Way. The system heads southeast along Grand Avenue approximately 1,500 ft, junctions with line C-1, then outlets to Lake Elsinore.	No	No	No	**Yes**
		Line C-1	The upstream portion of Line C-1 is at the intersection of Grand Avenue and the entrance to Butterfield Elementary. The system heads northwest along Grand Avenue for approximately 800 ft, junctions with Line C.	No	No	No	**Yes**
D	Proposed	Line D	The RCP begins approximately 900 ft southwest of the intersection of Union and Santa Rosa Drive. The system travels northeast along Santa Rosa Drive and traverses Grand then outlets to Lake Elsinore.	No	No	No	No

Table 4.3-4
MDP Facilities Relationship to MSHCP Requirements

Watershed	Proposed/ Existing	Facility Name	Facility Description	Within Criteria Cell	Within NEPSSA	Within CASSA	Within Burrowing Owl Survey Area/ Potential Burrowing Owl Habitat
E	Proposed	Line E	The upstream inlet begins at the future alignment of Union Avenue just south of Esther Street. RCP would head northeast under Esther street then along the property line of APN 381-280-002, 003, 006, 007, 024 to Grand Avenue then outlet to Lake Elsinore.	No	No	No	No
F	Proposed	Line F	Line F runs through the geographic low (possible location for a future street). The alignment would extend towards Grand Avenue and outlet to Lake Elsinore. A basin is proposed upstream of proposed Line F.	No	No	No	**Yes**
		Line F-1	Line F-1 inlet is located approximately 300 ft west of the intersection of Akely and Gillette Street. The alignment extends northwesterly approximately 500 ft where it junctions with Line F.	No	No	No	No
G	Proposed	Line G	Line G inlet begins at the intersection of Deeble Entrance and Grand Avenue. The system heads northwest along Grand Avenue and then extends northeasterly towards Lake Elsinore under a private driveway and outlets to the Lake.	No	No	No	No
		Line G WQ Basin	Located at the southwest corner of the intersection of Adelfa Street and Grand Avenue. The water quality basin would require a connection to the existing drainage system of the tract located at southeast corner of the intersection of Grand Avenue and Adelfa Street.	No	No	No	**Yes**

Table 4.3-4
MDP Facilities Relationship to MSHCP Requirements

Watershed	Proposed/ Existing	Facility Name	Facility Description	Within Criteria Cell	Within NEPSSA	Within CASSA	Within Burrowing Owl Survey Area/ Potential Burrowing Owl Habitat
H	Proposed	Line H (Adelfa Channel)	Line H (Adelfa Channel) inlet begins at a vacant parcel (APN 383-06-039) and extends northwest towards Zellar Street. The alignment continues along Zellar and extends northeasterly towards Cottrell. Line H continues northeasterly along Cottrell and extends northeasterly onto Blackwell Boulevard, where the alignment continues along the street heading north towards the lake.	No	No	No	No
	Proposed	Line H-1	Line H-1 inlet begins approximately 130 ft south of the intersection of Adelfa and Cottrell. Line H-1 continues northeasterly for approximately 260 ft, northerly for approximately 300 ft, then northeasterly for approximately 200 ft and junctions with Line H at the intersection of Adelfa and Cottrell.	No	**Yes**	No	No
		Line H-2	Line H-2 inlet begins near the intersection of Anthony Avenue and Brand Street, extends approximately 320 ft along Anthony Avenue. The alignment continues northeasterly towards Cottrell to the intersection of Cottrell and Landerville where Line H-2 junctions with Line H.	No	No	No	No
		Lakeland Village Channel	Inlet begins at proposed basin outlet. Proposed open channel extends northeasterly towards the upstream end of the existing Lakeland Village Channel. Existing culverts located at Grand Avenue,	No	**Yes**	No	**Yes**

Table 4.3-4
MDP Facilities Relationship to MSHCP Requirements

Watershed	Proposed/ Existing	Facility Name	Facility Description	Within Criteria Cell	Within NEPSSA	Within CASSA	Within Burrowing Owl Survey Area/ Potential Burrowing Owl Habitat
			Raley Avenue, Sutherland Avenue, Brightman Avenue, Mackay Avenue, Bobrick Avenue, Hays Avenue, and Nelson Avenue will be removed and replaced with proposed 12 ft W × 4 ft H RCBs. A 12 ft W × 4 ft H rectangular channel is proposed from Grand Avenue to the Lake to replace the existing 7 ft W × 4.5 ft H rectangular channel.				
	Existing	Lakeland Village Channel	From the outlet, a 7 ft W × 4.5 ft H rectangular channel extends southwesterly towards Grand Avenue. The rectangular channel transitions into a 12 ft W × 4 ft H rectangular channel and continues to extend southwesterly parallel to Baldwin Boulevard for approximately 1,850 ft.	No	No	No	No
I	Proposed	Line I	Debris basin is located upstream of proposed Line I. Line I inlet is located at approximately 250 ft south of the intersection of Hayes and Wood Street. Alignment travels northeast along Wood Street, northwest along Broomall Avenue, northeast along Downman Street, northwest along Brightman Avenue, then northeast along Lorimer Street where it junctions with Line I-1 at the intersection of Lorimer Street and Brightman Avenue. Line I continues northeast along Lorimer Street until it outlets into the lake.	No	**Yes**	No	**Yes**

Table 4.3-4
MDP Facilities Relationship to MSHCP Requirements

Watershed	Proposed/ Existing	Facility Name	Facility Description	Within Criteria Cell	Within NEPSSA	Within CASSA	Within Burrowing Owl Survey Area/ Potential Burrowing Owl Habitat
		Line I WQ Basin	Located at the northwest corner of the intersection of Lorimer Street and Grand Avenue. The water quality basin would require a connection to the existing drainage system of the tract located at the northeast corner of the intersection of Lorimer Street and Grand Avenue.	No	**Yes**	No	**Yes**
		Line I-1	Line I-1 begins at the intersection of Baldwin and Brightman Avenue and runs along Brightman to the junction of Line I at Lorimer Street.	No	No	No	No
J	Proposed	Line J	Line J inlet is located at the intersection of Benner Street and Brightman Avenue. The line extends northeasterly towards Turner Street and then continues north along Turner to Lake Elsinore.	5038	**Yes**	**Yes**	**Yes**
K	Proposed	Line K	From the outlet, the alignment extends southwesterly for approximately 1,480 ft towards Grand Avenue, then easterly along Grand for approximately 1,260 ft then southwesterly along Ginger Lane for approximately 1,100 ft to the proposed debris basin.	5038	**Yes**	No	**Yes**
		Line K-1		5038	No	**Yes**	**Yes**
L	Proposed	Line L	From the outlet, the proposed rectangular channel extends southeasterly for approximately 400 ft and then southerly for approximately 2,000 ft to the headworks.	No	**Yes**	No	**Yes**

Table 4.3-4
MDP Facilities Relationship to MSHCP Requirements

Watershed	Proposed/ Existing	Facility Name	Facility Description	Within Criteria Cell	Within NEPSSA	Within CASSA	Within Burrowing Owl Survey Area/ Potential Burrowing Owl Habitat
			Proposed alignment includes a 7 ft W × 7 ft H RCB culvert under Grand Avenue.				
M	Proposed	Line M	From the junction with Line L, a proposed 15 ft W × 8 ft H RCB extends easterly then transitions into a 7 ft W × 7 ft H RCB that extends southwesterly along Gregory Place towards Grand Avenue. Alignment continues southeasterly under Grand Avenue then continues southeasterly under Koves Road and then southwesterly for approximately 1,560 ft to the inlet.	No	**Yes**	No	**Yes**
N	Proposed	Line N	From the outlet, the alignment extends southwesterly towards Grand Avenue then southeasterly along Grand Avenue then southwesterly along Morrell Lane for approximately 2200 ft where Lateral N-1 junctions with Line N. The alignment continues southeasterly for approximately for 620 ft and terminates at Line N Debris Basin.	5140	**Yes**	**Yes**	**Yes**
		Lateral N-1	From Lateral N-1 inlet, the alignment extends northwesterly for approximately 1000 ft until it junctions with Line N.	No	**Yes**	No	**Yes**
O	Proposed	Line O-20	Line O-20 alignment begins at the outlet as a 50 ft W x 5 ft H rectangular channel and extends southwesterly along Ontario Way until it connects to the existing 84-in RCP on TR 24138. Line O-20 alignment continues at the upstream end of the	5140	**Yes**	**Yes**	**Yes**

Table 4.3-4
MDP Facilities Relationship to MSHCP Requirements

Watershed	Proposed/ Existing	Facility Name	Facility Description	Within Criteria Cell	Within NEPSSA	Within CASSA	Within Burrowing Owl Survey Area/ Potential Burrowing Owl Habitat
			existing 84-in RCP and extends southeasterly along Grand Avenue towards Borchard Drive then continues along Borchard Drive until it junctions with the proposed debris basin.				
		Line O-10	Line O-10 alignment begins at the existing Corydon Channel as a 14 ft W x 8 ft H rectangular channel then extends southwesterly towards Grand Avenue where it continues westerly along Grand Avenue to Skylark Drive and continues southwesterly for approximately 920 ft to meet the proposed debris basin.	5342	**Yes**	**Yes**	**Yes**
O	Existing	Corydon Channel	Upstream end begins as a double 14 ft W x 8 ft H RCB at Union Street then extends northeasterly for approximately 490 ft and then junctions with Palomar Channel.	5240	**Yes**	**Yes**	**Yes**
		Palomar Channel	Upstream end begins as a 14 ft W x 4.2 ft H RCB at Corydon Road and extends along Old Coach Road terminating at Palomar Street.	5240	**Yes**	**Yes**	**Yes**
		Existing 84 in RCP	Upstream end begins at Grand Avenue then extends northeasterly towards Lake Elsinore for approximately 3400 ft along Ontario Way.	5140	**Yes**	**Yes**	**Yes**

Table 4.3-4
MDP Facilities Relationship to MSHCP Requirements

Watershed	Proposed/ Existing	Facility Name	Facility Description	Within Criteria Cell	Within NEPSSA	Within CASSA	Within Burrowing Owl Survey Area/ Potential Burrowing Owl Habitat
P	Proposed	Channel A	Channel A alignment begins approximately 340 northwest of Batson Lane and extends easterly approximately 1630 ft towards Corydon Road where it junctions with the existing Palomar Channel.	5342	No	**Yes**	No
	Existing	Sedco–Bryant Street Storm Drain	Upstream end begins at Palomar Street, extends southwesterly along Bryant Street and continues northwesterly approximately 1000 ft parallel to Union Street where it junctions with proposed Channel A.	5342	No	No	No
			Upstream end begins at the debris basin and extends northeasterly towards Grand and continues northwesterly along Grand for approximately 1000 ft where it junctions with the existing channel.	5342	**Yes**	No	**Yes**

Source: County of Riverside 2003.

Jurisdictional Resources

Pursuant to Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (ACOE) regulates the discharge of dredged and/or fill materials into waters of the United States. The term "waters of the United States" is defined in the ACOE regulations at 33 CFT 328.3(a) as:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:
    a. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
    b. From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or
    c. Which are used or could be used for industrial purpose by industries in interstate commerce.
4. All impoundments of waters otherwise defined as waters of the United States under the definition;
5. Tributaries of waters identified in paragraphs (a) (1) through (4) of this section;
6. The territorial seas;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1) through (6) of this section.
8. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.
9. Waste treatments systems, including treatment ponds or lagoons designed to meet the requirements of the Clean Water Act (other than cooling ponds defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.

In the absence of wetlands, the limits of the ACOE jurisdiction in non-tidal waters, such as intermittent streams, extends to the ordinary high water mark, which is defined in 33 CFR 328.3(e) as "that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear,

natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider characteristics of the surrounding areas."

The term "wetlands" (a subset of "waters of the United States") is defined in Title 33 of the Code of Federal Regulations as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3(b)). In 1987 the ACOE published the *Corps Wetlands Delineation Manual* (Wetlands Delineation Manual), a manual to guide its field personnel in determining jurisdictional wetland boundaries. In December 2006, the ACOE issued a special public notice of availability of the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement* (Arid West Supplement; ACOE 2008). Both the Wetland Delineation Manual and the Arid West Supplement were used to guide the delineation and evaluate on-site soils.

The methodology set forth in the Wetland Delineation Manual generally requires that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. A wetland should normally meet each of the following three criteria:

- More than 50 percent of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter in the *National List of Plant Species that Occur in Wetlands*, Reed, P.B., Jr. 1988, *U.S. Fish and Wildlife Service Biological Report 88(26.10)*;
- Soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and
- Hydrologic characteristics must indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year (ACOE 1987).

Pursuant to Division 2, Chapter 6, Sections 1600–1603 of the California Fish and Game Code, the CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. The CDFW defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." The CDFW definition of "lake" includes "natural lakes or man-made reservoirs."

CDFW jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. The CDFW Legal Advisor has prepared the following option:

- Natural waterways that have been subsequently modified and which have the potential to contain fish, aquatic insects, and riparian vegetation will be treated like natural waterways…
- Artificial waterways that have acquired the physical attributes of natural stream courses and which have been viewed by the community as natural stream courses, should be treated by [CDFW] as natural waterways…
- Artificial waterways without the attributes of natural waterways should generally not be subject to Fish and Game Code provisions.

CDFW jurisdiction closely mirrors that of the ACOE. Exceptions include CDFW's exclusion of isolated wetlands (those not associated with a river, stream, or lake), the addition of artificial stock ponds and irrigation ditches constructed in uplands, and the addition of riparian habitat supported by a river, stream, or lake regardless of the riparian area's federal wetlands status.

The Project boundary contains numerous drainage and other aquatic features, including various water quality basins and debris basins, and the MDP facilities will outlet into Lake Elsinore at several locations. Based on the reconnaissance-level biological assessment of the MDP facilities, there are MDP facilities that would require a detailed jurisdictional delineation and potential permitting through the ACOE and CDFW. Once a formal jurisdictional delineation is conducted, potential impacts to waters of the United States or waters of the state could be assessed. Table 4.3-5 lists the MDP facilities that have been identified based on reconnaissance-level surveys that would require a formal jurisdictional delineation in order to assess potential impacts.

Table 4.3-5
MDP Facilities Requiring Jurisdictional Delineation

Line
Hill Street/Line A
Ortega Channel Outlet
Line D
Line F
Line F-1
Lakeland Village Channel
Proposed Open Channel associated with the Lakeland Village Channel
Line I
Line K
Line K-1
Line L

Table 4.3-5
MDP Facilities Requiring Jurisdictional Delineation

Line
Line M
Line N
Lateral N-1
Line O-20
Line O-10
Channel A
Corydon Channel
Bryant Street Storm Drain
Line N Water Quality Basin
Proposed Open Channel south of Stoneman Street
All proposed debris basins

4.3.2 Related Regulations

Federal

Federal Endangered Species Act

The federal Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) and subsequent amendments, provide for the conservation of endangered and threatened species and the habitats on which they depend. A federally endangered species is one facing extinction throughout all or a significant portion of its geographical range. A federally threatened species is one likely to become endangered within the foreseeable future throughout all or a significant portion of its range. The presence of any federally threatened or endangered species on a site generally imposes severe constraints on development; particularly if development would result in a take of the species or its habitat. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct. Harm in this sense can include any disturbance to habitats used by the species during any portion of its life history. The Project will avoid known occurrences of listed plants and habitat for listed wildlife species or otherwise mitigate potential impacts to these species.

Clean Water Act

The U.S. Environmental Protection Agency (EPA) regulates water quality under the Clean Water Act (CWA) (also known as the Federal Water Pollution Control Act). Enacted in 1972 and significantly amended in subsequent years, the CWA is designed to restore and maintain the chemical, physical, and biological integrity of waters in the United States. The CWA provides the legal framework for several water quality regulations, including National Pollutant Discharge Elimination System (NPDES) Permits,

effluent limitations, water quality standards, pretreatment standards, anti-degradation policy, non-point source discharge regulation, and wetlands protection.

The CWA requires NPDES permits for the discharge of pollutants to waters of the United States from any point source. In 1987, the CWA was amended to require that the EPA establish regulations for permitting of municipal and industrial stormwater discharges under the NPDES permit program. The EPA published final regulations regarding stormwater discharges on November 16, 1990. The regulations require that municipal separate storm sewer system (MS4) discharges to surface waters be regulated by an NPDES permit. On January 29, 2010, the Santa Ana Regional Water Quality Control Board (RWQCB) issued a fourth-term area-wide NPDES MS4 Permit to the District (the principal Permittee), the County of Riverside and the cities of Beaumont, Calimesa, Canyon Lake, Corona, Hemet, Lake Elsinore, Moreno Valley, Menifee, Norco, Perris, Riverside, San Jacinto, and Wildomar (Permittees). The Santa Ana MS4 Permit is for the portion of the Santa Ana River watershed located within Riverside County (Order No. R8-2010-0033, NPDES Permit No. CAS 618033).[2] The Permittee's stormwater programs are designed to ensure compliance with this permit. Surface runoff from the project site is permitted under the municipal NPDES permit issued to the County of Riverside.

The EPA has delegated the responsibility for administration of portions of the CWA to state and regional agencies. The CWA requires the states to adopt water quality standards for receiving water bodies and to have those standards approved by the EPA. Water quality standards consist of designated beneficial uses for a particular receiving water body (e.g., wildlife habitat, agricultural supply, fishing), along with water quality criteria necessary to support those uses. Water quality criteria are prescribed concentrations or levels of constituents, such as lead, suspended sediment, and fecal coliform bacteria, or they are narrative statements that represent the quality of water supporting a particular use.

Clean Water Act Section 404 Permit – ACOE

The ACOE regulates discharges of dredged or fill material into waters of the United States pursuant to Section 404 of the federal CWA. In order to obtain a Section 404 permit, applicants must demonstrate that the discharge of dredged or fill materials would not significantly degrade the nation's waters and there are no practicable alternatives less damaging to the aquatic environment. Applicants are also required to describe steps taken to minimize impacts to water bodies and wetlands and provide appropriate and practicable mitigation, such as restoring or creating wetlands, for any remaining, unavoidable impacts. Permits will not be granted for proposals that are found to be contrary to the public interest. Compliance with the Endangered Species Act and/or Section 106 of the National Historic Preservation Act may also be required before a Section 404 permit can be issued.

[2] It should be noted that Order No. R8-2010-0033 (NPDES No. CAS 618033), approved in January 2010, superseded Order No. R8-2002-0011 except for enforcement purposes and in order to meet the provisions contained in Division 7 of the California Water Code and provisions of the federal Clean Water Act.

Migratory Bird Treaty Act

According to the Migratory Bird Treaty Act (MBTA) administered by the USFWS, the removal of active nests, eggs, or nestlings is unlawful. A violation of the MBTA may occur on, but is not limited to, projects that involve clearing or grubbing of migratory bird nest habitat during the nesting season, and demolition or reconstruction where bird nests are present. This period is especially important due to the heightened presence of eggs or young that are essential to the survival of the species. Consequently, prior to initiating a project that includes potential bird habitat removal, it is generally recommended that a nesting bird survey be done if that habitat removal is proposed to be completed during the nesting season (generally February 1 to August 31).

State

California Endangered Species Act

California Fish and Game Code, Section 2050 et seq., establishes that it is the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. The California Endangered Species Act (CESA) mandates that state agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. CESA requires state lead agencies to consult with the CDFW during the California Environmental Quality Act (CEQA) process to avoid jeopardy to threatened or endangered species. CESA prohibits any person from taking or attempting to take a species listed as endangered or threatened (Fish and Game Code, Section 2080). Section 2080 of the Fish and Game Code provides the permitting structure for CESA. The take of a state-listed endangered or threatened species or candidate species will require incidental take permits as authorized by CDFW.

The MDP facilities will be reviewed on a project-by-project basis when they are proposed in the future. Since this is a PEIR, future MDP facilities will demonstrate how the MDP facility will avoid listed plants and habitat for listed wildlife species or outline mitigation measures (refer to Section 4.3.6) that would mitigate potential impacts to these species. For future MDP facilities being proposed within a Criteria Cell, under the MSHCP, as long as the MDP facility is determined to be consistent with the MSHCP, impacts (i.e., take), are granted to any of the 146 species Covered by the MSHCP that may occur within the MDP facility footprint.

As stated above, the District is a Permittee to the MSHCP and will be required to ensure the MDP facilities comply with the MSHCP. For future MDP facilities located outside a Criteria Cell, depending on the jurisdiction, either the County of Riverside or the Cities of Lake Elsinore or Wildomar will determine whether the MDP facility is consistent with the MSHCP.

Clean Water Quality 401 Certification

Section 401 of the CWA requires that any person applying for a federal permit or license which may result in a discharge of pollutants into waters of the United States must obtain a state water quality certification that the activity complies with all applicable water quality standards, limitations, and restrictions. No license or permit may be issued by a federal agency until certification required by Section 401 has been granted. Further, no license or permit may be issued if certification has been denied. CWA Section 404 permits and authorizations are subject to Section 401 certification by the RWQCB. A Clean Water Quality 401 Certification may be required for the MDP facilities listed in Table 4.3-5.

Porter-Cologne Water Quality Control Act

A Waste Discharge Requirement (WDR) is necessary when a project will result in temporary or permanent impacts to water features that are not regulated under Section 404 of the federal CWA. These features are regulated by the RWQCB as "waters of the state" in accordance with the Porter-Cologne Water Quality Control Act. The RWQCB needs to evaluate the impact to the quality of waters. Specifically, "quality of waters" refers to chemical, physical, biological, bacteriological, radiological, and other properties and characteristics of water that affect its use. The application process generally includes submittal of an application form, supplemental information like a biological resources report, project site plans, and any other reports or information about the MDP facilities' impacts to waters of the state. A general WDR may be issued for projects that will result in impacts to less than 400 linear feet and 0.2 acre of state jurisdictional waters, under Water Quality Order No. 2004-0004-DWQ. The RWQCB typically includes additional water quality requirements or conditions in the WDR that would be required to be implemented. Obtaining the WDR is required prior to impacts within the waters of the state.

Streambed Alteration Agreements

The CDFW is responsible for protecting, conserving and managing wildlife, fish and plant resources in the State of California. Under the Fish and Game Code, Section 1602, an entity is required to notify CDFW of any activity that may modify a river, stream or lake. Portions of the MDP facilities have traditional streambed indicators such as a defined bed and bank and may be associated with what was once a natural drainage channel. Those MDP facilities are therefore considered under the jurisdiction of the CDFW pursuant to Section 1602 of the California Fish and Game Code. A Streambed Alteration Agreement may be required of the MDP facilities listed in Table 4.3-5. If a Streambed Alteration Agreement with CDFW is needed, then CDFW will most likely require mitigation in the form of on-site, off-site, or in-lieu fee mitigation, or combination of all.

Local

Western Riverside County MSHCP

The Western Riverside County MSHCP is a comprehensive, multi-jurisdictional habitat conservation plan focusing on conservation of species and their associated habitats in Western Riverside County. This plan is one of several large, multi-jurisdictional habitat-planning efforts in Southern California with the overall goal of maintaining biological and ecological diversity within a rapidly urbanizing region. The MSHCP will allow the County of Riverside and its cities to better control local land-use decisions and maintain a strong economic climate in the region while addressing the requirements of the state and federal endangered species acts.

The MSHCP serves as a habitat conservation plan pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), as well as a Natural Communities Conservation Plan (NCCP) under the NCCP Act of 2001 (Fish and Game Code, Section 2800 et seq.). The MSHCP allows the participating jurisdictions to authorize take of plant and wildlife species identified within the plan area. The USFWS and CDFW have authority to regulate the take of threatened, endangered, and rare species. Under the MSHCP, the wildlife agencies have granted take authorization for otherwise lawful actions, such as public and private development that may incidentally take or harm individual species or their habitat outside of the MSHCP conservation area, in exchange for the assembly and management of a coordinated MSHCP conservation area.

The MSHCP is a criteria-based plan and does not rely on a hardline preserve map. Instead, within the MSHCP Plan Area, the MSHCP reserve will be assembled over time from a smaller subset of the Plan Area referred to as the Criteria Area. The Criteria Area consists of Criteria Cells (Cells) or Cell Groupings, and flexible guidelines (Criteria) for the assembly of conservation within the Cells or Cell Groupings. Cells and Cell Groupings also may be included within larger units known as Cores, Linkages, or Non-Contiguous Habitat Blocks.

As stated previously, the District is a Permittee to the MSHCP and will be required to ensure the MDP facilities comply with the MSHCP.

Riverside County Oak Tree Management Guidelines

In March 1993, the County of Riverside issued an Oak Tree Management Guidelines intended to address the treatment of oak woodlands in areas where zoning and/or general plan density restrictions will allow the effective use of clustering. The guidelines are generally considered to be the most effective where minimum lot sizes of 2.5 acres or larger or where oak woodlands are concentrated in a relatively small portion of a project site. The guidelines include recommendations for oak inventories, land use designs to cluster home sites in order to reduce impacts to oaks, and mitigation measures for oak conservation.

The MDP facilities will mostly be within roads rights-of-way and the proposed water quality basins and debris basins are not anticipated to be located near oak woodlands. Should some of the MDP facilities be located near oak woodlands, the specific MDP facility shall comply with the Riverside County Oak Tree Management Guidelines.

Riverside County General Plan

The biological resources section of the Riverside County General Plan (GP) (Riverside County 2003b) provides policies to address effects of prospective development on biological resources. The following policies are applicable to the Project:

Open Space Policy 6.1: During the development review process, ensure compliance with the Clean Water Act's Section 404 in terms of wetlands mitigation policies and polices concerning fill materials in jurisdictional wetlands.

Open Space Policy 17.2: Enforce the provisions of applicable MSHCPs, if adopted, when developing transportation or infrastructure projects that have been designated as covered activities in the applicable MSHCP.

Open Space Policy 18.1: Preserve multi-species habitat resources in the County of Riverside through the enforcement of the provisions of applicable MSHCPs, if adopted.

City of Wildomar General Plan

The City of Wildomar has incorporated Riverside County's General Plan. Therefore, the above policies related to the Riverside County General Plan also apply to the City of Wildomar.

City of Lake Elsinore General Plan

The biological resources section of the City of Lake Elsinore GP (City of Lake Elsinore, 2011) provides goals and policies to address effects of prospective development on biological resources. The following policies are applicable to the Project:

Policy 1.1: The City shall continue to participate in the Western Riverside County MSHCP, the LEAPS program, and the Implementation Agreement; with a strategy that focuses on quality assemblage of conservation acreage. The City shall work toward the lower end of the conservation acreage range as promised by the County during the adoption of the MSHCP by the City.

Policy 1.4: Encourage revegetation with native plants compatible with natural surrounding habitat where soils have been disturbed during construction, and discourage plants identified in the MSHCP as unsuitable for conservation areas.

Policy 1.8: The City shall consult with the RCA and adjacent jurisdictions to ensure proper adherence to MSHCP guidelines and to allow for a maximum level of regional interconnection of trail systems. The City shall reduce, modify or add to the regional interconnections and linkage based on new biological analysis brought forward during the CEQA and LEAP processes.

Policy 2.1: Biological resources analyses of proposed projects shall include discussion of potential impacts to any plant or wildlife species that is officially listed as threatened or endangered by the U.S. Fish and Wildlife Service and/or the CDFW but not covered by the MSHCP.

Policy 2.2: Development or modification shall be discouraged in areas containing riparian habitat of high functions and values or corridors with 80% of more of natural native habitat that link larger patches of natural native habitat containing 80% or more native plant species. Further, development in areas described for conservation, including areas planned for riparian/riverine restoration included in the MSHCP, shall also be discouraged.

4.3.3 Comments Received in Response to the Notice of Preparation

Comment letters were received from CDFG dated September 29, 2011, and from Linda Ridenour dated October 11, 2011, in response to the NOP. The contents of these letters are included in Appendix A.

4.3.4 Significance Threshold Criteria

The District has not established local CEQA significance thresholds as described in Section 15064.7 of the CEQA Guidelines. The NOP for the PEIR included the IS (Environmental Checklist) to show the areas being analyzed in the PEIR; refer to Appendix A of this PEIR. Accordingly, and based on the IS, the Project would have a significant impact on biological resources in the following if the Project would:

- 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, and regulations, or by the California Department of Fish and game or U.S. Fish and Wildlife Service.
- Have a substantial adverse effect on biological resources involved within a jurisdictional water features as defined by federal, state, or local regulations (e.g., Section 404 of the Clean Water Act, Section 401 of the Clean Water Act, Section 1602 of California Fish and Game Code, Porter-Cologne Water Quality Control Act, etc.) through direct removal, filing, 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.

4.3.5 Environmental Impacts Before Mitigation

The following analysis is programmatic. Since there are no specific MDP facilities being proposed for disturbance or construction by approval of this PEIR, the following is an analysis of the potential known resources within the Project boundary, and how future MDP facilities will be analyzed in light of what is presented below in the future. The District, City of Lake Elsinore, and City of Wildomar will use the following analysis and mitigation measures, if applicable, in guiding their future study and analysis.

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

Special-Status Plant Species

Based on the reconnaissance level surveys conducted for the MDP facilities, areas that have suitable habitat for special status plants are located in the northeastern portions of the Project area. Approximately one-third of the Project area is within NEPSSA survey areas and approximately one-quarter of the Project area is within CASSA survey areas (refer to Figure 4.3-4a, Figure 4.3-4b, Figure 4.3-5a, and Figure 4.3-5b). Suitable habitat is present within the Project boundary for the following NEPSSA species: California Orcutt grass, many-stemmed dudleya, Munz's onion, Wright's trichocoronis, and San Diego ambrosia. Suitable habitat is present within the Project boundary for the following CASSA species: Davidson's saltscale, little mousetail, Parish's brittlescale, smooth tarplant, and San Jacinto Valley crownscale. Most of the proposed MDP facilities will be within existing road rights-of-way and construction requires a limited area of linear construction impact. However, for the MDP facilities that do fall within NEPSSA/CASSA areas (refer to Figures 4.3-4a, Figure 4.3-4b, Figure 4.3-5a, and Figure 4.3-5b; Table 4.3-4), focused surveys within suitable NEPSSA/CASSA habitat areas will be required when specific projects are proposed for construction during the appropriate flowering season. If these plants are found to occur within the construction footprint in the future, impacts to these species may be considered significant. However, with implementation of Mitigation Measure (**MM**) **BIO-1**, which

requires mitigation in the form of species preservation, creation, restoration, or relocation to occur, future impacts to sensitive special status plant species are considered to be **less than significant**.

Special-Status Wildlife Species

Based on the reconnaissance-level surveys conducted for the MDP facilities within the Project boundary, no special-status species were observed during the time of the surveys. Special-status wildlife species likely to occur within the Project boundary are listed in Table 4.3-4. Despite the fact that the Project area is located in a predominantly disturbed environment, special-status native species, primarily birds, may occur in less than optimal and/or disturbed conditions, and may forage over open areas present within the Project boundary. The MDP facilities could impact disturbed habitats potentially suitable for several species of birds (i.e., California gnatcatcher, least Bell's vireo, yellow-breasted chat, yellow warbler, and burrowing owl). However, with implementation of **MM BIO-1**, **MM BIO-2**, and **MM BIO-3**, future impacts to sensitive special -status plant species and bird species are considered to be **less than significant with mitigation incorporated.**

In order to be consistent with the MSHCP, the proposed Project will need to ensure it does not adversely impact riparian and/or riverine resources (Section 6.1.2 of the MSHCP) without adequate mitigation, does not impact any special-survey species (Section 6.1.3 and 6.3.2 of the MSHCP) without mitigation, and does not conflict with the Urban/Wildlands Interface Guidelines (Section 6.1.4 of the MSHCP). The Project area does contain suitable habitat for riparian bird species that pursuant to Section 6.1.2 of the MSHCP would require focused bird surveys when specific facilities are proposed. Based on conditions during initial habitat assessments conducted in 2010, those MDP facilities that contain suitable habitat for riparian birds that would need to have focused surveys include Palomar Channel, Line C-1, and the existing facility along Ortega Channel, which is adjacent to existing riparian habitat.

The Project area also contains trees, shrubs, ground cover, and structures that provide suitable habitat for nesting migratory birds. Most of the nine debris basins proposed in the Project are located within sage scrub communities which might be suitable for California gnatcatcher. Suitable Riversidean sage scrub habitat for California gnatcatcher is found within a small portion of the proposed storm drain and open channel located along Line D, Line F-1, Stoneman Street, Lakeland Village, Ortega Basin, and Line A. Most of the debris basins and some water quality basins contain suitable habitat for nesting raptors or burrowing owls. Suitable raptor nesting is located along Shadow Trails Lane and Bryant Street Storm Drain. Oak woodlands along Line K, Line K-1, along Lateral N-1, Ginger Lane, Line A, and Norrell Lane provide additional habitat for raptor nesting. Riparian habitat and existing drainages along Line L and below Ontario Way also provide suitable nesting habitat for raptors.

Portions of the Project area are within the Burrowing Owl Survey Area of the MSHCP (see Figure 4.3-6a and Figure 4.3-6b; Table 4.3-4). Most proposed water quality basins and some proposed debris basins are located within annual grasslands that contain suitable habitat for burrowing owl. Future habitat

assessments and focused surveys (if suitable habitat/burrows are present) shall be required for MDP facilities located within the MSHCP Burrowing Owl Survey Area per **MM BIO-1** and **MM BIO-3**. Construction activities could adversely impact burrowing owls if active nests are located near the proposed MDP facilities at the time of construction. Construction noise and activity may disrupt normal breeding and nesting patterns or activities of these species. Implementation of **MM BIO-1** and **MM BIO-3** would reduce impacts to burrowing owls to **less than significant.**

Habitat assessments conducted in 2010 indicated that suitable burrowing owl habitat was located at the following facilities: Line F-1, Line G, Lakeland Village Channel, Line L, Line N, Palomar Channel, and Channel A.

At the time any of these MDP facilities identified as having suitable habitat to be designed, the District, City of Lake Elsinore, or City of Wildomar shall have a qualified biologist conduct a habitat assessment and focused surveys if needed for burrowing owls in order to comply with Section 6.3.2 of the MSHCP. For any facility not listed above or in Table 4.3-4 as having suitable burrowing owl habitat, a habitat assessment shall be completed in order to determine that conditions of the site have not changed from when this document and analysis was compiled. However, given the developed nature of the majority of the Project area, it is not expected that MDP facilities not already identified would become suitable burrowing owl habitat in the future. Nevertheless, **MM BIO-1** reflects the requirement for suitable habitat to be assessed in the future. Additionally, **MM BIO-3** requires pre-construction surveys for burrowing owls, pursuant to Species Objective 6 of the MSHCP.

In addition to **MM BIO-1**, existing regulations are also designed to protect and limit impacts to birds. For example, the MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). In addition, Sections 3505, 3503.5, and 3800 of the California Department of Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs. This regulation, along with mitigation measures **MM BIO-1** and **MM BIO-2**, will reduce impacts to sensitive or special-status species to **less than significant.**

If any vegetation or structures are to be removed during the nesting season (February 1 to August 31), facility-specific nesting bird surveys shall be conducted first to determine the presence/absence of active nests. If active nests are identified, appropriate avoidance buffers should be established (see **MM BIO-2**). Implementation of **MM BIO-2** is required to reduce potential impacts to sensitive and protected bird species to **less than significant levels**.

MM BIO-1 through **MM BIO-3** shall be implemented to ensure surveys are conducted during the appropriate season when specific MDP facilities are proposed for design and construction, and to ensure that MSHCP compliance for Section 6.3.2 is attained for future Project implementation. Incorporation of these mitigation measures ensures that when future MDP facilities are proposed, potential impacts to

biological resources through compliance with Section 6.3.2 of the MSHCP will be addressed and impacts are considered **less than significant with mitigation incorporated**.

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

Riparian habitat is present within the Project boundary, and is identified with special conditions in the Riparian and Riverine Policy Section 6.1.2 of the MSHCP. This section of the MSHCP requires identification of riparian/riverine habitats and avoidance of these habitats, where possible. If avoidance is not possible of riparian vegetation, then a mitigation plan which typically includes restoration, creation or enhancement either on or off site is provided. Future MDP facilities will be required to comply with Section 6.1.2 of the MSHCP and provide mitigation as appropriate as described in **MM BIO-4**. Based on the reconnaissance level biological assessment conducted on the Project site, there is riparian habitat located within the Project boundary (refer to Figure 4.3-7a and Figure 4.3-7b).

There is approximately 9.8 acres of riparian habitat within the Project boundary (Figure 4.3-7a and Figure 4.3-7b). Specifically, the existing facility at Palomar Channel is within riparian habitat; the proposed MDP facility Line C-1 is a storm drain adjacent to riparian habitat and the existing facility along Ortega Channel is adjacent to existing riparian habitat. Given the proximity to riparian habitats and the riparian/riverine areas along lakeshore, and that riparian vegetation can grow up quickly over the years, by the time some of the MDP facilities are built, there may be riparian vegetation in areas that do not support it at this time. In order to address this future potential for a changed condition, as mentioned above, the District, City of Lake Elsinore, or City of Wildomar will need to assess each MDP facility's final alignments for impacts to riparian and/or riverine habitats. A habitat assessment shall be conducted once final alignments are known and those results shall be compared to the analysis conducted herein. If the Project area does not support riparian vegetation which is consistent with the determination herein, no further surveys are needed. For the MDP facilities above that do have the potential for impacts to riparian vegetation, the MSHCP compliance analysis needs to include an assessment of impacts and include focused riparian bird surveys if warranted pursuant to Section 6.1.2 requirements.

If the MDP facilities mentioned above cannot avoid riparian/riverine habitat during the construction, the MDP facility would be required per Section 6.1.2 of the MSHCP to prepare a Determination of Biologically Equivalent or Superior Preservation (DBESP) (i.e., mitigation plan) including appropriate mitigation, i.e., on-site or off-site enhancement, restoration, establishment (creation), preservation, payment into habitat mitigation banks or in lieu fee programs, or a combination of one or more of these options, to offset the loss of functions and values as they pertain to the MSHCP covered species.

The majority of the MDP facility alignments do not support riparian habitat areas; however, since the alignments or features currently convey water to downstream resources in the MSHCP Conservation Area, the Project area would be considered to support riverine resources as defined in the MSHCP. Per Section 6.1.2 of the MSHCP, water flowing to downstream resources should not be altered in quantity or quality in such a way that would affect downstream resources. Since the proposed Project is to construct flood conveyance facilities in locations that currently convey water during storm events, the Project would improve the water quality being discharged during storm events by containing the erosive conditions, and allowing the majority of the stormwater to be cleaned in the proposed water quality basins prior to discharge to Lake Elsinore. The water that is currently being conveyed to Lake Elsinore during storm events will not be cut off or prevented from entering Lake Elsinore. Instead, the Project will ensure erosion, siltation and urban pollution is curtailed and improved over current conditions. Therefore, since the Project will not limit or negatively change the quality of water that is currently being conveyed through the Project area and into Lake Elsinore, there are no impacts to riverine habitats and it is not expected that mitigation or DBESPs would be needed to address riverine impacts alone. Dewatering of riparian areas can be caused by direct or indirect impacts. The MDP facilities do not anticipate any de-watering of any potential riparian areas because it will not alter the velocity, volume, or seasonal flow of the Lake Elsinore 100-year floodplain and its tributaries. The area within the Project boundary is mostly developed and construction of future MDP facilities are not expected to result in substantial changes to the existing local hydrology. The riparian areas identified near Palomar Channel, Line C-1, and the existing facility along Ortega Channel outlet receive rain fall or sheet flow which supports these areas would continue to receive direct rain fall and sheet flow during small storm events. It would be during the larger storm events that stormwater would be collected and conveyed through the MDP facilities. Additionally, the riparian areas that are existing are isolated patches and are not connected to any larger conservation area. Impacts to riparian habitat will be addressed and mitigated through compliance with Section 6.1.2 of the MSHCP (**MM BIO-4**) as well as through regulatory permitting requirements from ACOE, RWQCB, and CDFW (**MM BIO-5**).

Compliance with mitigation measures **MM BIO-4** and **MM BIO-5**, and Section 6.1.2 of the MSHCP reduces potential impacts to riparian habitats and associated species from the Project to **less than significant** levels.

Would the Project have a substantial adverse effect on biological resources involved within a jurisdictional water features as defined by federal, state, or local regulations (e.g., Section 404 of the Clean Water Act, Section 401 of the Clean Water Act, Section 1602 of California Fish and Game Code, Porter-Cologne Water Quality Control Act, etc.) through direct removal, filing, hydrological interruption, or other means?

On January 11, 2011, Dudek evaluated the MDP facilities for the potential to support jurisdictional waters under the federal Clean Water Act, California Fish and Game Code, and Porter-Cologne Water

Quality Act. MDP facilities with potentially jurisdictional features are listed in Table 4.3-5. Since the Project is a long-term plan that will not be built out for several years, it is not reasonable to obtain regulatory permits for any impacts to jurisdictional features at this point in time. Instead, the analysis herein will identify the MDP facilities that based on the reconnaissance level analysis conducted to date, indicate that permits may be required in the future.

In addition to the altering and fill that may occur with Project implementation to jurisdictional features, there will also be impacts associated with the transition of currently unlined ditches and open areas conveying stormwater to lined, concrete facilities which do not allow any infiltration or natural conditions to occur in the drainage systems. These impacts will be evaluated on a case by case basis, depending on the resources and conditions present when the specific MDP facility is proposed for permitting. Mitigation for this loss will be coordinated with the regulatory agencies and could include off-site mitigation, conservation or restoration/creation.

Once the District, City of Lake Elsinore, or City of Wildomar is ready to start preparing design drawings of a specific MDP facility, specific jurisdictional delineations will need to be conducted by a qualified biologist on the MDP facilities listed in Table 4.3-5, to determine whether features would be subject to the jurisdictions of the ACOE, RWQCB, and CDFW (see **MM BIO-5**). If regulatory permits are needed for an MDP facility, mitigation may be required as determined by the various regulatory agencies. Typical mitigation for the type of MDP facilities proposed would most likely include a combination of the following: creation of riparian or wetland habitat either within MDP facilities themselves, or off-site, restoration of riparian or wetland habitat, enhancement of habitat, and/or payment of in lieu fees to an established mitigation bank. With implementation of **MM BIO-5**, potential impacts to federally protected wetlands are reduced to **less than significant** levels.

Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

There are no established migratory corridors or nursery sites within the Project boundary. The Project area is within the MSHCP Plan Area which overall consists of proposed and existing cores connected by linkages within Western Riverside County. The Project area coincides with Existing Core B, Existing Core E, and Proposed Extension of Existing Core 3. Existing Core B is composed of the Cleveland National Forest, which lines the western border of the MSHCP Plan Area. Within the MSHCP Plan Area Existing Core B consists of two large and two small blocks of Public/Quasi-Public Lands, mainly owned by the U.S. Forest Service, which are considered part of the MSHCP Conservation Area.

Existing Core B is connected to Existing Core A (Prado Basin/Santa Ana River) in the north via two Constrained Linkages (Proposed Constrained Linkage 1 and Proposed Constrained Linkage 2), in the center by Proposed Linkage 1 to the Lake Mathews/Estelle Mountain area, and in the south to the

Tenaja Corridor (Proposed Linkage 9). Existing Core B represents the second largest habitat block in the Plan Area and is located only 1.6 miles from the nearest connected Core. Studies of mountain lion movement within Existing Core B indicated that this Core provides both Live-In and Linkage Habitat for this mammal, which requires very large blocks of intact Habitat. Existing Core B likely provides linkage area for other mammals such as mountain lion and bobcat in addition to the Cooper's hawk, southern California rufous-crowned sparrow, Bell's sage sparrow, golden eagle, turkey vulture, yellow warbler, mountain quail, downy woodpecker, purple martin, California spotted owl, tree swallow, mountain lion, Palmer's grapplinghook, prostrate spine flower, graceful tarplant, and small-flowered microseris. Management entities in this existing Core include the U.S. Forest Service.

Existing Core E consists of Lake Elsinore, located in the west-central region of the MSHCP Plan Area. Existing Core E is connected to other MSHCP conserved lands via Proposed Extension of Existing Core 3 (Lake Elsinore Soils). This Core provides Live-In Habitat for Cooper's hawk, tricolored blackbird, southern California rufous-crowned sparrow, burrowing owl, American bittern, ferruginous hawk, Swainson's hawk, mountain plover, northern harrier, yellow warbler, white-tailed kite, California horned lark, peregrine falcon, bald eagle, yellow-breasted chat, loggerhead shrike, black-crowned night heron, mountain quail, osprey, double-crested cormorant, white-faced ibis, purple martin, tree swallow, least Bell's vireo, San Jacinto Valley crownscale, prostrate spineflower, Palmer's grapplinghook, and Engelmann oak, and likely provides for movement of common mammals such as bobcat. Urban Development partially constrains Existing Core E; however some natural lands remain along the border of the Core. Since this is an existing Core with no new Reserve Assembly anticipated, treatment and management of edge conditions along Existing Core E will be necessary to ensure that it provides Habitat and movement functions for species using the Core.

Proposed Extension of Existing Core 3 (Lake Elsinore Soils) consists of two blocks of land extending from the southern border of Existing Core E (Lake Elsinore). The northern portion of the proposed extension is also connected to Proposed Linkage 8. Proposed Extension of Existing Core 3 conserves soils of the Traver series, which is important to the maintenance of several species of Narrow Endemic Plants. The northern portion of the extension also provides for movement of species along the lower San Jacinto River to Proposed Linkage 8. Together with Existing Core E, Proposed Extension of Existing Core 3 provides Habitat for shorebird use. Since surrounding land uses include city (Lake Elsinore) and community Development, management of edge conditions in this area will be necessary to maintain high quality Habitat in this area.

There are no specific MSHCP linkages that have been identified for the Project area. The Cores listed above are not intended to link through the Project area to other conservation areas. Many of the MDP facilities lie within road rights-of-way and/or are within developed areas. Thus, it is not anticipated that the construction and maintenance of future MDP facilities would impede the movement of any native resident or migratory fish or wildlife species within the reserve features of the MSHCP outlined above. Future MDP facilities that lie within MSHCP Criteria Cells will consider any ways the MDP facility can avoid species impacts or outline mitigation measures for any applicable species/habitat impacts.

Therefore, since there are no specific wildlife movement corridors within the Project boundary that would be affected by the MDP facilities because they are located in developed areas, impacts to wildlife movement are considered **less than significant** without mitigation incorporated.

Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Biological resource policies are listed in Section 4.3.2. The MDP facilities will not interfere with the County of Riverside or cities of Lake Elsinore and Wildomar implementing these policies. Additionally, Riverside County has an Oak Tree Management Guideline policy for impacts to oak woodlands. The MDP facilities will mostly be within road rights-of way and the proposed water quality basins and debris basins are not anticipated to be located near any identified oak woodlands. Should some of the MDP facilities be located near oak woodlands in the future, the specific MDP facility shall comply with the Riverside County Oak Tree Management Guidelines. The MDP facilities shall meet the goal of applicable policies or ordinances protecting biological resources within the County of Riverside, City of Lake Elsinore, and City of Wildomar. Impacts are therefore considered to be **less than significant** without mitigation incorporated.

Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

As stated previously, the MSHCP is an HCP and NCCP of which the District, City of Lake Elsinore, and City of Wildomar are Permittees. The Project is located within the MSHCP Plan Area and a portion of the MDP facilities are located in the Criteria Area, specifically within Criteria Cells 5038, 5140, 5240, and 5342 (see Figure 4.3-3; Table 4.3-4). Per the MSHCP, projects proposed in the Criteria Area are subject to the JPR process through the RCA (see **MM BIO-6**). Since this is a Program EIR, there are no specific projects proposed at this time; evaluation of MSHCP consistency through the JPR process of specific impacts for specific alignments will happen when funding is available for specific MDP facility design. Without specificity of the MDP facilities design, timeliness of survey data and mitigation is compromised. The District, City of Lake Elsinore, or City of Wildomar shall ensure that each subsequent and future MDP facility within the MSHCP Plan area will conduct its own MSHCP Consistency analysis. For MDP facilities located outside MSHCP Cells, the District or other MSHCP Permittee (i.e., City of Lake Elsinore or City of Wildomar) shall conduct its own MSHCP Consistency Analysis as part of that Project's approval process. For MDP facilities that occur in Cells, or a portion is in a Cell, a JPR will need to be prepared by the District or other MSHCP Permittee and provided to the RCA for review pursuant to Section 6.6.2 of the MSHCP (**MM BIO-6**). Part of the forthcoming JPRs would be to assess how the MDP facility affects Reserve Assembly, and other Plan requirements. However, since the District is a Permittee to the MSHCP, its activities are considered Covered Activities per Section 7.3.7 of the MSHCP, which means no specific requirements for land Conservation would be required of the MDP facilities.

Each MDP facility is also subject to be reviewed for consistency with the other Plan requirements in Section 6.1.2 (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pool), Section 6.1.3 (Protection of Narrow Endemic Plant Species), Section 6.3.2 (Additional Survey Needs and Procedures), and Section 6.1.4 (Guidelines Pertaining to the Urban/Wildlands Interface) of the MSHCP. The analysis of consistency with each of these four sections of the MSHCP will be conducted by the District, City of Lake Elsinore, or City of Wildomar for each MDP facility proposed, and contained with the JPR analysis.

None of the MDP facilities lie within Public Quasi-Public lands.

Additionally, since there are potential biological impacts associated with the Project, a biological resources assessment shall be prepared by a qualified biologist during the design process of the MDP facilities (**MM BIO-7**). For MDP facilities located within a Criteria Cell, the biological resources report shall be included as part of the JPR application. The biological resources report shall include a MSHCP Consistency Analysis and Findings pursuant to Sections 6.1.2, 6.1.3, 6.3.2, and 6.1.4 of the MSHCP. A discussion of the Project's consistency on a programmatic level with these MSHCP sections follows.

Consistency with MSHCP Section 6.1.2

Section 6.1.2 of the MSHCP addresses preservation of riparian, riverine, vernal pools, and fairy shrimp habitats. Riparian habitats are specifically defined by the MSHCP under Section 6.1.2. The MSHCP defines riparian/riverine areas as "lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year." In addition, riverine areas (i.e., streams) include areas that "do not contain riparian vegetation, but that have water flow for all or a portion of the year, and contain biological functions and values that contribute to downstream habitat values for covered species inside the MSHCP Conservation Area." As previously mentioned, the MDP facilities listed in Table 4.3-5 support riverine/riparian habitat and would be evaluated for potential impacts/avoidance and any applicable mitigation when they are proposed in the future.

Based on the reconnaissance level biological assessment conducted within the Project boundary, there is riparian habitat located within the Project boundary (refer to Figure 4.3-7a and Figure 4.3-7b). There is approximately 9.8 acres of riparian habitat within the Project boundary. Specifically, the existing facility at Palomar Channel is within riparian habitat; the proposed storm drain is adjacent to riparian habitat along Line C-1; and the existing facility along Ortega Channel is adjacent to riparian habitat.

The MSHCP defines vernal pools as "seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season..." For assessment of suitable fairy shrimp (Riverside, vernal pool, and Santa Rosa fairy shrimp) habitat not artificially created, mapping and a description of the functions and values of

the mapped areas with respect to the fairy shrimp species listed above shall be provided. The Project area is steep along the foothills and consists of mainly sandy, rocky soils given the alluvial conditions. There may be alkaline soils that could support vernal pools and fairy shrimp closer to the lake edge. When specific MDP facilities are proposed, there should be an assessment of suitable habitat for vernal pools and fairy shrimp (**MM BIO-8**). The assessment should consider species composition, topography/hydrology, and soils analysis, where appropriate. If vernal pools and suitable fairy shrimp habitat are identified within the Project area, and the proposed Project design does not incorporate avoidance of the identified pools and/or fairy shrimp, then a DBESP along with mitigation measures to offset the loss of the values and functions of these areas shall be prepared (**MM BIO-8**).

If an avoidance alternative is not feasible when specific MDP facilities are designed and planned, then a DBESP shall be made by the Permittee (District, City of Lake Elsinore, or City of Wildomar) to ensure replacement of any lost functions and values of Habitat as it relates to Covered Species. If a DBESP is needed, then it shall include the following information:

- Definition of the project area.
- A written project description, demonstrating why an avoidance alternative is not possible.
- A written description of biological information available for the project site including the result of resource mapping.
- Quantification of unavoidable impacts to riparian/riverine areas and vernal pools associated with the project, including direct and indirect effects.
- A written description of project design features and mitigation measures that reduce indirect effects, such as edge treatments, landscaping, elevation difference, minimization and/or compensation through restoration or enhancement.
- A finding demonstrating that although the proposed project would not avoid impacts, with proposed design and compensation measures, the project would be biologically equivalent or superior to that which would occur under an avoidance alternative without these measures, based on one or more of the following factors:
    - Effect on Conserved Habitats;
    - Effects on the species listed in Section 6.1.2 of the MSHCP; and
    - Effects on riparian linkages and function of the MSHCP Conservation Area.

Any DBESP prepared must be approved by the Permittee, and then forwarded to the CDFW and USFWS for a 60-day review period. If the future MDP facility is located in a Criteria Cell, then the DBESP shall be included in the JPR as well.

Consistency with MSHCP Section 6.1.3 (NEPSSA)

Section 6.1.3 sets forth survey requirements for certain narrow endemic plants. Portions of the Project area are within a NEPSSA survey area for the following species: California Orcutt grass, many-stemmed dudleya, Munz's onion, Wright's trichocoronis, and San Diego ambrosia. Based on the site reconnaissance conducted by qualified biologists, it was determined that suitable habitat for California Orcutt grass, many-stemmed dudleya, Wright's trichocoronis, and San Diego ambrosia (see Figure 4.3-4a and Figure 4.3-4b; Table 4.3-4) is located within some of the potential MDP facility alignments. None of the other NEPSSA species were identified as having suitable habitat within the Project boundary.

Therefore, pursuant to Section 6.1.3, since suitable habitat has been identified for California Orcutt grass, many-stemmed dudleya, Wright's trichocoronis and San Diego ambrosia, focused surveys for these species will be required in the future for the MDP facilities referenced on Table 4.3-4. When the specific Projects listed on Table 4.3-4 in a NEPSSA suitability area are proposed, a focused survey conducted by a qualified biologist during the appropriate blooming period will be required. The focused survey shall include survey results in mapped and text form along with information on the habitat and soils present on site, date of surveys, precipitation data for that year, and estimation of population.

If NEPSSA plants are identified within the specific MDP facility alignment, then the District, City of Lake Elsinore, or City of Wildomar shall attempt to avoid 90% of those areas to provide for long-term conservation value for those species until it is demonstrated that conservation goals for the particular species are met.

If it is determined that the 90% threshold cannot be met and achievement of overall MSHCP conservation goals for the particular species has not yet been demonstrated, the Permittee (District, City of Lake Elsinore, or City of Wildomar) must prepare a DBESP. The DBESP shall demonstrate that although the MDP facility would exceed the 10% NEPSSA impact threshold, with proposed design and compensation measures, it would result in an overall MSHCP Conservation Area design and configuration biologically equivalent or superior. Equivalency Findings in the DBESP should include:

- Definition of the project area.
- A written project description.
- A written description of biological information available for the project site including the results of Narrow Endemic Plant Species surveys.
- Quantification of unavoidable impacts to Narrow Endemic Plant Species associated with the project, including direct and indirect effects, documenting that the 90% thresholds shall be met.
- A written description of project design features that reduce indirect effects, such as edge treatments, landscaping, elevation differences; minimization and/or compensation through restoration or enhancement.
- A summary conclusion, including findings of consistency with the 90% threshold.

Any DBESP prepared must be approved by the Permittee, and then forwarded to the CDFW and USFWS for a 60-day review period. If the future MDP facility is located in a Criteria Cell, then the DBESP shall be included in the JPR as well.

MM BIO-1 has been included in order to outline how Section 6.1.3 compliance will occur.

Consistency with MSHCP Section 6.3.2 (Additional Survey Areas)

Section 6.3.2 of the MSHCP addresses additional survey requirements (in this case CASSA plants and Burrowing Owl Survey Area). Suitable habitat is present within the Project boundary for the following CASSA species: Davidson's saltscale, little mousetail, Parish's brittlescale, smooth tarplant, and San Jacinto Valley crownscale (see Figure 4.3-5a and Figure 4.3-5b; Table 4.3-4). The MDP facilities is also located within a Burrowing Owl Survey Area (see Figure 4.3-6a and Figure 4.3-6b; Table 4.3-4).

Section 6.3.2 sets forth survey requirements for certain CASSA species. As shown on Table 4.3-4, there are MDP facilities that are within the CASSA survey area. Therefore, pursuant to Section 6.2.3, when specific MDP facilities are located within suitable habitat area for little mousetail, smooth tarplant, and San Jacinto Valley crownscale, focused surveys for these species will be required in the future for the MDP facilities referenced in Table 4.3-4.

Section 6.3.2 sets forth survey requirements for burrowing owls. As shown in Table 4.3-4, MDP facilities that include suitable habitat for burrowing owls within MSHCP Burrowing Owl Survey Areas include Line C, Line C-1, Line F, Line F-1, Line G WQ Basin, Lakeland Village Channel, Line I, Line J, Line K, Line L, Line M, Line N, Lateral N-1, Line 0-20, Line 0-10, Corydon Channel, Palomar Channel, Existing 84-inch RCP, Channel 1A, and Sedco–Bryant Street Storm Drain (Table 4.3-4). Suitable habitat has been identified and since it is known that burrowing owls can occupy a variety of open habitats, even those that appear to moderately disturbed, all future MDP facilities within the Burrowing Owl Survey Area shall conduct a pre-construction survey for resident burrowing owls by a qualified biologist within 30 days prior to commencement of grading and construction activities (see **MM BIO-3**).

Regardless for CASSA plants or burrowing owls, the focused survey shall include survey results in mapped and text form along with information on the habitat and soils present on site, date of surveys, precipitation data for that year, and estimation of population.

If CASSA plants and/or burrowing owls are identified within the specific MDP facility alignment, then the District, City of Lake Elsinore, or City of Wildomar shall attempt to avoid 90% of those areas to provide for long-term conservation value for those species until it is demonstrated that conservation goals for the particular species are met. If species are identified within the specific MDP facility alignment, then the District, City of Lake Elsinore, or City of Wildomar shall attempt to avoid 90% of those areas to provide for long-term conservation value for those species until it is demonstrated that conservation goals for the particular species are met. For the burrowing owl, pursuant the MSHCP Species Objectives for the Burrowing Owl, if the MDP facility falls within a Criteria Cell, and more than 3 pairs of burrowing owls

are found on over 35 acres that is non-contiguous with MSHCP Conservation Areas, then conservation measures need to be proposed. If less than 3 pairs are found, then the owls can be relocated subject to coordination with the RCA, CDFW, and USFWS. Findings of equivalency shall be made to demonstrate that the 90% standard has been met. Information to be included in the Equivalency Findings is the same as those described for Section 6.1.3 above. If it is determined that the 90% threshold cannot be met and achievement of overall MSHCP conservation goals for the particular species has not yet been demonstrated, the Permittee (District, City of Lake Elsinore, or City of Wildomar) must prepare a DBESP. The DBESP shall demonstrate that although the MDP facility would exceed the 10% impact threshold, with proposed design and compensation measures, it would result in an overall MSHCP Conservation Area design and configuration biologically equivalent or superior.

Any DBESP prepared must be approved by the Permittee, and then forwarded to the CDFW and USFWS for a 60-day review period. If the future MDP facility is located in a Criteria Cell, then the DBESP shall be included in the JPR as well.

Consistency with MSHCP Section 6.1.4

Section 6.1.4, *Guidelines Pertaining to the Urban/Wildlife Interface*, outlines the minimization of indirect effects associated with locating development in proximity to the MSHCP Conservation Area. To minimize these effects, guidelines in Section 6.1.4 of the MSHCP shall be implemented in conjunction with review of individual public and private development projects in proximity to the MSHCP Conservation Area and address the following: drainage, toxics, lighting, noise, invasive species, barriers, and grading/land development. Future proposed MDP facilities would need to demonstrate adherence to the guidelines of the MSHCP Section 6.1.4 that show the MDP facilities would minimize indirect effects associated with the development of the MDP facilities. The following include standard measures for compliance with Section 6.1.4 of the MSHCP:

1. Incorporate measures to control the quantity and quality of runoff from the site entering the MSHCP Conservation Area. In particular, measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas into MSHCP Conservation Areas. The proposed project will include measures required through the NPDES requirements, to ensure that the quality and quality of runoff discharged to MSHCP conservation areas are not altered from the existing conditions.
2. The use chemicals or generation of bioproducts (i.e.) manure, which are potentially toxic or may adversely affect wildlife species, habitat or water quality shall not result in discharge to the MSHCP Conservation Area. The greatest risk is from pesticide overspray and run-off.
3. Although not anticipated, if any night lighting is used during construction, lighting shall be directed away from the MSHCP Conservation Area to protect species within the MSHCP Conservation Area from direct night lighting. Shielding shall be incorporated in project designs to ensure ambient lighting in the MSHCP Conservation Area is not increased.

4. Proposed noise generating land uses affecting the MSHCP Conservation Area shall incorporate setbacks, berms or walls to minimize the effects of noise on MSHCP Conservation Area resources pursuant to applicable rules, regulations and guidelines related to land use noise standards.
5. No landscaping is expected to be included with the MDP facilities, but should some landscaping be considered, ensure that the invasive, non-native plant species listed in Table 6-2 of the MSHCP are not used for the portions of the project that are adjacent to the MSHCP Conservation Area. Considerations in reviewing the applicability of this list shall include proximity of planting areas to the MSHCP Conservation Areas, species considered in the planting plans, resources being protected within the MSHCP Conservation Area and their relative sensitivity to invasion, and barriers to plant and seed dispersal, such as walls, topography and other features.
6. Proposed access to MDP facilities adjacent to the MSHCP Conservation Area shall incorporate barriers, where appropriate in individual project designs to minimize unauthorized public access, domestic animal predation, illegal trespass, or dumping into the MSHCP Conservation Areas. Such barriers may include native landscaping, rocks/boulders, fencing, walls, signage, and/or appropriate mechanisms. Manufactured slopes associated with the proposed site development shall not extend into the MSHCP Conservation Area.

Section 7.3.7 of the MSHCP – Flood Control Facilities

Within the MSHCP Criteria Area, flood control facilities (improvements and new construction) that are undertaken by a Permittee are considered Covered Activities. Since the District and cities of Lake Elsinore and Wildomar are all Permittees under the MSHCP, and since Section 7.3.7 contemplated projects like the Lakeland Village Project, the proposed MDP facilities would be considered Covered Activities. Also, as a Covered Activity pursuant to Section 7.3.7 of the MSHCP, the proposed MDP facilities would not be required to set aside lands for MSHCP Conservation.

Section 7.5.3 of the MSHCP – Construction Guidelines

Pursuant to Section 7.3.7 requirements, future construction of the MDP facilities located within the Criteria Area shall comply with the applicable following construction guidelines as outlined in Section 7.5.3 of the MSHCP:

- Plans for water pollution and erosion control will be prepared for MDP facilities involving the movement of earth in excess of 50 cubic yards. The plans will describe sediment and hazardous materials control, dewatering or diversion structures, fueling and equipment management practices, use of plant material for erosion control. Plans will be reviewed and approved by the County of Riverside and participating jurisdiction prior to construction.

- Timing of construction activities will consider seasonal requirements for breeding birds and migratory non-resident species. Habitat clearing will be avoided during species active breeding season defined as March 1 to June 30.
- Sediment and erosion control measures will be implemented until such time soils are determined to be successfully stabilized.
- Short-term stream diversions will be accomplished by use of sand bags or other methods that will result in minimal in-stream impacts. Short-term diversions will consider effects on wildlife.
- Silt fencing or other sediment trapping materials will be installed at the downstream end of construction activities to minimize the transport of sediments off site.
- Settling ponds where sediment is collected will be cleaned in a manner that prevents sediment from re-entering the stream or damaging/disturbing adjacent areas. Sediment from settling ponds will be removed to a location where sediment cannot re-enter the stream or surrounding drainage area. Care will be exercised during removal of silt fencing to minimize release of debris or sediment into streams.
- No erodible materials will be deposited into water courses. Brush, loose soils, or other debris material will not be stockpiled within stream channels or on adjacent banks.
- The footprint of disturbance will be minimized to the maximum extent Feasible. Access to sites will occur on pre-existing access routes to the greatest extent possible.
- Equipment storage, fueling and staging areas will be sited on non-sensitive upland Habitat types with minimal risk of direct discharge into riparian areas or other sensitive Habitat types.
- The limits of disturbance, including the upstream, downstream and lateral extents, will be clearly defined and marked in the field. Monitoring personnel will review the limits of disturbance prior to initiation of construction activities.
- During construction, the placement of equipment within the stream or on adjacent banks or adjacent upland Habitats occupied by Covered Species that are outside of the project footprint will be avoided.
- Exotic species removed during construction will be properly handled to prevent sprouting or regrowth.
- Training of construction personnel will be provided.
- Ongoing monitoring and reporting will occur for the duration of the construction activity to ensure implementation of best management practices.
- When work is conducted during the fire season (as identified by the Riverside County Fire Department) adjacent to coastal sage scrub or chaparral vegetation, appropriate fire-fighting equipment (e.g., extinguishers, shovels, water tankers) shall be available on the site during all

phases of project construction to help minimize the chance of human-caused wildfires. Shields, protective mats, and/or other fire preventative methods shall be used during grinding, welding, and other spark-inducing activities. Personnel trained in fire hazards, preventative actions, and responses to fires shall advise contractors regarding fire risk from all construction-related activities.

- Active construction areas shall be watered regularly to control dust and minimize impacts to adjacent vegetation.
- All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other toxic substances shall occur only in designated areas within the proposed grading limits of the project site. These designated areas shall be clearly marked and located in such a manner as to contain run-off.
- Waste, dirt, rubble, or trash shall not be deposited in the Conservation Area or on native habitat.

Standard Best Management Practices (Appendix C of the MSHCP)

Pursuant to Section 7.3.7 of the MSHCP, future proposed MDP facilities shall comply, as applicable, with the following standard best management practices:

1. A condition shall be placed on grading permits requiring a qualified biologist to conduct a training session for project personnel prior to grading. The training shall include a description of the species of concern and its habitats, the general provisions of the Endangered Species Act (Act) and the MSHCP, the need to adhere to the provisions of the Act and the MSHCP, the penalties associated with violating the provisions of the Act, the general measures that are being implemented to conserve the species of concern as they relate to the project, and the access routes to and project site boundaries within which the project activities must be accomplished.
2. Water pollution and erosion control plans shall be developed and implemented in accordance with RWQCB requirements.
3. The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall be via pre-existing access routes to the greatest extent possible.
4. The upstream and downstream limits of projects disturbance plus lateral limits of disturbance on either side of the stream shall be clearly defined and marked in the field and reviewed by the biologist prior to initiation of work.
5. Projects should be designed to avoid the placement of equipment and personnel within the stream channel or on sand and gravel bars, banks, and adjacent upland habitats used by target species of concern.
6. Projects that cannot be conducted without placing equipment or personnel in sensitive habitats should be timed to avoid the breeding season of riparian identified in MSHCP Global Species Objective No. 7.

7. When stream flows must be diverted, the diversions shall be conducted using sandbags or other methods requiring minimal instream impacts. Silt fencing of other sediment trapping materials shall be installed at the downstream end of construction activity to minimize the transport of sediments off site. Settling ponds where sediment is collected shall be cleaned out in a manner that prevents the sediment from reentering the stream. Care shall be exercised when removing silt fences, as feasible, to prevent debris or sediment from returning to the stream.
8. Equipment storage, fueling, and staging areas shall be located on upland sites with minimal risks of direct drainage into riparian areas or other sensitive habitats. These designated areas shall be located in such a manner as to prevent any runoff from entering sensitive habitat. Necessary precautions shall be taken to prevent the release of cement or other toxic substances into surface waters. Project related spills of hazardous materials shall be reported to appropriate entities including but not limited to applicable jurisdictional city, FWS, and CDFG, RWQCB and shall be cleaned up immediately and contaminated soils removed to approved disposal areas.
9. Erodible fill material shall not be deposited into water courses. Brush, loose soils, or other similar debris material shall not be stockpiled within the stream channel or on its banks.
10. The qualified project biologist shall monitor construction activities for the duration of the project to ensure that practicable measures are being employed to avoid incidental disturbance of habitat and species of concern outside the project footprint.
11. The removal of native vegetation shall be avoided and minimized to the maximum extent practicable. Temporary impacts shall be returned to pre-existing contours and revegetated with appropriate native species.
12. Exotic species that prey upon or displace target species of concern should be permanently removed from the site to the extent feasible.
13. To avoid attracting predators of the species of concern, the project site shall be kept as clean of debris as possible. All food related trash items shall be enclosed in sealed containers and regularly removed from the site(s).
14. Construction employees shall strictly limit their activities, vehicles, equipment, and construction materials to the proposed project footprint and designated staging areas and routes of travel. The construction area(s) shall be the minimal area necessary to complete the project and shall be specified in the construction plans. Construction limits will be fenced with orange snow screen. Exclusion fencing should be maintained until the completion of all construction activities. Employees shall be instructed that their activities are restricted to the construction areas.
15. The Permittee (District, City of Lake Elsinore, City of Wildomar) shall have the right to access and inspect any sites of approved projects including any restoration/enhancement area for compliance with project approval conditions including these BMPs.

Future proposed MDP facilities within the MSHCP Criteria Area will be required to submit a JPR to the RCA to demonstrate compliance with 6.1.2, 6.1.3, 6.3.2, 6.1.4 of the MSHCP and adhere to the construction guidelines set forth in Section 7.5.3 and Appendix C of the MSHCP, outlined above (**MM BIO-6**). For MDP facilities not in Criteria Cells, it will up to the Permittee (District, City of Lake Elsinore or City of Wildomar) to prepare the MSHCP Consistency Analysis and Findings pursuant to Sections 6.1.2, 6.1.3, 6.3.2, and 6.1.4 of the MSHCP. Therefore, with compliance with the MSHCP and implementation of **MM BIO-6**, impacts are considered to be **less than significant**.

4.3.6 Mitigation Measures

The CEQA Guidelines require an EIR to describe feasible mitigation measures which could minimize significant adverse impacts (14 CCR 15126.4). Mitigation measures were evaluated for their ability to eliminate or reduce the potential significant adverse impacts to special-status species and loss of foraging habitat. The following measures shall be implemented to eliminate or reduce potentially significant impacts to biological resources to below the level of significance.

MM BIO-1 Suitable habitat has been identified within the Project boundary within the NEPSSA, CASSA, and Burrowing Owl Survey Areas (see Table 4.3-4). All MDP facility alignments and impact footprints shall be reviewed by the District, City of Lake Elsinore, or City of Wildomar during project design in order to determine if suitable habitat conditions have changed from the analysis contained herein. If no changes have occurred, and no suitable habitat is present for CASSA species, NEPSSA species, or burrowing owls, then no further surveys are needed. For the MDP facilities identified as having suitable habitat on Table 4.3-4, those facilities will require habitat assessments and focused surveys conducted by a qualified biologist during the appropriate season. If species are found to be present in the footprint, further measures as recommended by the District's, City of Elsinore's, or City of Wildomar's qualified biologist shall be taken to avoid or minimize adverse project effects to these species and their habitat. Per Section 6.3.2 of the MSHCP, the District, City of Lake Elsinore or City of Wildomar shall avoid 90% of the areas providing long-term conservation value for the target species. For burrowing owls, if owls are found in the impact area of an MDP facility, Species Objective 5 from the MSHCP shall be implemented. If avoidance is not feasible, then individual projects will require the approval of a Determination of Biologically Equivalent or Superior Preservation (DBESP) pursuant to the requirements of Section 6.3.2 of the MSHCP including appropriate mitigation, i.e., on-site or off-site enhancement, restoration, establishment (creation), preservation, relocation and/or payment into habitat mitigation banks or in lieu fee programs, or a combination of one or more of these options.

MM BIO-2 In order to avoid violation of the MBTA and California Fish and Wildlife Code, the District, City of Lake Elsinore and/or City of Wildomar shall ensure that site-preparation activities (removal of trees and vegetation) shall be avoided, to the greatest

extent possible, during the nesting season (generally February 1 to August 31) of potentially occurring native and migratory bird species. If site-preparation activities are proposed during the nesting/breeding season (generally February 1 to August 31), a pre-activity field survey shall be conducted by the District's, City of Lake Elsinore's or City of Wildomar's qualified biologist to determine if active nests of species protected by the MBTA or the California Fish and Wildlife Code are present in the construction zone. If active nests are not located within the a future MDP facility alignment and appropriate buffer (i.e., within 500 feet of an active listed species or raptor nest, 300 feet of other sensitive or protected bird nests (non-listed), or within 100 feet of sensitive or protected songbird nests), construction may be conducted during the nesting/breeding season. However, if active nests are located during the pre-activity field survey, no grading or heavy equipment activity shall take place within at least 500 feet of an active listed species or raptor nest, 300 feet of other sensitive or protected (under MBTA or California Fish and Wildlife Code) bird nests (non-listed), or within 100 feet of sensitive or protected songbird nests until the nest is no longer active.

MM BIO-3 All future MDP facilities within the mapped survey area Burrowing owls shall have a qualified biologist conduct a pre-construction survey for resident burrowing owls within 30 days prior to commencement of grading and construction activities. If ground-disturbing activities in these areas are delayed or suspended for more than 30 days after the pre-construction survey, the area shall be resurveyed for owls. Take of active nests shall be avoided. The pre-construction survey and any relocation activity will be conducted following accepted protocols and in coordination with the Regional Conservation Authority (RCA), California Department of Fish and Wildlife (CDFW), and U.S. Fish and Wildlife Service.

MM BIO-4 As Permittees to the MSHCP, the District, City of Lake Elsinore, or City of Wildomar shall ensure that the construction of each future MDP facility shall be compliant with Section 6.1.2 of the MSHCP and documented as such. For areas not excluded as artificially created, the MSHCP requires 100% avoidance of riparian/riverine areas. If avoidance is not feasible, then individual projects will require the approval of a DBESP including appropriate mitigation, i.e., on-site or off-site enhancement, restoration, establishment (creation), preservation, payment into habitat mitigation banks or in lieu fee programs, or a combination of one or more of these options, to offset the loss of functions and values as they pertain to the MSHCP Covered Species. If riparian vegetation will be impacted, then focused surveys for least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo will be required if suitable habitat is present. If avoidance is not feasible, then individual projects will require the approval of a DBESP including appropriate mitigation, i.e., on-site or off-site enhancement,

restoration, establishment (creation), preservation, payment into habitat mitigation banks or in lieu fee programs, or a combination of one or more of these options.

MM BIO-5 The District, City of Lake Elsinore, or City of Wildomar shall conduct Project-specific jurisdictional delineations to determine the limits of the U.S. Army Corps of Engineers (ACOE), Regional Water Quality Control Board, and CDFW jurisdiction for the MDP facilities listed in Table 4.3-5. Impacts to jurisdictional waters will need to be verified by the corresponding regulatory agency. If impacts are anticipated, then jurisdictional water will either a) be completely avoided or b) necessary permits from requisite jurisdictions will be obtained. Obtaining permits may include mitigation for impacts, which would most likely include similar mitigation to that offered in a DBESP such as restoration, creation and enhancement of resources in exchange for impacts from the project (same as **MM HYDRO-4**). The District, the City of Lake Elsinore, or the City of Wildomar shall be responsible for obtaining required regulatory permits for any jurisdictional features prior to ground disturbance.

MM BIO-6 MDP facilities located within MSHCP Criteria Cells will require submittal of a JPR to the RCA by the District, City of Lake Elsinore, or City of Wildomar as Permittees to the MSHCP for review and approval to illustrate that the MDP facility does not affect the Reserve Assembly, demonstrate consistency with Sections 6.1.2, 6.1.3, 6.1.4, and 6.3.2, and demonstrate that the appropriate surveys and applicable mitigation measures (refer to **MM BIO-1** through **MM BIO-5**, and **MM BIO-8**) have been conducted.

MM BIO-7 A biological resource assessment shall be prepared by a qualified biologist during the design phase of each MDP facility. The biological resource assessment shall include project location, project description, regulatory context, methods for field surveys including weather, dates, and time of surveys, mapping, and results of the biological assessment. Since the Project is located within the Western Riverside County MSHCP Plan Area, the biological resources assessment shall also include a MSHCP Consistency Analysis and Findings pursuant to Sections 6.1.2, 6.1.3, 6.3.2, and 6.1.4 of the MSHCP. For MDP facilities located within a Criteria Cell, the biological resource assessment shall be included as part of the JPR application.

MM BIO-8 As Permittees to the MSHCP, the District, City of Lake Elsinore, or City of Wildomar shall ensure where appropriate, future MDP facilities shall be surveyed for vernal pools and/or fairy shrimp habitat and documented as such. For areas not excluded as artificially created, the MSHCP requires 100% avoidance of vernal pools and fairy shrimp habitat. If avoidance is not feasible, then individual projects will require the approval of a DBESP including appropriate mitigation to offset the loss of functions and values as they

pertain to the MSHCP covered species. Vernal pools and other seasonal ponding depressions will also need to be evaluated for Riverside and Vernal pool fairy shrimp.

4.3.7 Summary of Environmental Effects After Mitigation Measures Are Implemented

Based on the required compliance with the MSHCP for all future MDP facilities, required permits from ACOE, RWQCB, and CDFW for jurisdictional resources, and proposed mitigation measures identified in Section 4.3.6 potential adverse impacts associated with special-status species and their habitat and federally-protected wetlands are reduced to a less than significant level with implementation of the mitigation measures provided in Section 4.3.6.

4.3.8 References

ACOE (U.S. Army Corps of Engineers). 1987. *Corps of Engineers Wetlands Delineation Manual*. Final Report. Produced by Environmental Laboratory for ACOE Wetlands Research Program. January 1987. http://el.erdc.usace.army.mil/elpubs/pdf/wlman87.pdf.

ACOE. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*. ACOE Wetlands Regulatory Assistance Program. September 2008. http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/reg_supp/trel08-28.pdf.

ACOE. Accessed September 19, 2011. http://www.usace.army.mil/CECW/Documents/cecwo/reg/materials/33cfr328.pdf.

CDFG (California Department of Fish and Game). 2010. Forest and Woodlands Alliances and Stands. Accessed on December 16, 2011. http://www.dfg.ca.gov/biogeodata/vegcamp/pdfs/natcomlist.pdf.

CDFG. 2011. California Natural Diversity Data Base.

City of Lake Elsinore. 2011. *City of Lake Elsinore General Plan*. December 2011.

CNPS (California Native Plant Society). 2011. Inventory of Rare and Endangered Species: Plants.

County of Riverside. 2003a. *Western Riverside County Multiple Species Habitat Conservation Plan*. Adopted September 23, 2003. Accessed November 11, 2011. http://www.tlma.co.riverside.ca.us/mshcp/.

County of Riverside. 2003b. *General Plan Environmental Impact Report*.

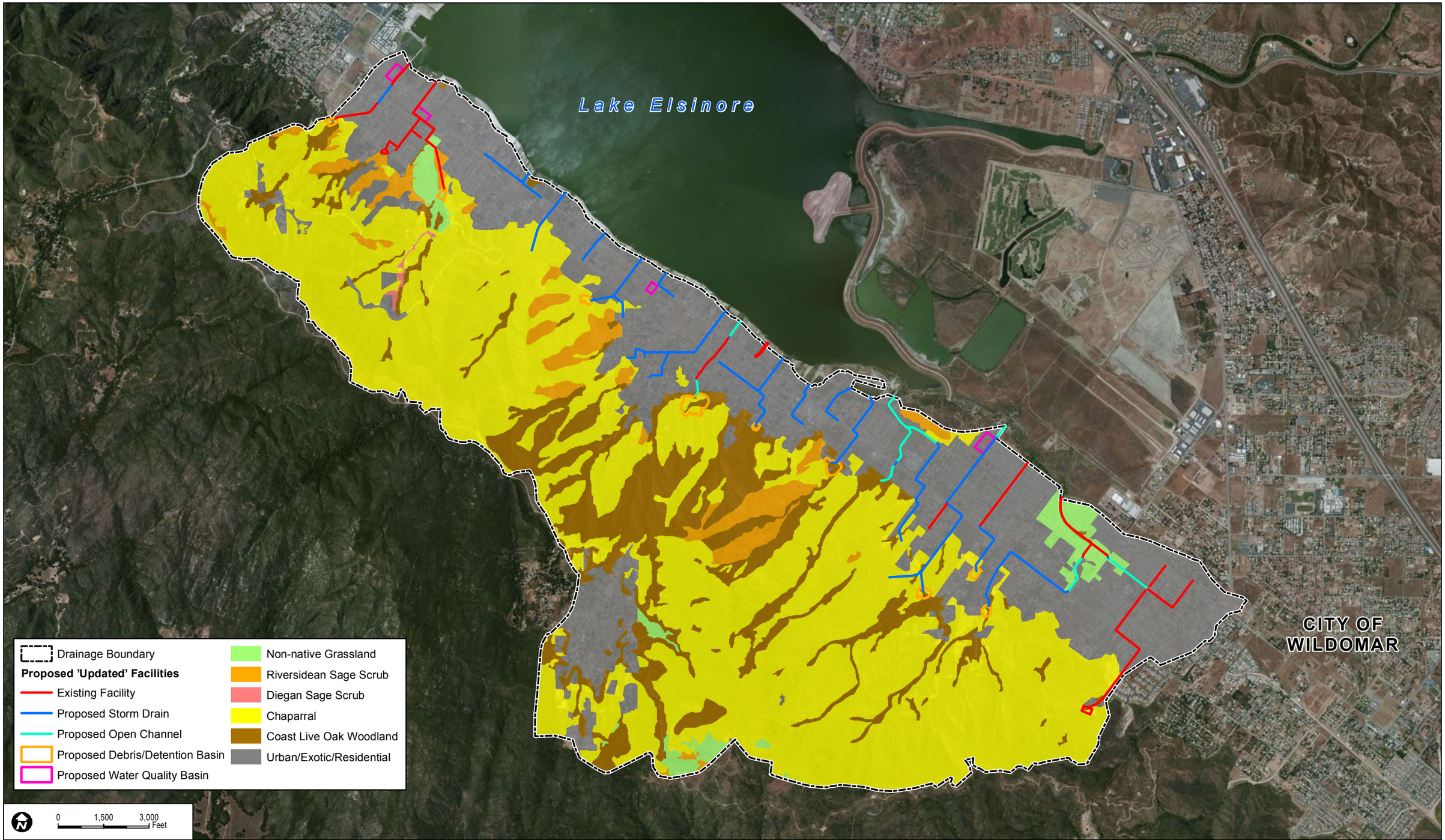
Dudek. 2011. *Environmental Constraints Analysis*. February 9, 2011.

SOURCE: Riverside County Flood Control and Water Conservation District 2012; Bing Maps

FIGURE 4.3-1

Lakeland Village MDP Boundary

INTENTIONALLY LEFT BLANK



DUDEK

6736

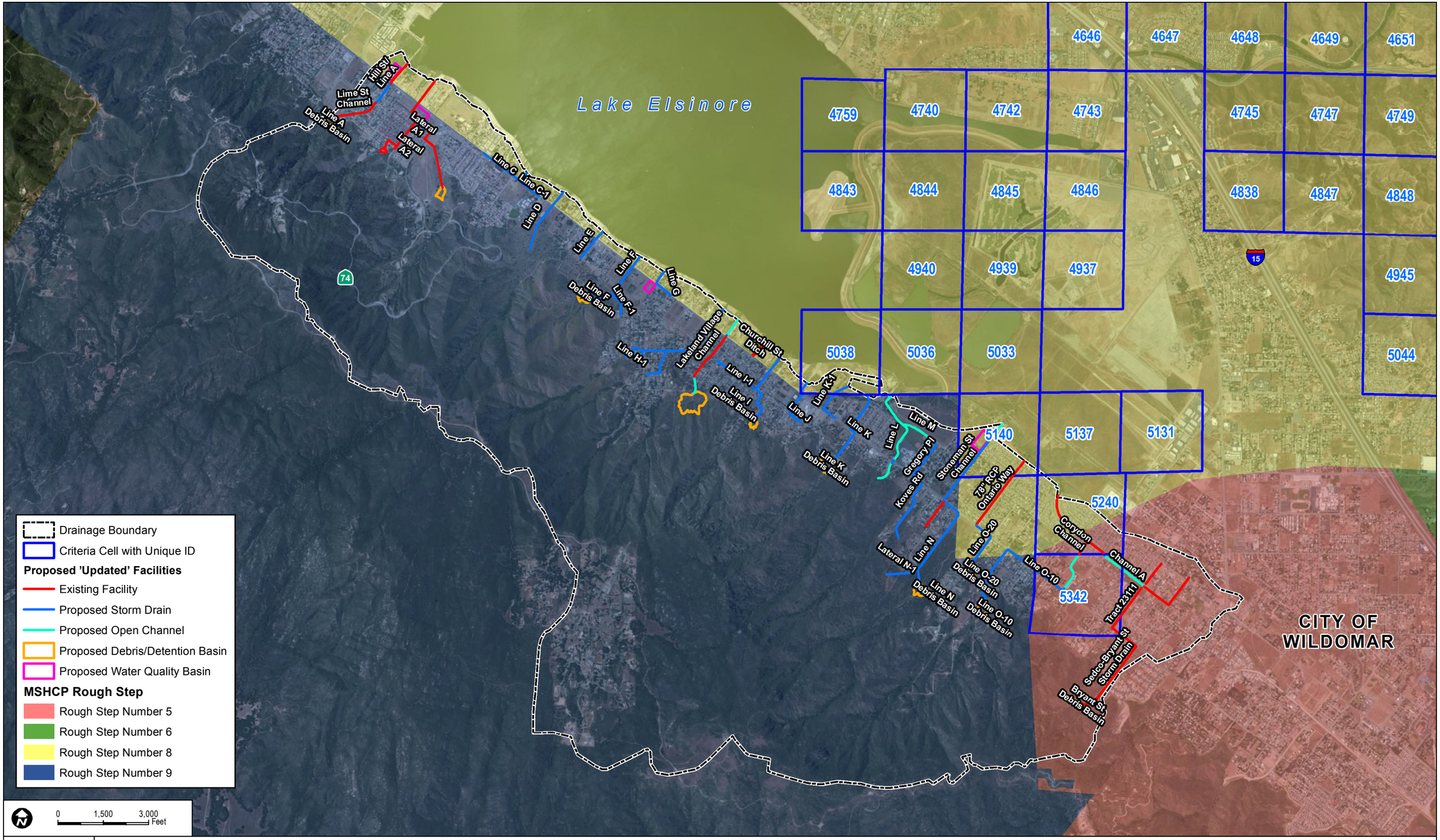
SOURCE: Riverside County Flood Control and Water Conservation District 2012; Riverside County 2012; Bing Maps

FIGURE 4.3-2

Vegetation Map

LAKELAND VILLAGE MDP DRAFT PROGRAM EIR

INTENTIONALLY LEFT BLANK



DUDEK

6736

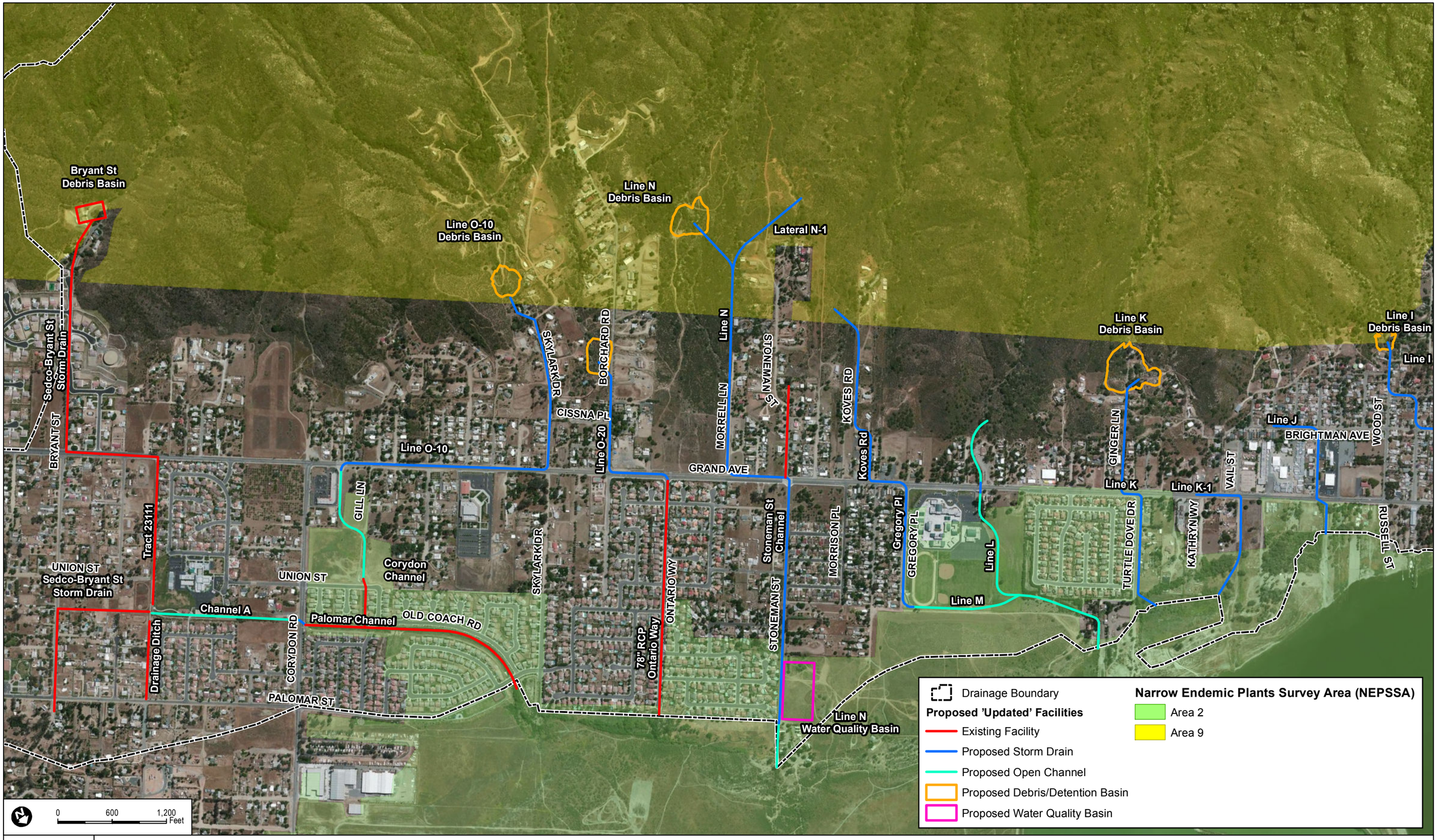
SOURCE: Riverside County Flood Control and Water Conservation District 2012; Riverside County 2012; Bing Maps

FIGURE 4.3-3

MSHCP Criteria Area

LAKELAND VILLAGE MDP DRAFT PROGRAM EIR

INTENTIONALLY LEFT BLANK



DUDEK

6736

SOURCE: Riverside County Flood Control and Water Conservation District 2012; County of Riverside MSHCP; Bing Maps

FIGURE 4.3-4a

Narrow Endemic Plants Survey Area (NEPSSA) Survey Area (Left)

INTENTIONALLY LEFT BLANK

DUDEK

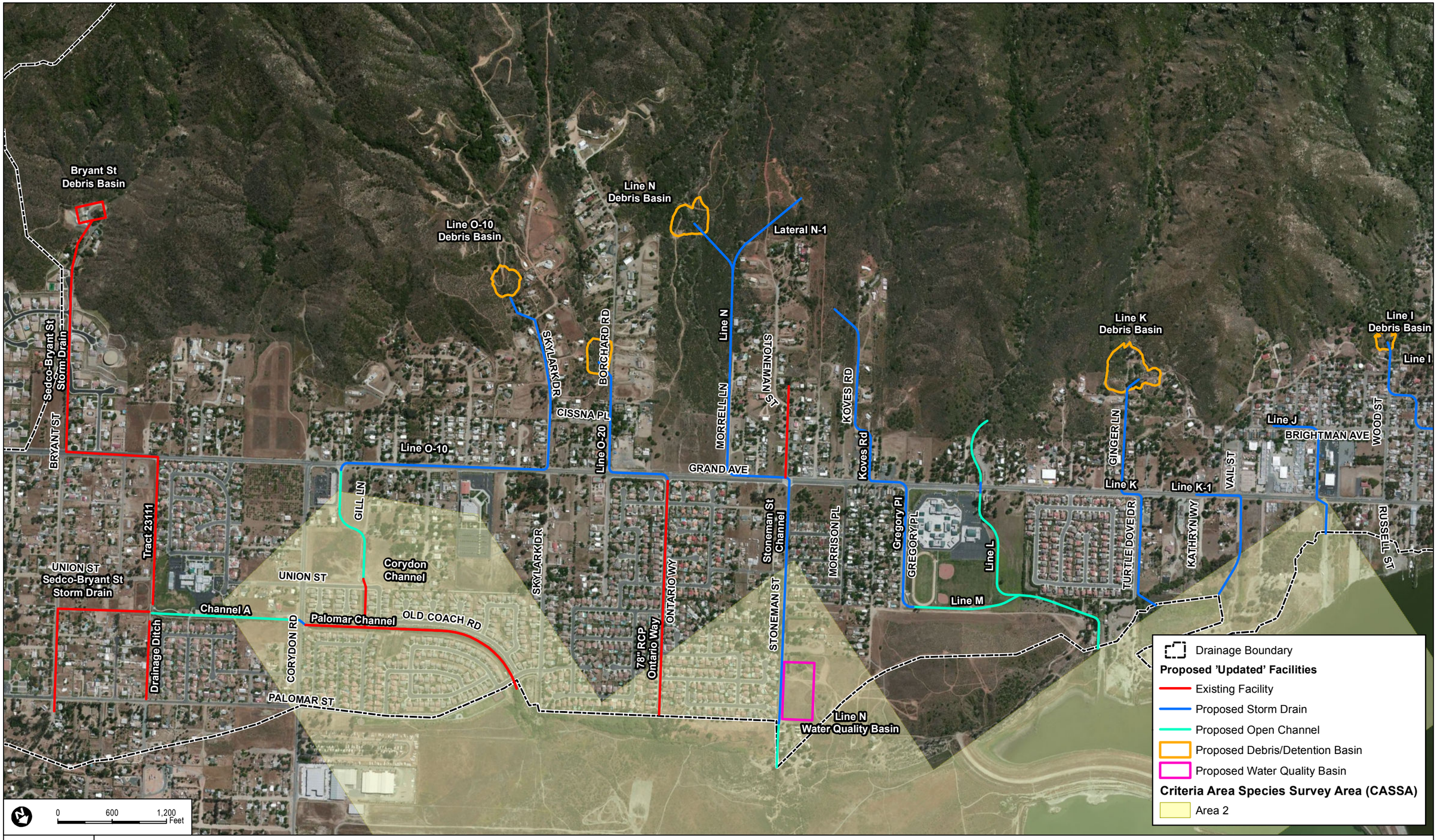
6736

SOURCE: Riverside County Flood Control and Water Conservation District 2012; County of Riverside MSHCP; Bing Maps

FIGURE 4.3-4b

Narrow Endemic Plants Survey Area (NEPSSA) Survey Area (Right)

INTENTIONALLY LEFT BLANK



DUDEK

6736

SOURCE: Riverside County Flood Control and Water Conservation District 2012; County of Riverside MSHCP; Bing Maps

FIGURE 4.3-5a

Criteria Area Species Survey Area (CASSA) Survey Area (Left)

INTENTIONALLY LEFT BLANK

DUDEK

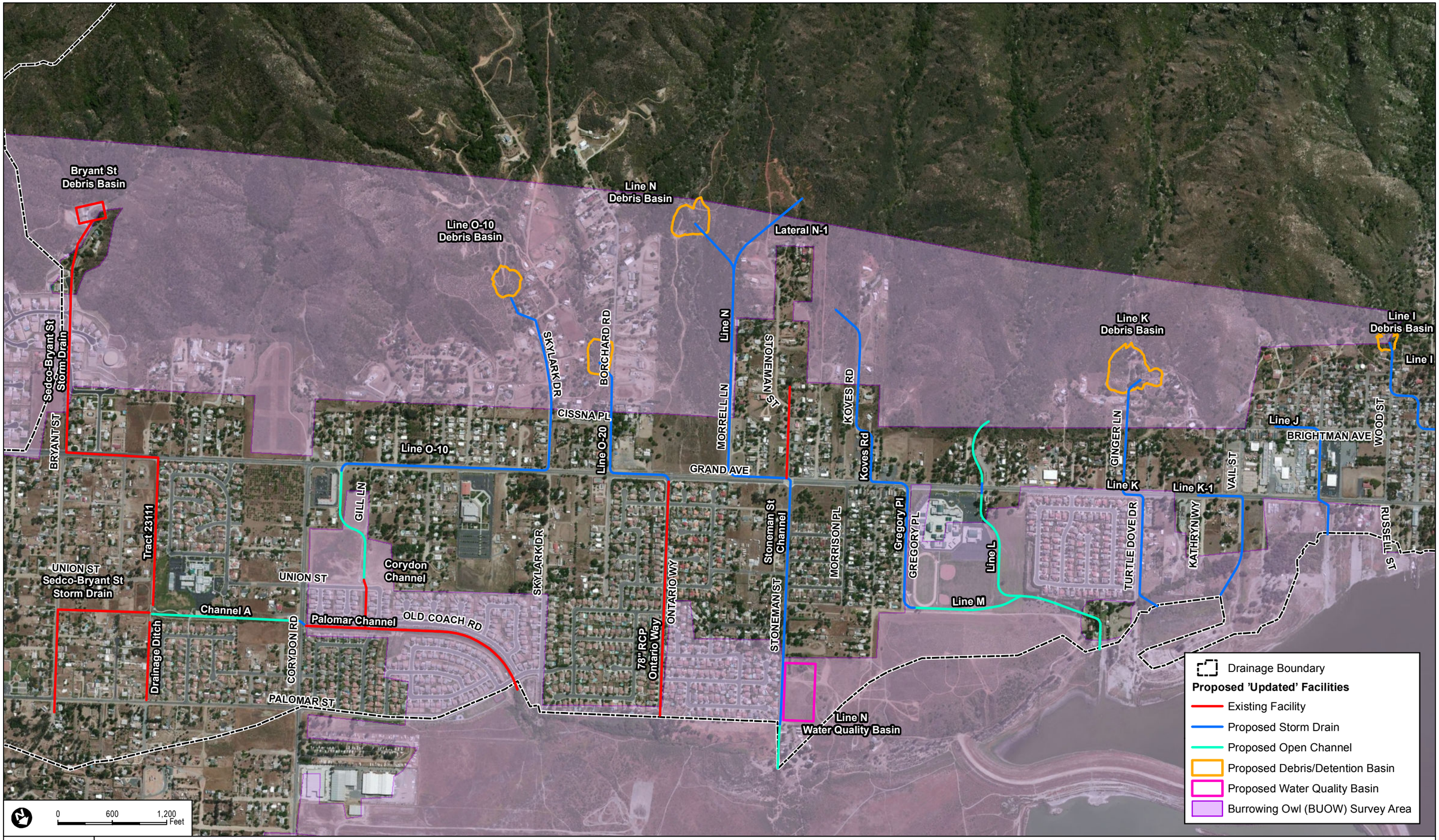
6736

SOURCE: Riverside County Flood Control and Water Conservation District 2012; County of Riverside MSHCP; Bing Maps

FIGURE 4.3-5b

Criteria Area Species Survey Area (CASSA) Survey Area (Right)

INTENTIONALLY LEFT BLANK



DUDEK

6736

SOURCE: Riverside County Flood Control and Water Conservation District 2012; County of Riverside MSHCP; Bing Maps

FIGURE 4.3-6a

Burrowing Owl (BUOW) Survey Area (Left)

INTENTIONALLY LEFT BLANK

DUDEK

6736

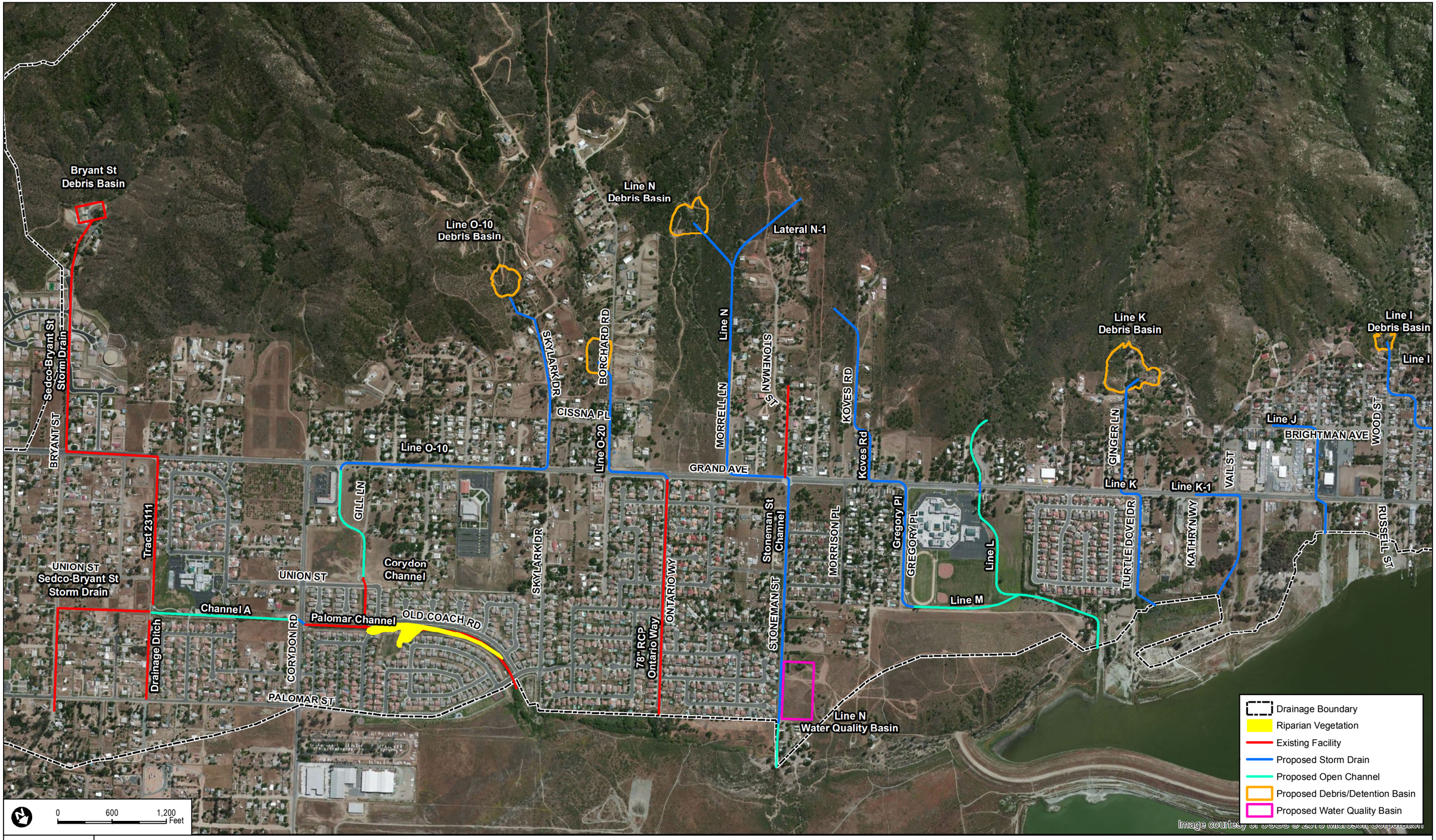
SOURCE: Riverside County Flood Control and Water Conservation District 2012; County of Riverside MSHCP; Bing Maps

FIGURE 4.3-6b

Burrowing Owl (BUOW) Survey Area

LAKELAND VILLAGE MDP DRAFT PROGRAM EIR

INTENTIONALLY LEFT BLANK



DUDEK

6736

SOURCE: Riverside County Flood Control and Water Conservation District 2010; County of Riverside MSHCP; Digital Globe 2008

FIGURE 4.3-7a

Vegetated Riparian Habitats (Left)

LAKELAND VILLAGE MDP DRAFT PROGRAM EIR

INTENTIONALLY LEFT BLANK

DUDEK

6736

SOURCE: Riverside County Flood Control and Water Conservation District 2010; County of Riverside MSHCP; Digital Globe 2008

FIGURE 4.3-7b

Vegetated Riparian Habitats (Right)

LAKELAND VILLAGE MDP DRAFT PROGRAM EIR

INTENTIONALLY LEFT BLANK

4.4 Cultural Resources

The focus of the following discussion and analysis, based on the initial study (IS), public scoping session, and comments received during the Notice of Preparation (NOP) public comment period, is related to the Project's potential impacts related to substantial adverse change in the significance of a historical resource as defined in the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15064.5), substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5, and directly or indirectly destroying a unique paleontological resource or site or unique geologic feature.

Potential impacts from the Project on disturbance of human remains were found to be less than significant in the IS and therefore are not further discussed in the Draft Program Environmental Impact Report (PEIR) (see Appendix A).

Cultural resources include archaeological resources (both prehistoric and historic), historic architectural resources (physical properties, structures, or built items), and traditional cultural resources (those important to living Native Americans for religious, spiritual, heritage, or traditional reasons). Though not specifically cultural, paleontological resources (prehistoric life, fossils) are also considered. The assessment of cultural resource considerations for the Project area is based on results of an archaeological site records and literature search of the California Historical Resources Information System at the Eastern Information Center (EIC), conducted on January 20, 2011, by Dudek.

4.4.1 Setting and Project Baseline

Cultural Setting

As discussed in the Riverside County General Plan and the Riverside County Integrated Project Final Program Environmental Impact Report (County of Riverside 2003; County of Riverside TLMA n.d.), the cultural history of Riverside County is divided chronologically into three periods: prehistoric, ethnohistoric, and historic. Native American culture predominates in the prehistoric and ethnohistorc periods of County history, beginning with the settlement of the Southern California region 10,000 to 12,000 years ago and extending through time to initial Euro-American settlement in the late 18th century when the mission system was established, disrupting native life ways. Most natives were removed to reservations set aside in Riverside County and nearby vicinities, further disrupting, and to a large extent, ending, the persistence of native life ways.

Prior to Spanish colonization in the late 18th century, the geographic area within the Project boundary was inhabited by the Luiseño and possibly other Native Americans (possible previous occupation by the Juaneño based on their place names and creation myths and overlapping use or influence by adjacent groups including the Gabrielino, Serrano, and Cahuilla (City of Lake Elsinore 2011). Luiseño is derived from the Mission San Luis Rey and has been used in Southern California to refer to Takic-speaking people associated with the mission. The Luiseño territory comprised of 1,500 square miles of Southern California.

Specifically, the Pechanga Tribe asserts that the Project area is part of the Tribe's aboriginal territory, as evidenced by the existence of Luiseño place names, *tóota yixélval* (rock art, pictographs, petroglyphs, cupules), named villages and habitation areas, traditional landscapes, Traditional Cultural Properties, and tangible and intangible cultural resources within the Project boundary (Pechanga Tribe 2013). Lake Elsinore is known to the Tribe as *Páayaxchi;* this name is also the name of a village known to exist within the Project boundary.

With the independence of Mexico in the early 19th century, the mission period came to an end, and it became common practice for large land grants to be issued to those friendly with the Nationalistic Mexican cause. The ranchero, Julian Manriquez, received the grant for Rancho La Laguna (which encompassed approximately 20,000 acres) and established a rancho in the area in the early 1844. The Mexican period soon ended with the Treaty of Guadalupe-Hidalgo in 1848, which ceded much of the southwest to the United States, including all the lands around La Laguna, the City of Lake Elsinore's historic name. Gold deposits were discovered in the region shortly after the war's end. In 1858, Augustin Machado acquired Rancho La Laguna and became the first landowner to call the lakeshore home since the Indians.

With the construction of the Atchison, Topeka, & Santa Fe Railroad and the discovery of mineral ores in the late 19th century, immigration began to increase significantly to the lake area. Many people also visited looking for recreational opportunity. Also, mining played an important role in the economic and social development within the area from the Gold Rush to the present day. Tin ore, coal, clay, and minor amounts of gold have historically been extracted from the area. The most prosperous mine was the Good Hope Mine which produced over $2 million worth of gold during its working years. Coal was also discovered in the 1880s and was used to process gold, operate fire kilns, and to heat homes. Given the railroad and attraction of Lake Elsinore for recreation and gold mining prospects, Lake Elsinore experienced development along the lake shore.

As a result of its historical evolution, the area surrounding Lake Elsinore encompasses significant prehistoric and historical archaeological sites in addition to a rich record of fossil life. The Elsinore Naval Military Academy and the Adobe Machado House Butterfield Stage Stop (also known as P-7230 – Juan Machado Home/Rippley Ranch), are community recognized significant historical resources according to the city of Lake Elsinore's General Plan Draft PEIR.. The Adobe Machado House Butterfield Stage Stop is located near the Line A Water Quality (WQ) Basin. Based on the EIC records search, P-8663/CA-RIV-6176H was also identified as cultural resources within the Project boundary. P-8663/CA-RIV-6176H is a wooden pumphouse located near Stoneman Street Channel.

Based on the confidential records search, prehistoric archaeological sites are within the Project boundary and include lithic scatters, habitation sites, and bedrock milling features. Lithic scatters are flaking stations that may indicate possible opportunistic quarrying activities or tool reduction stations. Habitation Sites are temporary camps or transition areas that exploit an immediate or seasonal

resource. Habitation sites are usually located near watercourses and its tributaries. Associated artifact assemblages may include, but are not limited to, ground stone, lithic debitage, and bedrock milling features. Bedrock milling features are grinding stations that are typically located along watercourses and its tributaries near exposed bedrock outcrops typically granite or granodiorite with suitable resources in the area for processing.

The Pechanga Tribe Ethnography of the Lake Elsinore Area (2013) stated that there are villages and named places recorded within the Project boundary. Some of the places refer to gathering areas, while others recall specific events important to the Luiseño culture and history.

Paleontological Setting

Paleontological resources are the fossilized biotic remains of ancient environments. They are valued for the information they yield about the history of the earth and its past ecological settings. Figure 4.4-1 illustrates the paleontological resources sensitivity mapping within the Project boundary. As depicted in Figure 4.4-1, the valley floor surrounding most of Lake Elsinore and the upper regions in the southeasterly portion as well as the fan deposits flanking the Santa Ana Mountains within the Project boundary are of undetermined paleontological sensitivity. The valley floor and upper regions within the central and westerly portion of the Project are considered to have low paleontological sensitivity.

The Society of Vertebrate Paleontology has defined the two categories of potential paleontological sensitivity for geologic units as follows:

- Low: Geologic units are assigned to this category when few significant nonrenewable vertebrate, invertebrate, or plant fossils have been recovered from the same unit nearby.
- Undetermined: Geologic units are assigned to this category when there is little or no past history available to base a sensitivity assessment on.

Archaeological Records Search Results

Dudek conducted a records search of the California Historical Resources Information System at the EIC, University of California, Riverside, on January 20, 2011. The records search was conducted to identify all recorded archaeological sites and investigations within 1 mile of the proposed Master Drainage Plan (MDP) facilities. The records search identified not only archaeological sites, but historic resources, and previous cultural resource surveys within the Project area. The EIC records search is divided up into two categories: recorded resources and previous cultural studies. The EIC records indicate that 57 recorded cultural resources have been documented within the Project area and 68 previous cultural resource studies have been conducted within 1 mile of the proposed MDP facilities.

In addition to the EIC records search, a search of the Native American Heritage Commission's Sacred Land File was conducted on February 10, 2011, in order to determine the location of any sacred and/or burial sites within the Project boundary. The search did not indicate the presence of Native American sacred heritage resources within the Project boundary.

Generally speaking, the proposed water quality and debris basins are located within undeveloped or minimally developed areas. There is the potential that intact, previously undisturbed prehistoric cultural resources are located within the footprint of the proposed water quality and debris basins that have not been previously surveyed.

Based on the records search, of the four proposed water quality basins, three are located in areas that have been previously studied:

- Line A WQ Basin
- Line B WQ Basin
- Line N WQ Basin.

The remaining unstudied water quality basin, Line G WQ Basin, will require further study when specific projects and disturbance are proposed.

In addition to the previous survey areas identified, the EIC records search also identified several recorded cultural resources near future MDP facilities. A wooden pumphouse, recorded in the records search, is located within the northern portion of the proposed Line N WQ basin. The pumphouse may date to the late 19th or early 20th century. The remains of a residence that may have been constructed in the 1940s or 1950s and was at least partially constructed of adobe brick has been identified in the upslope of the pumphouse. The Juan Machado Home/Ripley Ranch, listed on the records search, is listed in the Office of Historic Preservation Directory of Properties in the Historic Properties Directory File as potentially eligible for inclusion on the National Register of Historic Places (NRHP). This resource is located immediately adjacent to the proposed Line A WQ basin.

Another recorded site is located near proposed Line O-10 Debris Basin. The site is a prehistoric bedrock milling station. Nine grinding holes were observed on one boulder but other grinding/milling features were noted in the "site area." Flakes and ground stone artifacts were observed on the ground surface. The site record indicates that the area has been heavily disturbed by grading for house pads and roads but that intact deposits may be present. The area surrounding this debris basin has not been the subject to previous surveys.

Of the nine proposed debris basins, only three have been previously studied:

- Line A Debris Basin

- Line B Debris Basin
- Line N Debris Basin.

The majority of the Lakeland Village Debris Basin has been previously studied.

Therefore, the following remaining five debris basins may need to be further evaluated when specific projects and disturbance are proposed in the future:

- Line F Debris Basin
- Line K Debris Basin
- Line N Debris Basin
- Line O-20 Debris Basin
- Line O-10 Debris Basin.

4.4.2 Related Regulations

Federal

National Historic Preservation Act

The National Historic Preservation Act of 1966 established the NRHP as the official federal list of cultural resources that have been nominated by state offices for their historical significance at the local, state, or national level. Properties listed in the NRHP, or determined eligible for listing, must meet certain criteria for historical significance and possess integrity of form, location, and setting. Significance is determined by four aspects of American history or prehistory recognized by the NRHP criteria:

- Association with events that have made a significant contribution to the broad pattern of our history; or
- Association with the lives of persons significant in our past; or
- Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possess high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; or
- Has yielded, or has the potential to yield, information important to the prehistory or history.

Eligible properties must meet at least one of the above criteria and exhibit integrity. The integrity of a subject property is measured by the degree to which the resource retains its historical properties and conveys its historical character. Integrity also depends on the degree to which the original fabric has been retained, and the reversibility of any changes to the property.

Properties listed in the NRHP include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture.

State

California Public Resources Code (Section 5097.98)

California Public Resources Code, Section 5097.98, addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the Native American Heritage Commission (NAHC) to resolve disputes regarding the disposition of such remains. It has been incorporated into Section 15064.5(e) of the CEQA Guidelines. The Project will be required to comply with California Public Resources Code, Section 5097.98, should any unknown human remains be discovered during site disturbance.

California Health and Safety Code Sections 7050.5, 7051, 5052, and 7054

Sections 7050.5, 7051, 5052, and 7054 of the Health and Safety Code collectively address the illegality of interference with human burial remains, as well as the disposition of Native American burials in archaeological sites. The law protects such remains from disturbance, vandalism, or inadvertent destruction, and establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project, including the treatment of remains prior to, during, and after evaluation, and reburial procedures. The Project will be required to comply with these sections of the Health and Safety Code.

California Register of Historical Resources

The California Register of Historical Resources is an authoritative guide to identifying the state's historical resources. It establishes a list of those properties which are to be protected from substantial adverse change (California Public Resources Code, Section 5024.1).

A historical resource may be listed in the California Register of Historical Resources if it meets any of the following criteria:

a. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

b. Is associated with the lives of persons important in our past.

c. 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.

d. Has yielded, or may be likely to yield, information important in prehistory or history.

Senate Bill 18

The Local and Tribal Intergovernmental Consultation process, commonly known as Senate Bill (SB) 18 was signed into law in September of 2004 and took effect on March 1, 2005. Senate Bill 18 established responsibilities for local governments to contact, provide notice to, refer plans to, and consult with California Native American Tribes. The purpose of this consultation process is to protect the identity of the cultural place and to develop appropriate and dignified treatment of the cultural place in any subsequent project. The consultation is required whenever a General Plan, Specific Plan, or Open Space Designation is proposed for adoption or to be amended. As part of the application process, California Native American Tribes must be given the opportunity to consult with the applicant (if applicable) of the Project and with the Riverside County Flood Control and Water Conservation District (District), the City of Lake Elsinore, or the City of Wildomar for the purpose of preserving, mitigating impacts to, and identifying cultural places located on project land within District or City of Lake Elsinore or Wildomar jurisdiction. The Project does not include a General Plan Amendment or Specific Plan Amendment or include an Open Space Designation; therefore, SB 18 does not apply to the Project.

California Public Resources Code Section 5097.5 and Section 30244

California Public Resources Code, Section 5097.5, prohibits "knowing and willful" excavation upon, removal, destruction, injury, and defacement of any historic or prehistoric ruins, burial grounds, or archaeological or vertebrate paleontological site situated on public lands (lands under state, county, city, district, or public authority ownership or jurisdiction, or the ownership or jurisdiction of a public corporation), except where the agency with jurisdiction has granted express permission. Section 30244 requires reasonable mitigation for impacts on archaeological or paleontological resources that occur as a result of development on public lands.

Local

Riverside County Historical Commission – County Historic Landmark Program

The power to identify and advise the Riverside County Board of Supervisors (Board) concerning historical matters is assigned to the Riverside County Historical Commission (Commission) by Resolution No. 2005-345. The Commission was established by Board Resolution on May 6, 1968. The resolution of 1968 was amended on March 15, 1971; May 4, 1982 (Resolution 82-131); and September 13, 2055 (Resolution 2005-345). The Commission operates under established bylaws approved by the Board on September 13, 2005.

Pursuant to the County resolution establishing the County Historical Commission, its purpose is to "advise the Board of Supervisors in historic matters of the County of Riverside…; to discover and identify persons, events, and places of historical importance within Riverside." Pursuant to this charge, the Commission established criteria and procedures to identify and recognize historic landmarks in

Riverside County. Such identification and recognition does not convey any regulatory authority to the Commission over properties assigned landmark status.

The Commission adopted Riverside County Historic Landmark criteria and procedures in 2008 that outline the criteria for historic landmark designation and the procedures for application and review.

Riverside County General Plan

Riverside County's General Plan (County of Riverside 2003) includes a section on cultural and paleontological resources and provides policies regarding the treatment and preservation of cultural, historical, and paleontological resources within the County. The following policies are applicable to the Project:

Open Space Policy 19.2: Review all proposed development for the possibility of archaeological sensitivity.

Open Space Policy 19.6: Enforce the Historic Building Code so that historical buildings can be preserved and used without posing a hazard to public safety.

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

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

City of Wildomar General Plan

The City of Wildomar has incorporated Riverside County's General Plan. Therefore, the above policies related to the Riverside County General Plan also apply to the City of Wildomar.

City of Lake Elsinore General Plan

The City of Lake Elsinore General Plan (City of Lake Elsinore 2011) includes a section on cultural and paleontological resources and provides goals, policies, and implementation programs regarding the

treatment and preservation of cultural, historical, and paleontological resources within the City. The following policies are applicable to the Project:

Policy 6.1: Encourage the preservation of significant archeological, historical, and other cultural resources located within the City.

Policy 6.3: When significant archaeological sites or artifacts are discovered on a site, coordination with professional archeologists, relevant state agencies, and concerned Native American tribes regarding preservation of sites or professional retrieval and preservation of artifacts prior to development of the site shall be required. Because ceremonial items and items of cultural patrimony reflect traditional religious beliefs and practices, developers should waive any and all claims to ownership and agree to return all Native American ceremonial items and items of cultural patrimony that may be found on a project site to the appropriate tribe for treatment. It is understood by all parties that unless otherwise required by law, the site of any reburial of Native American human remains or cultural artifacts shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act.

Policy 6.4: If archaeological excavations are recommended on a project site, the City shall require that all such investigations include Native American consultation, which shall occur prior to project approval.

Policy 7.1: Consult with California Native America tribes prior to decision-making processes for the purpose of preserving cultural places located on land within the City's jurisdiction that may be affected by the proposed plan, in accordance with State requirements.

Policy 8.1: For development in areas delineated as "High" or "Undetermined" potential sensitivity for paleontological resources, require the project applicant to hire a certified paleontologist, who must perform a literature search and/or survey and apply the relevant treatment for the site as recommended by the Society of Vertebrate Paleontology.

Policy 9.1: Require the developer to obtain a professional, qualified historian to conduct a literature search and/or survey for any project that entails demolition or modification of an existing structure that may be of historical value in relation to the City's cultural heritage.

Policy 10.1: Continue to implement the Historic Preservation Guidelines that guide historic preservation efforts as set forth in the Historic Elsinore Design Guidelines and the Downtown Master Plan (Society of Vertebrate Paleontology 2011).

4.4.3 Comments Received in Response to the Notice of Preparation

A comment letter was received from the NAHC dated September 19, 2011, in response to the NOP. The contents of this letter are included in Appendix A.

4.4.4 Significance Threshold Criteria

The District has not established local CEQA significance thresholds as described in Section 15064.7 of the CEQA Guidelines. The NOP for the PEIR included the IS (Environmental Checklist) to show the areas being analyzed in the PEIR (refer to Appendix A of this PEIR). Accordingly, and based on the IS, the Project would have a significant impact on cultural resources if the Project would:

- Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

4.4.5 Environmental Impacts Before Mitigation

The following analysis is programmatic. Since no specific facilities are being proposed for disturbance or construction by approval of this PEIR, the following is an analysis of the potential known resources within the Project boundary, and how future facilities will be analyzed in light of what is presented below in the future. The District, City of Lake Elsinore, or City of Wildomar will use the following analysis and mitigation measures, if applicable, in guiding their future study and analysis.

Would the Project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

As discussed in Section 4.4.1, Setting and Project Baseline, most of the MDP facilities are located in existing disturbed/developed areas, as most of the MDP facilities are located in road rights-of-way, and therefore, limited new disturbance will occur as a result of the Project. Therefore, future MDP facilities that are proposed within existing road rights-of-way would have a less than significant impact to historical resources since these areas have already been previously disturbed and no further studies/surveys would be required. The proposed water quality and debris basins, however, are located in mainly undisturbed areas. Significant effects upon historic structures or features are evaluated by determining the presence or absence of historic status with respect to the MDP facility in question, and then determining the potential for Project implementation to affect the structure or feature if it possesses historic status.

As previously discussed, Juan Machado Home/Rippley Ranch, is listed in the Office of Historic Preservation Directory of Properties in the Historic Properties Directory File as potentially eligible for

inclusion on the NRHP. Additionally, based on the information provided by the Pechanga Tribe, the area around this adobe structure may contain sensitive archaeological resources. The Line A WQ Basin is proposed immediately adjacent to this resource; therefore, further studies and analysis will be conducted prior to final design of this facility so that avoidance of this cultural resource can be evaluated. If avoidance is not feasible, Mitigation Measures (**MM**) **CUL-1** through **MM CUL 8** shall reduce impacts to less than significant.

Also, as previously mentioned, P-8663/CA-RIV-6176H, a wooden pumphouse, may date back to the late 19th or early 20th century. The remains of a residence that may have been constructed in the 1940s or 1950s and partially constructed of adobe brick were identified upslope of the pumphouse. Since the Line N WQ Basin is being proposed near the wooden pumphouse, this resource would need to be further evaluated prior to final design of this facility so that avoidance of this cultural resource can be evaluated. If avoidance is not feasible, mitigation measures **MM CUL-1** through **MM CUL-8** shall reduce impacts to less than significant.

If construction of MDP facilities is within road rights-of-way and underground, then the Project will not result in the destruction or relocation of the known historic resources listed above. The MDP facility alignment that was used in the records search is conceptual at this time. When specific MDP facilities are proposed in the future, and the MDP facility changes include expansion of rights-of-way and/or aboveground structures that would impact known historic resources, then field surveys and additional analysis shall be prepared per mitigation measures **MM CUL-1**, **MM CUL-2**, and **MM CUL-3**. With the implementation of mitigation measures **MM CUL-1**, **MM CUL-2**, and **MM CUL-3**, impacts to historical resources will be reduced to **less than significant with mitigation incorporated**.

Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

There are some MDP facilities located in proximity to known archaeological resources. There are also MDP facilities, specifically the basins, that are in relatively undisturbed areas that have not been subject to past surveys, and so it is unknown whether or not there are resources that could be impacted by the Project. Even though some facilities have been subject of surveys before, for any MDP facility, implementation of **MM CUL-1**, **MM CUL-2**, and **MM CUL-3** will ensure that the site is surveyed ahead of impacts. Conducting surveys closer to when impacts will occur will allow for avoidance to be considered in final design of the MDP facility and any refinements to mitigation measures can be implemented at that point in time. That said, there are also MDP facilities located in existing roads and/or road rights-of-way that would disturb already disturbed lands, and the likelihood of finding archaeological resources would be very low. For all the MDP facilities, **MM CUL-6** through **MM CUL-8** will be required, so that if any remains or artifacts are uncovered during construction activities, then work must stop and the property authorities contacted.

A recorded archaeological site is located near proposed Line O-10 Debris Basin. The site is a prehistoric bedrock milling station. Nine grinding holes were observed on one boulder but other grinding/milling features were noted in the area of this site. Flakes and ground stone artifacts were observed on the ground surface. The site record indicates that the area has been heavily disturbed by grading for house pads and roads but that intact deposits may be present. The area surrounding this debris basin has not been the subject to previous surveys. Prior to final design of this facility, further cultural resource surveys need to be conducted to determine if the debris basin can avoid this resource. If avoidance is not feasible, mitigation measures **MM CUL-1** through **MM CUL-8** shall reduce impacts to less than significant.

As requested by the NAHC, when specific MDP facilities are proposed, the project proponent for the MDP facility shall conduct a Sacred Lands file search with the NAHC. Implementation of **MM CUL-1** through **MM CUL-6** will be required to be implemented for the MDP facilities not located within existing roads or road rights-of-way. For any MDP facilities located in existing road rights-of-way, **MM CUL-7** and **MM CUL-8** will also ensure that if any unknown resources are encountered, that work will stop and the appropriate measures will be taken to protect the resource. Implementation of **MM CUL-1** through **MM CUL-8** will reduce potential impacts to cultural resources to **less than significant with mitigation incorporated**.

Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

According to Figure 4.4-1, the majority of MDP facilities are within Low and Undetermined areas of Paleontological Resources. A portion of the Stoneman Street Channel and the Stoneman WQ Basin are located in an area considered to have High Potential of Paleontological Resources per Figure 4.4-1. The City of Lake Elsinore's Policy 8.1 requires surveys and study of project impacts on paleontological resources for projects within High and Undetermined areas and implementation of proper measures to reduce impacts. Since some of the MDP facilities are located within the City of Lake Elsinore and within the High and Undetermined Paleontological Resources area, future proposed MDP facilities within the Project boundary would be required to prepare a literature search and/or survey by a certified paleontologist (**MM CUL-9** and **MM CUL-10**).

Compliance with federal, state, and local regulations pertaining to paleontological resources and compliance with City of Lake Elsinore's Cultural Resources Policy 8.1, at a programmatic level, will prevent future MDP facilities from resulting in significant impacts to paleontological resources. Specific MDP facilities that are proposed for construction in the future must demonstrate that the Project will not result in significant impacts to paleontological resources through implementation of **MM CUL-9** and **MM CUL-10**. Therefore, impacts will be considered **less than significant with mitigation incorporated**.

4.4.6 Mitigation Measures

The CEQA Guidelines require an Environmental Impact Report to describe feasible mitigation measures which could minimize significant adverse impacts (14 CCR 15126.4). Mitigation measures were evaluated for their ability to eliminate or reduce the potential significant adverse impacts to historical resources, archaeological resources, and paleontological resources. The following measures shall be implemented to reduce potentially significant impacts to cultural resources to below the level of significance.

MM CUL-1 Prior to final design of flood control facilities, a cultural resources survey not within an existing road rights-of-way shall be completed by a qualified archaeologist. The survey shall include an updated site records search at the Eastern Information Center (EIC) to locate all previously recorded archaeological sites within the proposed construction area of Master Drainage Plan (MDP) facilities. The survey shall assess the direct and indirect impact of the MDP facility. Consultation with the Pechanga Band of Luiseño Indians (Pechanga Tribe) shall be initiated at the beginning of the survey to request additional site information and requested participation in the Project. If the record search indicates that the area has been surveyed and the study is not older than 5 years, a reconnaissance survey shall verify the condition and location of any previously recorded archaeological sites. If previously recorded sites are relocated during the survey, any changes in site condition shall be documented on appropriate State Department Parks and Recreation (DPR) forms, documented in the final technical study as described further in **MM CUL-3** and submitted to the EIC and the Pechanga Tribe (upon request). Any prehistoric or historic sites identified during the survey shall be recorded on appropriate DPR forms, discussed and described in the technical study, and submitted to the EIC and the Pechanga Tribe (upon request).

MM CUL-2 If the cultural resources survey determines that construction of an MDP facility would potentially impact a prehistoric or historic archaeological site and avoidance is not feasible, the Riverside County Flood Control and Water Conservation District (District), City of Lake Elsinore, or City of Wildomar shall have a qualified archaeologist develop a testing program which includes the excavation of shovel test pits and/or test units, in consultation with the Pechanga Tribe. The testing program shall fully define the boundaries of surface and subsurface materials, evaluate the integrity and significance of the site and collect surface and subsurface artifacts. The program shall include mapping of all site features, artifacts, and excavation locations. Related laboratory work shall be conducted to treat the materials that are recovered from the archaeological investigations in consultation with the Tribe.

If construction of an MDP facility would potentially impact a historic architectural resource structure because the MDP facility cannot be moved to avoid the resource, a

survey of the structure by a qualified architectural historian shall be required to assess the structure's significance. A review of primary and secondary documentary sources, such as tax assessor records, historic fire insurance maps, city directories, aerial photographs, and local building permit files, shall be conducted. The assessment shall take into account any events with which the structure is associated, any persons who may have lived in the structure, distinctive architectural characteristics, methods of construction, or association with a notable architect/designer. The assessment by the architectural historian shall recommend to the District, the City of Lake Elsinore, or the City of Wildomar guidelines to assist in the maintenance, repair, and renovation of the resource, if applicable.

MM CUL-3 For MDP facilities not within existing roads or road rights-of-way that have prepared a cultural resources survey per **MM CUL-1** and **MM CUL-2** described above, a technical report shall be prepared that documents all of the information gathered from the survey, data gathered from the testing program of prehistoric or historic archaeological sites, and consultation efforts with the Pechanga Tribe. The report shall identify any significant cultural resources and evaluate the potential impacts to those resources, providing an analysis based upon a regional, landscape viewpoint. If any site evaluated would be impacted by construction of a proposed component, additional project-specific mitigation measures shall be required to reduce the level of impacts. These mitigation measures shall include one of the following or a combination thereof:

a. Redesign of the proposed component to avoid the significant cultural resource, thereby avoiding significant impacts.

b. A data recovery program to recover sufficient cultural materials to exhaust the research potential of the site such that construction shall no longer represent a significant impact.

MM CUL-4 A data recovery program shall be required whenever avoidance from construction of MDP facilities has been demonstrated to be infeasible. The data recovery program shall include the excavation of a sufficiently large percentage of a subsurface deposit such that the research potential of the deposit will be exhausted. Typically, a 5% sample of the deposit will be required; however, sample sizes in the data recovery program will be determined on a per site basis in consultation with the Pechanga Tribe. Laboratory analysis and research shall be conducted to catalog all recovered materials and interpret the data. Interpretation of the site shall take into account the traditional beliefs and customs of the Tribe.

MM CUL-5 Indirect impacts may be identified where construction of MDP facilities would occur adjacent to a significant resource. In cases where construction activities are planned adjacent to known cultural resources, temporary fencing shall be placed around the site boundary by the Project archaeologist and the Pechanga Tribe prior to the start of construction activities to prevent access to the site. All temporary fencing shall be removed once the construction activities are completed.

MM CUL-6 Ground disturbances associated with construction of proposed MDP facilities that contain recorded archaeological sites identified in the cultural records survey (**MM CUL-1** and **MM CUL-2**) and archaeological sites identified in the technical report (**MM CUL-3**), regardless of significance, shall be monitored by a qualified archaeologist. Monitoring of construction activities shall ensure that any materials uncovered during construction activities are identified and adequately recorded. If the site is prehistoric, a local Native American observer shall also be retained by the District, the City of Lake Elsinore, or the City of Wildomar to monitor construction activities.

Not all MDP facilities will be constructed by the District. For District-administered contracts, monitors from the Tribe shall be allowed to monitor grading and ground-disturbing activities pursuant to the executed Master Cultural Resources Treatment and Tribal Monitoring Agreement between the Pechanga Tribe and the District. Additionally, the hired contractor would use the District's plans and specifications, which would include all the mitigation measures outlined in this section.

For MDP facilities located in the cities of Lake Elsinore and Wildomar where those jurisdictions will have lead agency authority over the project constructing the MDP facility, the cities can utilize the mitigation measures outlined herein, or prepare its own California Environmental Quality Act (CEQA) document with mitigation measures and/or incorporation conditions of approval in its project approval process that addresses monitoring activities within proximity to recorded archaeological sites.

MM CUL-7 A pre-construction workshop shall be conducted by a qualified archaeologist for an MDP facility not located within roads or roads right-of-way. The workshop shall address the following: review the types of archaeological resources that may be uncovered; provide examples of common archaeological artifacts to examine; describe why monitoring is required; identify monitoring procedures; describe what would temporarily stop construction and for how long; describe a reasonable worst-case resource discovery scenario (i.e., discovery of intact human remains or a substantial midden deposit); and describe reporting requirements and the responsibilities of the construction supervisor and crew. The workshop shall make attendees aware of prohibited activities, including unauthorized collecting of artifacts, which can result in impact on cultural resources.

The following mitigation measure has been included in order to address accidental discoveries of archaeological resources not identified in cultural resources surveys.

MM CUL-8 In the event cultural remains are encountered during construction of any MDP facilities, work shall stop immediately until a qualified archaeologist is retained to determine the potential significance of the find. If the remains are prehistoric, the District, the City of Lake Elsinore, or the City of Wildomar shall contact the Pechanga Tribe and abide by the District and Pechanga Master Agreement related to treatment of resources unexpectedly uncovered. Measures per the Master Agreement between the District and the Pechanga Tribe shall include giving all cultural items, including ceremonial items and archaeological items to the Pechanga; waiving ownership of any items found in favor of the Pechanga; no photography shall be taken of any articles found; and no destructive testing shall occur on ceremonial and/or sacred objects and human remains unless permission is granted by the Pechanga Tribe.

The following mitigation measures are provided to reduce potential impacts to paleontological resources to less than significant levels:

MM CUL-9 A literature search, and/or paleontological resources field survey (or surveys) by a certified paleontologist shall be completed prior to construction of any MDP facility that lie within the High or Undetermined potential sensitivity paleontological resource area. Relevant treatment for the site as recommended by the Society of Vertebrate Paleontology shall be applied, if needed. If the results of such survey (or surveys) identify the presence of potentially significant paleontological resources, avoidance or other appropriate measures (such as excavation, analysis, and interpretation of resources) potentially leading to curation in perpetuity in a facility that meets the standards of the State of California Guidelines for the Curation of Archaeological Collections and 36 CFR 79, shall be implemented.

MM CUL-10 In the unlikely event that paleontological resources such as vertebrate, plant, or invertebrate fossils are discovered during construction or site disturbance, work shall stop within the area of the discovery and the District, along with possibly the County of Riverside, the City of Lake Elsinore, or the City of Wildomar Planning Department, shall be contacted so that a qualified paleontologist can be consulted to determine the extent or quality of the find and make recommendations for further action, if necessary.

4.4.7 Summary of Environmental Effects After Mitigation Measures Are Implemented

Because this is a PEIR, specific MDP facilities are not being proposed at this time. As outlined above, there are some MDP facilities located in areas that may have more potential to impact cultural resources than others. For those MDP facilities located in sensitive areas, near known resources or unsurveyed areas, implementation of the mitigation measures identified in Section 4.4.6 would mitigate potential adverse impacts on cultural resources to levels below significance.

4.4.8 References

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

City of Lake Elsinore. 2011. *Draft General Plan.* Chapter 4.0 – Resource Protection and Preservation. Accessed November 30, 2011. http://issuu.com/cityoflakeelsinore/docs/chapter_4.0_-_resource_protection_and_preservation?mode=window&backgroundColor=%23222222.

County of Riverside. 2003. *Riverside County General Plan*.

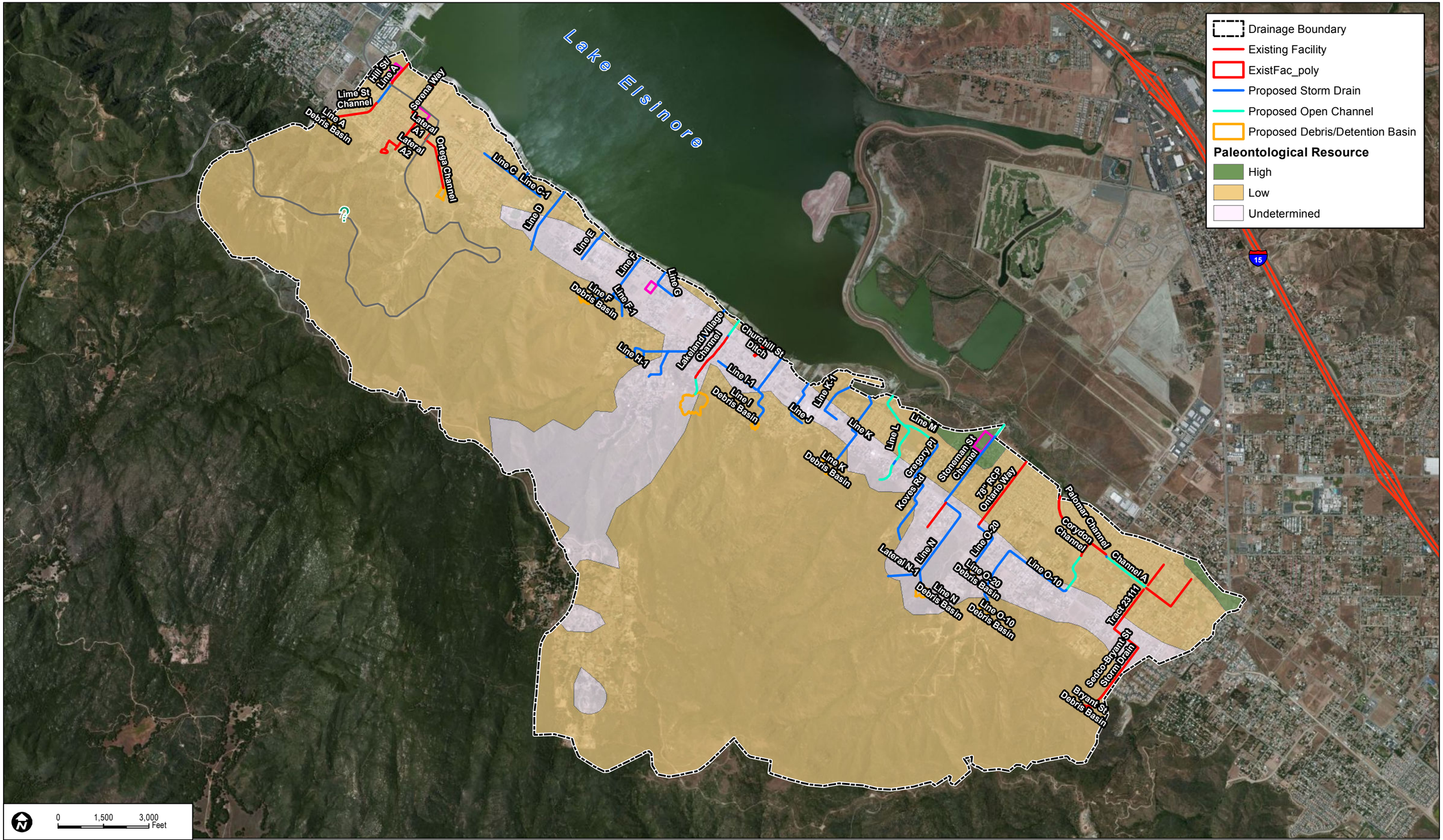
County of Riverside TLMA (Transportation and Land Management Agency). n.d. *Riverside County Integrated Project Final Program Environmental Impact Report.*

Dudek. 2011. *Environmental Constraints Analysis*. February 9, 2011.

Pechanga Tribe. 2013. *Pechanga Tribe Ethnography of the Lake Elsinore Area – Páayaxchi and Its Surrounds*. February 8, 2013.

Society of Vertebrate Paleontology. 2011. "Policy Statements." Accessed November 30, 2011. http://www.vertpaleo.org/ConformableImpactMitigationGuidelinesCommittee.htm.

INTENTIONALLY LEFT BLANK



SOURCE: Riverside County Flood Control and Water Conservation District 2010; Bing Maps

DUDEK

6736

FIGURE 4.4-1

Paleontological Resources

LAKELAND VILLAGE MDP DRAFT PROGRAM EIR

INTENTIONALLY LEFT BLANK

4.5 Geology and Soils

The focus of the following discussion and analysis, based on the initial study (IS), public scoping session, and comments received during the Notice of Preparation (NOP) public comment period, is related to the Project's potential impacts to exposure of people or structures to potential substantial adverse effects, including seismic-related ground failure, landslides, mudflows, lateral spreading, subsidence, liquefaction, or collapse from implementation of the Project. Potential impacts from the Project on exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map; strong seismic ground shaking; changes in topography; unstable soil conditions from excavation, grading or fill, or soil erosion; or the loss of topsoil, expansive soil, and soils being incapable of adequately supporting any structures, fill, or other improvements associated with the Project were found to be less than significant in the IS for the Project and are not further discussed in the Draft Program Environmental Impact Report (PEIR) (see Appendix A).

A *Seismic and Geologic Hazards Review* (Appendix D) was prepared by Leighton Consulting Inc. in the preparation of this section of the PEIR.

4.5.1 Setting and Project Baseline

The Project area is generally located on the eastern slopes of the Santa Ana Mountains, west of the fault-controlled Elsinore–Temecula trough, within the Peninsular Ranges geomorphic province of California. The majority of the area is composed of undeveloped natural slopes and drainages descending toward Lake Elsinore. The low-lying areas along the west side of Lake Elsinore are generally developed and consist primarily of residential and local retail developments. Tectonic uplift of the plateau and subsequent erosion has resulted in remnants of the Miocene Age Santa Rosa Basalt capping the underlying Cretaceous Age granodiorite bedrock in this area. Specifically, the Project boundary is situated along the western fringe of the fault-controlled, down-dropped graben known as the Elsinore Trough. The most significant active fault zones that are capable of seismic ground shaking that can impact the MDP facilities include the following:

- **Elsinore Fault Zone –** This includes the local Wildomar Fault and Willard Fault segments, which pass through the eastern edge of the Project area. The Elsinore Fault Zone is capable of generating a Maximum Earthquake Magnitude (Mw) of 6.8 per the Richter scale.
- **San Jacinto Fault Zone –** This fault zone is located approximately 22 miles northeast of the Project boundary and is capable of generating earthquakes in excess of 7.1 Mw.
- **Newport-Inglewood Fault Zone –** This fault zone is located approximately 28 miles west of the Project boundary and is capable of generating earthquakes in excess of 6.9 Mw.
- **San Andreas Fault Zone –** This fault zone is located approximately 38 miles northeast of the Project boundary. It is considered the dominant active fault in California and is capable of generating earthquakes in excess of 7.4 Mw.

The Wildomar Segment of the Elsinore Fault Zone, an Alquist-Priolo Earthquake Fault Zone, traverses the far southeasterly portion of the Project area (see Figure 4.5-1). The County of Riverside also has zoned fault systems. One of Riverside County's zoned fault systems, the Willard Fault, is within the Project boundary (see Figure 4.5-1).

The Project area is underlain by numerous surficial deposits and/or bedrock units based on published geologic maps, as illustrated in Figure 4.5-2. The major surficial deposits and bedrock units that are most likely to be encountered during future construction of MDP facilities are described below:

- **Artificial Fill:** Artificial fills are generally referred to as undocumented fills or engineered (documented) fills. Undocumented fills are typically those fills that were placed without the review and testing of a geotechnical consultant. Engineered fills are those fills that were observed and tested by a geotechnical consultant. Most artificial fills within the Project boundary are expected to be engineered and placed during construction of existing public roads and private developments. The engineering characteristics and vertical or horizontal extent of these fills are site specific.
- **Young Alluvial-Fan Deposits:** These deposits generally consist of unconsolidated, bouldery, cobbly, gravelly, sandy, or silty alluvial fan deposits, and headward channel parts of alluvial fans (late Holocene).
- **Young Alluvial-Valley Deposits:** These are active and recently active fluvial deposits along valley floors. These deposits consist of unconsolidated sandy, silty, or clay-bearing alluvium within the lower elevations and near the present Lake Elsinore.
- **Old Alluvial-Fan Deposits:** These deposits generally consist of reddish-brown gravel and sand alluvial fan deposits; indurated, commonly slightly dissected.
- **Pauba Formation:** The Pauba-sandstone formation (Pleistocene) is poorly to moderately well indurated, extensively crossbedded, channeled and filled sandstone and siltstone that contains local intervening cobble-and-boulder conglomerate beds. This formation is generally found in the southern portion of the Project area.
- **Basalt of Elsinore Peak:** These vesicular basalt flows overlie Paleogene sandstone and are restricted to the Elsinore Peak area (Miocene).
- **Granodiorite-undifferentiated**: This is a Cretaceous age formation with intermediate composition granitic rocks, mainly biotite-hornblende and biotite granodiorite.
- **Heterogeneous granitic rocks**: This unit generally comprises the majority of the high slopes along the western half of the Project area. This Cretaceous age formation includes heterogeneous, compositionally diverse granitic rocks mostly of tonalitic and granodiorite composition, but includes some monzogranite and gabbro.
- **Mesozoic metasedimentary rocks-undifferentiated:** These are quartz-bearing metasedimentary rocks, chiefly biotite schist; includes unknown Mesozoic metasedimentary rocks and rocks of other designated Mesozoic units.