Initial Study

Basin Maintenance for Water Recharge

Waterman Spreading Grounds
San Bernardino Valley Municipal Water District
San Bernardino County, California

Prepared for:

San Bernardino Valley Municipal Water District
380 E Vanderbilt Way
San Bernardino, CA 92408

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March 2019

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1 INTRODUCTION

The San Bernardino Valley Municipal Water District (Valley District) proposes to annually recharge up to 30,000 acre feet per year (AFY) of State Water Project (SWP) water, or an average of 15,000 AFY, based on water availability in the Waterman Spreading Grounds in San Bernardino, which are owned and operated by the San Bernardino Flood Control District (SBCFCD). To facilitate the recharge, specific maintenance activities are required in 10 of the 12 existing percolation basins in the Waterman Spreading Grounds (Proposed Project). Maintenance-would generally be conducted in two cycles, one in the late winter/early spring and again in the late summer/early fall and consists of removing excess vegetation and excess sediment from the sideslopes and basin floors, and/or ripping the bottoms of the basins within the Spreading Grounds that will be used for recharge.

The basins will continue to attenuate storm water when needed. The two basins outside the Valley District Proposed Project area would be maintained by the SBCFCD for flood control purposes under their own permit and are not part of the Proposed Project.

1.1 Background

The Valley District was formed in 1954 as a regional agency to plan a long-range water supply for the San Bernardino Valley. It imports SWP water and manages groundwater storage within its boundary which is approximately 353 square miles in southwestern San Bernardino County, about 60 miles east of Los Angeles. The Valley District serves a population of approximately 695,000 and spans the eastern two-thirds of the San Bernardino Valley, the Crafton Hills, and a portion of the Yucaipa Valley, and includes the cities and communities of San Bernardino, Colton, Loma Linda, Redlands, Rialto, Bloomington, Highland, East Highland, Mentone, Grand Terrace, and Yucaipa.

The California Department of Water Resources (DWR) operates and manages the SWP, the largest state-built, multipurpose water project in the United States. The SWP depends on a complex system of dams, reservoirs, power plants, pumping plants, and aqueducts to deliver water. The Project provides drinking water to more than 25 million Californians and SWP water is used to irrigate about 750,000 acres of farmland, mainly in the south San Joaquin Valley. Also, the SWP was designed and built to control floods, generate power, and provide recreational facilities as well as enhance habitats for fish and wildlife.

Since the 1970s, the Valley District has been recharging SWP water in several detention basins owned and operated by the SBCFCD in the San Bernardino, Rialto and Yucaipa areas, when they are not needed for flood control. This activity was originally covered as part of a legal agreement but has been more informal in recent years. The agreement consists of the Valley District contracting with the SBCFCD to perform specific maintenance activities in an effort to support water recharge activities.

In September 2017, the SBCFCD notified the Valley District that standing water and algae had created a condition that could present a vector control issue. Therefore, the Valley District coordinated with the regulatory agencies to complete maintenance activities using an emergency authorization process. The Valley District stopped discharging water into the Waterman basins and subsequently removed vegetation and algae from the basins using heavy machinery. After the bottom of the basins and a buffer on the slope were cleaned of vegetation Valley District resumed imported water discharge into Waterman Basins.

The SBCFCD has requested that the Valley District obtain an SBCFCD encroachment permit to recharge and maintain the facility to support the recharge operations. One of the SBCFCD permit requirements is for the Valley

District to perform a California Environmental Quality Act (CEQA) analysis along with obtaining other regulatory clearances from other applicable agencies.

The Valley District proposes to contract with SBCFCD or an outside vendor to perform maintenance activities in the Waterman Spreading Grounds. If an outside contractor is used for any maintenance activities in the Waterman Spreading Grounds, the contractor must be approved by both the SBCFCD and the Valley District before any maintenance activities occur.

2 PROJECT LOCATION

The Waterman Spreading Grounds facility is located in the City of San Bernardino east of Waterman Avenue and north of E. 40th Street (just south of the foothills of the San Bernardino Mountains, Figure 1 and Figure 2). Constructed in the mid-1960s, the approximately 150-acre site consists of a series of four large basins, terraced into the sloped ground surface, divided by various access roads which create smaller sub-basins east and west of the access roads (a total of 12 basins). The spreading grounds are designed to attenuate storm flows from Waterman Creek and recharge imported water during the non-flood season. Water flows via gravity through the system by a series of transfer/drain tubes that connect the higher elevation Basins to the adjacent lower elevation Basins. In some cases, there is more than one outlet from a Basin. Imported water is delivered to the Basins in the northwest corner of the site in Basin 2 West (2W). Storm water enters the site at a north central point located above Sub-basin 1E and 1W (Scheevel Engineering, February 2018).

Whether the source of water is storm flow or imported water the SBCFCD physically operates the facility and manages the flow through the various basins.

The basins to be maintained for water spreading include the following and are identified on Figures 3 and 4 and include the following:

- **Basin 2W and Basin 2E** – located in the northern portion of the spreading grounds. Basins 2W and 2E are separated by a spillway. The Valley District outlets water upstream, to the west of Basin 2W, and these basins are the first to receive water. A radial gate structure exists on the east end of Basin 2E, which can outlet water to Twin Creek, which flows to the Twin Creek Spreading Grounds. In general, the Basin 2W has a typical spreading depth of 5 feet, but has a maximum depth of 12 feet, which represents the top of the radial gate elevation. Basin 2E has a typical spreading depth of 11 feet, with a maximum of approximately 19 feet, based on the top of radial gate elevation from that basin.

- **Basin 2A** – located in the northeastern portion of the spreading grounds, generally southeasterly of Basin 2E. Water generally flows from 2E into 2A, and water from 2A generally flows south into basin 3W. This basin has a typical spreading depth of 6 feet, with a maximum of 8 feet.

- **Basin 3W and 3E** – located in the central area of the spreading grounds. A spillway separates basins 3W and 3E. Water originates from two outlets in basin 2A and flows into a channel area (about 12 feet wide) that meanders through an upland area, eventually outletting into the larger basin designated as 3W. Basin 3W has a typical spreading depth of 10 feet with a maximum depth of approximately 13 feet. Basin 3E has a typical spreading depth of 14 feet, with a maximum of approximately 17 feet.

- **Basin 3D** – located in the southwestern portion of the spreading grounds, south of 3W. Water from 3W feeds this basin. This basin has a maximum spreading depth of 6 feet.

- **Basin 3B –** located in the south central area of the spreading grounds. Generally water from Basin 3A and the westerly area of Basin 3E and provides water to this basin. This basin has a maximum spreading depth of 6 feet.

- **Basin 3A –** located in the southeastern area of the spreading grounds. Water from the eastern area of Basin 3E provides water to this basin via one gated pipe. Three gated pipes exist on the south side of this basin which feed Basin 3B and Basin 3C. This basin has a maximum spreading depth of 6 feet.

- **Basin 3C –** located in the southeasterly portion of the spreading grounds, south of basins 3B and 3A. This basin has a maximum spreading depth of 6 feet.

- **Basin 4 –** located along the southern boundary of the spreading grounds, south of basins 3D and 3C. Generally overflow from water in 3W, 3D and 3C provide the water source to this basin. If water fills within this basin, a radial gate on the east end of this basin can outlet the water to Twin Creek. This basin has a typical spreading depth between 4 feet and 6 feet, with the shallow end of the basin being toward the western end of the basin.

3 PROJECT DESCRIPTION DETAIL

The Valley District proposes to contract with the SBCFCD, or an outside contractor, to conduct specific maintenance activities in 10 of the 14 existing percolation basins in the Waterman Spreading Grounds to facilitate the groundwater recharge of up to 30,000AF of SWP water per year, based on water availability. On average approximately 15,000 AFY would be recharged.

In general, the Valley District plans to conduct a maintenance-recharge cycle in the late winter/early spring and again in the late summer/early fall. With each cycle, the Valley District would first remove vegetation and excess sediment from the sideslopes and basin floors, rip the basin floors, and repair inlet/outlet and gate structures of only the areas of the basins in the Spreading Grounds that will be used for recharge. The basins will continue to attenuate storm water when needed. The two basins outside the Valley District Proposed Project area would be maintained by SBCFCD for flood control purposes and are not part of the Valley District's recharge operations plan.

Once the basins have been cleared of vegetation and the bottom prepped for recharge, the Valley District would discharge SWP water on an ongoing basis. At the end of each six-month impoundment cycle, the Valley District will close the valves to not allow any additional water flow, and allow each of the basins to percolate the existing water so that each basin can dry (approximately 10 days). Once the basins are dry, vegetation will be removed from sideslopes and the basin floor and repairs of any gates, inlet/outlets, and sideslope repair will occur. Once the basin maintenance has been performed, the Valley District will initiate another cycle of water recharge.

During periods of inundation, vegetation will be sprayed for vector control and/or removed as necessary if posing a vector control problem. Any algae blooms will be controlled by chemical spraying as needed with chemicals as approved by the Santa Ana Regional Water Quality Control Board (SARWQCB) and applied by professional, licensed applicators.

Soil and vegetation removed from the operations will be placed in a stockpile location in an upland area on the north end of the facility. Once the stockpiled material is dry enough for transport, the material will be taken to the Mid-Valley Landfill in Fontana for disposal.

The maintenance activities would generally consist of the following but are not limited to:

Activity 1 - Regular removal of basin vegetation
Activity 2 - Regular removal of excess sediment
Activity 3 – Ripping/scraping the bottom of the basins
Activity 4 - Minor repair/rehabilitation of existing basin and structures
Activity 5 - Filling the basins with water from the State Water Project and monitoring

Maintenance Activities Description

Activity 1 – Regular removal of basin vegetation

Activities include the control of vegetation growth on basins floors, basin slopes, roads, flow channels, and structures to facilitate access to the various areas of the basin, preserve infiltration characteristics, basin volume and flow-through capacity, and/or to control the spread of non-native and invasive species (e.g. tobacco, castor bean, eucalyptus, thistle, tumble weeds). Vegetation control includes the control of both non-native weeds, grasses, aquatic vegetation, emergent vegetation, and woody and herbaceous plants are likely to impede normal operations or present a danger during high winds or high-flow conditions. Fallen trees and associated debris are also removed to maintain the basin infiltration and design flow capacities. It is the intent that all vegetation on the sideslopes and basin bottom would be removed.

In general, all vegetation from the wet side (south side of each of the sub-basins) slopes of the basins would be removed to prevent trees and shrubs from growing on the wet side. For the dry slopes (north side of each of the sub-basins), only excess vegetation along the water's edge interface ("fringe" vegetation) would also be removed.

The basin sideslopes will also be maintained for vector control access. In general, this consists of creating entrance points of vegetation-free zones that would be approximately 12 feet wide, spaced generally in 50-foot intervals, and generally along the dry or northern slopes of each of the sub-basins.

Method: Vegetation will be removed by mechanical means with heavy equipment, hand labor and tools, as well as chemical applications of state-approved herbicide.

Timing and Frequency: Typically, two times per year in approximately January through March and August through October, dependent upon basin conditions and weather. Both chemical and mechanical treatment may be needed twice per year to adequately control dry brush and weeds in accordance with local fire code requirements.

Activity 2 - Regular removal of excess sediment

Preservation of basin infiltration capacity requires that fine sediment be removed so that soil pores do not become clogged and impede recharge. This type of sediment is deposited from many sources such as, but not limited to erosion, storm flows, or gradual deposition from water recharge operations. Sediment removal includes the following activities:

1. Mechanical removal of clay, silt, and fine sand materials from the basin interior slopes, floors, and berms.
2. Mechanical removal of accumulated, silt, sediment, rocks, debris, eroded vegetation and other obstructions to the flow of water around and within: (1) existing basin inlet and outlet structures; (2) existing storm drain outfall structures; (3) existing dam inlet and outlet structures; (4) existing canals associated with inlet and outlet structures; (5) existing flow measuring stations and devices; and (6) existing drop structures [energy dissipaters], flap gates, culverts, transfer pumps, siphons, weirs and similar flood control devices necessary to maintain the proper function of the basins for flood control and recharge purposes.
3. Periodic over-excavation of the basin floors to remove deeper fine sediments embedded in the basin floor, and replacement of material using clean imported sand to improve recharge. This will be performed on an as-needed basis when it is determined that the basins are not percolating at optimum levels long term. This activity would be in response to indicators such as a need to decrease the amount of SWP water being released to maintain water levels or a significant amount of algae build up despite recent mechanical and chemical treatments.

Method: A variety of heavy equipment will be used to remove sediment from the basins, such as a dozer, loader, grader, gradall, excavator, scraper, etc. (please see complete list of equipment in **Table 1**). Sediment will either be: 1) hauled off-site and disposed of at an off-site facility (i.e. stockpile or landfill) or 2) used in an effort to maintain or repair slopes, within the maintenance footprint, that have eroded and are in need of repair.

Only a portion of the basins will be used for water recharge; therefore, as part of this permitting effort only those basins where the recharge activities take place will be excavated. Additionally, District Operations personnel will grade the basin bottom in a manner that maintains the established elevations to facilitate drainage for recharge and flood control.

Timing and Frequency: Up to two times per year in approximately January through March and August through October, dependent upon basin conditions. Storm Season is typically October through April (work occurs only after the wetted portions of a channel or basin are dry enough to safely operate equipment).

Volume of Material: Material to be removed will include clay and silt from the area of recharge and the area of recharge/flood control interface. The volume will vary annually. Based on historic percolation testing and other historical maintenance data from past recharge operations, between 1 foot and up to 4 feet of material may be removed at each recharge location annually, but in all instances, the established grade based on the inlet will be maintained. Estimated volumes of material will vary annually and are provided in **Table 2**.

Activity 3 – Ripping/scraping the bottom of the basins

Ripping and/or scraping the bottom of the basins may occur after sediment and vegetation has been removed between periods of basin inundation to improve basin recharge efficiency.

Method: Ripping will be performed with a dozer equipped with ripper attachments. For basin scraping, a scraper will be used. Minor amounts of vegetation and debris in the subsurface will either remain in place or be removed (depending on the amount of debris unearthed) and hauled to the designated stockpile location. If needed, the basin will be re-ripped or re-scraped.

Timing and Frequency: Typically, two times per year in approximately January through March and August through October, dependent upon basin conditions.

Activity 4 - Minor repair and/or rehabilitation of existing basin and structures

The repair of structures would be performed, as needed, in an effort to preserve the existing flow characteristics of the system and could include, but not be limited to: repair to damaged, or eroded earthen levees, basin banks, patches in concrete slope paving, repair of existing rock rip-rap protection, and repair of operational structures and equipment such as culverts, drain inlets/outlets, and valves and structures. It includes repair of damage caused by erosion, catastrophic events, vandalism and normal wear or breakage.

Rehabilitation activities may include placement of riprap below the structure, if necessary, to reduce erosion.

Method: Heavy equipment such as dozers and excavators will be used to place and repair rock riprap bank protection, eroded levees, patching of concrete slope protection, and the repair of basin structures; smaller equipment may be used to scrape material from bottom and re-establish side-slopes as needed.

Timing: Inspections of the facilities will occur after periods of inundation, after storm events, and use of heavy and light equipment will be used to replace rock rip-rap and scrape the basin floor for material to re-establish sideslopes when the basin is dry. Equipment will also be used to remove vegetation that is blocking inlets/outlets and SWP control structures, as needed.

Activity 5 - Filling the basins with water from the State Water Project and monitoring (to be performed by the Valley District)

This activity includes manual operation of gate valves and appurtenances by SBCFCD to facilitate the flow of water into and through the multiple basins.

Method: Work is performed by SBCFCD employees to operate the equipment and inspect the flows.

Timing: Periodic, primary recharge occurs in the summer and fall or when State Water Project water is made available.

Typical Equipment to Be Utilized

All work will be performed by SBCFCD, or an outside contractor, as directed by the Valley District. Typical equipment includes the following as shown on **Table 1**.

Table 2 summarizes all of the proposed maintenance activities.

Table 1
Typical Maintenance Equipment

Equipment	Application
Hand-Sprayers/Hand Tools and other non-mechanized Equipment	Hand-sprayers can be used to apply herbicide and pesticide. Hand tools are used by hand crews to remove vegetation from areas that are not accessible or efficient for mechanized equipment, or in an effort to minimize impacts.
Dozer	A Dozer is a track piece of heavy equipment used to push and move earthen materials. This machine efficiently moves, clears, and grades large amounts of earthen materials, and is specifically useful in muddy and/or sandy conditions where other rubber tire equipment is ineffective. Dozers are used to push and clear material/debris from the bottom of facilities; as well as push material onto slopes of facilities in an effort to stabilize compromised slopes. Dozers are also used for center flow and grading activities.
Dump Truck	Dump trucks are used to move materials from one location to another within a facility. Dump trucks can also be utilized to export materials from a facility or import materials from an off-site location.
Hydraulic Excavator (Excavator)	An Excavator is a track piece of equipment that consists of a dual hydraulic arm and a material bucket mounted on a rotating platform for the scrapping and scooping of earthen material. Excavators have the ability to work around waterways, as well as muddy/sandy soil by using its long arm and bucket to work at an adequate distance preventing the machine from becoming entrenched in mud or water. Excavators are used to excavate, clear, and scoop material/debris from facilities. The dual function of an excavator allows the piece of equipment to excavate and load material/debris into piles and then into dump trucks. Excavators are also used to backfill and compact erosions/reals on slopes using native material from the facility.
Motor Grader (Grader)	A Motor Grader is a rubber tire piece of equipment that has a wide blade attached to it and is used to maintain/repair/grade earthen facility roads. A Grader is also an efficient method of removing vegetation from levee roads and large areas that involve flat surfaces
Wheel Loader (Loader)	A Wheel Loader is a rubber tire piece of equipment with a hydraulic arm and bucket attached to the front of the machine. A Loader is used to excavate, scoop/pile, and carry native material within a facility. A Loader has the ability to move material cleanly from one area to another, as well as to stockpile excess material within the facility during activities in an effort for the excavation process to run more efficiently. Further, a Loader cam be used to load Dump Trucks with native material, as well as for grading and vegetation removal within a facility.
Tractor Mower	A Tractor Mower is a tractor that has a fixed mower head attached to its rear or an affixed hydraulic boom arm with mower head. Mowing equipment is used to remove/trim vegetation from facilities without removing the root system of the plant. This enables the soil to retain its structure and prevent erosion of levee slopes or basin slopes.
Service Truck	Service trucks allow manpower to travel within a facility as well as serve as a means of transportation for hand tools, power tools, hand sprayers, and construction tools. Service trucks are primarily used as support to heavy equipment operations, but they can also be used by Vector Control Technicians and in herbicide applications.
Sprayer Trucks / Equipment	Sprayer trucks are other vehicles that can be used in order to spray herbicide and pesticide within a facility. These vehicles can range from Heavy Spray Trucks to pick-up trucks as well as all-terrain vehicles.
Water Truck	A Water Truck is an all-wheel drive tanker truck that is used in an effort to control dust during maintenance activities. A Water Trucks can also be used for compaction purposes, such as levee road repairs and backfill operations.
Gradall	A Gradall is a highway speed hydraulic excavator. This specialized excavator is versatile in its ability to travel on highways and also function on construction sites. A Gradall can be used to remove vegetation from facility slopes, as well as grade and compact slopes.
Skid Steer Loaders	A Skid Steer Loader is a compact wheel or rubber tracked piece of equipment that is used to excavate, load, and place materials. A Skid Steer can also be utilized for removing and/or mowing vegetation with its mower attachment. The small size of the skid steer enables the machine to work in areas that height restrictions. For the most part the light rubber tracked machines are used in earthen facilities, as well as on slopes where rubber tire equipment does not have traction.

Table 2
Activity Summary Estimate

Activity	**Equipment**	**Frequency and Timing**	**Estimated Annual Volume of Material Removed**	**Trucks Per Day Trucks Total (10 cy capacity)**	**Disposal Location Assumptions**
Activity 1 – Regular removal of basin vegetation	2 dozers, 2 water trucks, 1 loader	3 weeks each: Spring: January through March Fall: August through October	Spring: approx. 750 cy Fall: approx. 1,500 cy	Spring Total: 75 trucks Spring Daily: 10 trucks per day for 8 days Fall Total 150 trucks Fall Daily: 10 trucks per day for 15 days	Mid-Valley Landfill (22 miles round-trip)
Activity 2 - Regular removal of excess sediment	Included in Activity 1	Same as Activity 1	Included in Activity 1	Included in Activity 1	Same as Activity 1
Activity 3 - Ripping/scraping the bottom of the basins	Included in Activity 1	Same as Activity 1	Included in Activity 1	Included in Activity 1	Same as Activity 1
Activity 4 - Minor repair/rehabilitation of existing basin and structures	Included in Activity 1	Same as Activity 1	Included in Activity 1	Included in Activity 1	Same as Activity 1
Activity 5 - Filling the basins with water from the State Water Project and monitoring (to be performed by the Valley District)	Release Gate (existing)	Year – round, based on supply	Not Applicable	Included in Activity 1	Not applicable

Figure 1 - Regional Overview and Site Vicinity

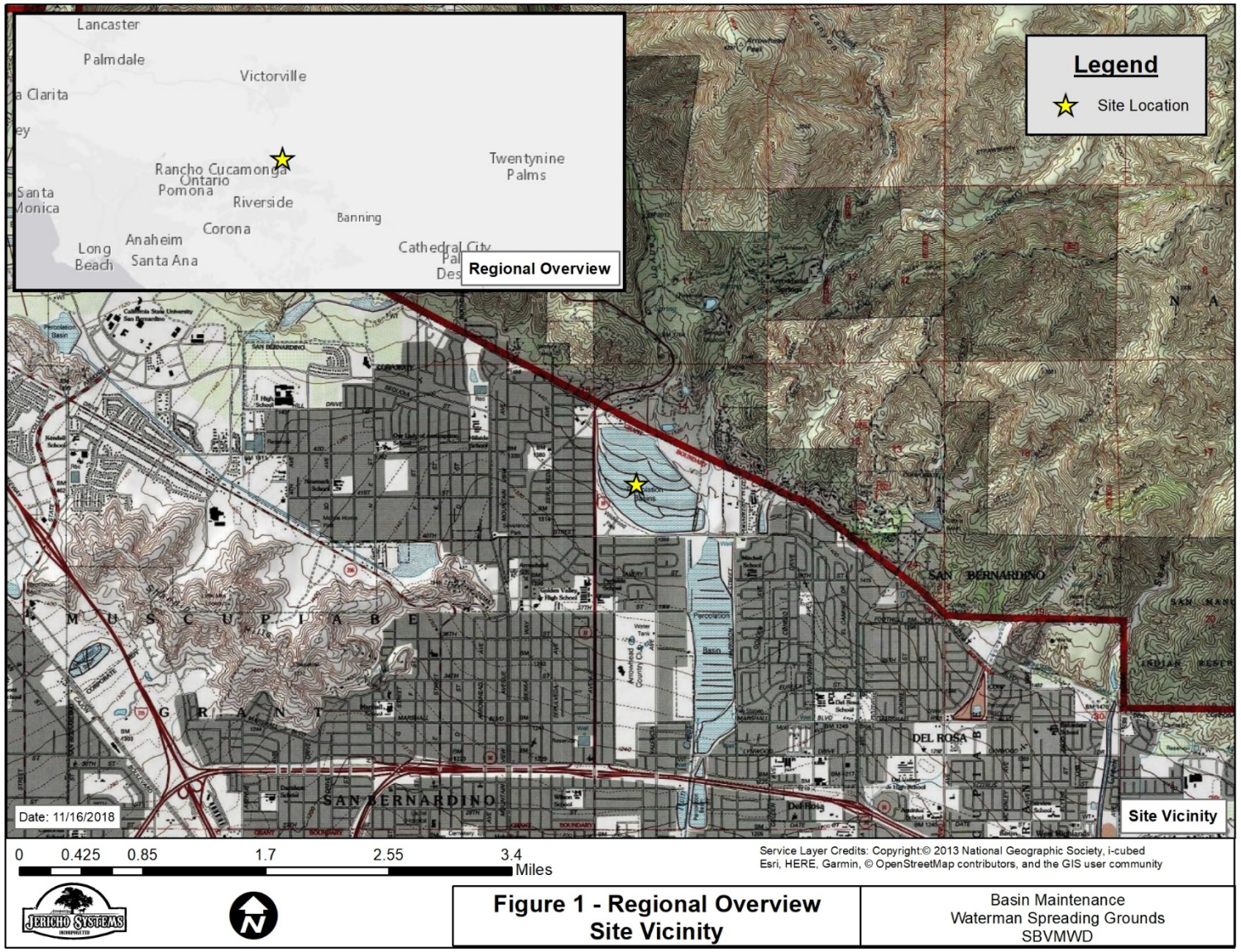


Figure 2 -Site Location

Figure 3 - Maintenance Limits

Figure 4 - Directional Flows with Structures

4 ENVIRONMENTAL CHECKLIST FORM

1. Project Title: Basin Maintenance for Water Recharge – Waterman Spreading Grounds

2. Lead Agency Name: San Bernardino Valley Municipal Water District
Address: 380 E Vanderbilt Way, San Bernardino, CA 92408

3. Contact Person: Douglas Headrick, General Manager
San Bernardino Valley Municipal Water District
380 E Vanderbilt Way, San Bernardino, CA 92408
douglash@sbvmwd.com, heatherd@sbvmwd.com

Phone Number: (909) 387-9211

4. Project Location: City of San Bernardino
North of 40th Street, east of Waterman Avenue (SR-18)
USGS Quadrangle; *San Bernardino North*
Latitude: 34°10'13.11"N
Longitude: 117°16'26.08"W

5. General Plan Designation: Open Space (City of San Bernardino)

6. Zoning: Publicly Owned Flood Control (City of San Bernardino)

7. Project Description Summary:

The Valley District proposes to annually recharge up to 30,000 acre feet per year (AFY) of State Water Project (SWP) water, or an average of 15,000 AFY based on water availability, in the Waterman Spreading Grounds in San Bernardino, which are owned and operated by the San Bernardino Flood Control District (SBCFCD). To facilitate the recharge, specific maintenance activities are required in 10 of the 12 existing percolation basins in the Waterman Spreading Grounds (Proposed Project). Maintenance would generally be conducted in two cycles, one in the late winter/early spring and again in the late summer/early fall, and would consist of removing vegetation and excess sediment, ripping/scraping the basin floors, and repairing various basin structures of only the areas of the basins in the Waterman Spreading Grounds that will be used for recharge.

The basins will continue to attenuate storm water when needed. The two basins outside the Valley District Proposed Project area would be maintained by SBCFCD for flood control purposes under their own permit and are not part of the Proposed Project.

Details of the maintenance and recharge operations are provided in Section 3.

8. Surrounding land uses and setting (Briefly describe the project's surroundings)

The Waterman Spreading Grounds are primarily surrounded by urban uses and disturbed open space.

- North: Open space, San Bernardino Mountain foothills
- South: Wildwood Park and ballfields, City of San Bernardino
- East: Twin Creek Spreading Grounds and Open Space
- West: Waterman Avenue (Hwy 18)

9. Lead Agency Discretionary Actions:

- Approve of CEQA compliance and obtain a SBCFCD encroachment permit.

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

- Alteration/Discharge into Streambeds – State Jurisdiction. The California Department of Fish and Wildlife (CDFW) is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the Fish and Game Code (FGC) (Section 1602) requires an entity to notify CDFW of any proposed activity that may substantially modify a river, stream, or lake. The Proposed Project will occur within Waterman Spreading Grounds, therefore, a Lake or Streambed Alteration Agreement from the CDFW is required. The Agreement will include reasonable conditions necessary to protect those resources. The Agreement must comply with CEQA. The entity may proceed with the activity in accordance with the final Agreement.

- Alteration/Discharge into Streambeds – Federal Jurisdiction. The federal Clean Water Act (CWA) is the primary federal law promulgated to protect the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The responsible regulating agencies are the U.S. Army Corps of Engineers (USACE) and the Santa Ana Regional Water Quality Control Board (SARWQCB). The Waterman Spreading Grounds is considered Waters of the U.S. because it is a tributary to the Santa Ana River, and ultimately the Pacific Ocean. Project activities involving the physical alteration or direct discharge into Waters of the U.S., and therefore require Federal Clean Water Act Permits would be required.

- Encroachment Permit – SBCFCD. The SBCFCD requires a permit to spread SWP water on behalf of the Valley District, as well as a maintenance agreement to maintain the basins.

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

A search of tribal records was completed in July 13, 2018 by CRM Tech (September 14, 2018). In response to CRM TECH's inquiry, the Native American Heritage Commission (NAHC) reported in a letter dated July 16, 2018, that the unspecified Native American cultural sites have been identified in the vicinity of the project area and refers further inquiries regarding these sites to various tribal entities.

On November 27, 2018, the Valley District mailed project notices to the following entities:

- Raymond Huaute, Cultural Resource Specialist, Morongo Band of Mission Indians;
- Lee Clauss, San Manuel Band of Mission Indians

- Andrew Salas, Chairman, Gabrieleno Band of Mission Indians, Kizh Nation

The District also sent a letter to Kassie Sugimuto, Tribal Liaison, Gabrieleno-Tongva Tribe, but the letter was returned with no forwarding information.

The project notices provided information about the project and requested written comments to be sent to the Valley District by December 31, 2018. The following comments were received:

Morongo Band of Mission Indians

- A records search conducted at the appropriate California Historical Resources Information System (CHRIS) center with at least a 1.0-mile search radius. If you already have done this work, please furnish copies of the reports and site records generated through this search for us to compare to our records to begin productive consultation.

- Tribal participation during survey and testing, if this fieldwork has not already taken place. In the event that archaeological crews have completed this work, our office requests a copy of the Phase I study or other cultural assessments as soon as available.

San Manuel Band of Mission Indians

The December 21, 2018 email stated that the San Manuel Band of Mission Indians did not have any concerns regarding the project, but requested that mitigation measures be included in the Cultural Resources section of the environmental documentation to protect cultural resources.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The Proposed Project could potentially affect ("Potentially Significant" or "Less than Significant with Mitigation Incorporated") the environmental factor(s) checked below. The following pages present a more detailed checklist and discussion of each environmental factor and identifies where mitigation measures would be necessary to reduce all impacts to less than significant.

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

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation, the following finding is made:

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

Shay Lawrey March 1, 2019
Prepared by: Date
Jericho Systems, Inc
47 N. 1st Street, Suite 1
Redlands, CA 92373

Signature Date
San Bernardino Valley Municipal Water District

EVALUATING ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

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

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) “Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).

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

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

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

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

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.

9) The explanation of each issue should identify:
   a) the significance criteria or threshold, if any, used to evaluate each question; and
   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
I. AESTHETICS: Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X

SUBSTANTIATION: (Check ☐ if project is located within a view-shed of any Scenic Route listed in the General Plan):

Environmental Setting

The Waterman Spreading Grounds facility is located in the foothills of the City of San Bernardino. All basins are located at and below grade.

Impact Analysis

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

Less Than Significant. The CEQA Guidelines do not provide a definition of what constitutes a "scenic vista" or "scenic resource" or a reference as to from what vantage point(s) the scenic vista and/or resource, if any, should be observed. However, a scenic vista can generally be defined as a viewpoint from a public vantage that provides expansive views of a highly-valued landscape for the benefit of the general public. Common examples include undeveloped hillsides, ridgelines, and open space areas that provide a unifying visual backdrop to a developed area. Scenic resources are those landscape patterns and features that are visually or aesthetically pleasing and that contribute affirmatively to the definition of a distinct community or region such as trees, rock outcroppings, and historic buildings.

The Waterman Spreading Grounds can be viewed from a portion of State Highway 18 that traverses the San Bernardino Mountains directly above the Waterman Spreading Grounds, more clearly in the portion near Crestline and Lake Arrowhead, at an elevation of approximately 4,000 feet above mean sea level (msl). These basins are situated within the northern portion of the City of San Bernardino. The views from various turnouts along State Route 18 (SR-18) at the higher elevations afford views of the entire San Bernardino Valley, although the turnouts are not scenic vistas designated by the State of California. The Waterman Spreading Grounds facility has been part of the landscape since the 1960s, with or without water.

Therefore, none of the proposed activities would have a substantial adverse effect on any scenic vista.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. A portion of the Waterman Avenue/SR-18 alignment roughly borders the Waterman Spreading Grounds in the City of San Bernardino, adjacent to the Waterman Spreading Grounds, but this portion of SR-18 is not eligible to be a state scenic highway. While these routes will be utilized to move equipment and personnel to the various areas of work, all of the Project activities will be located within the Basins and on major arterials and roadways. Therefore, none of the SBCFCD maintenance activities or District water spreading activities will damage any scenic resources viewed by people traveling on SR-18 nor will it damage any scenic resources within or adjacent to the traveled corridors. None of the SBCFCD maintenance or District water spreading activities will impact trees or rock outcroppings, or historic buildings within SR-18, therefore, there is no impact to this criterion.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less Than Significant. All of the basins within the spreading grounds are located at grade and below grade in an urbanized area of the City of San Bernardino. All SBCFCD maintenance activities will occur within the basins below grade or on access roads at grade. All of the basins within the spreading grounds are situated below grade and not readily visible by the general public. SBCFCD maintenance will occur over short periods of time (days or weeks) with minimal equipment along the access roads which may be visible to the public. The District's water spreading activities will occur within the basins, below grade and will not be visible to the public. The Project is located in an area of the City of San Bernardino that is zoned for public flood control purposes.

The Waterman Spreading Grounds can be viewed from portions of SR-18, between approximately Crestline and Running Springs, where elevations exceed approximately 3,500 feet. The spreading grounds landform is part of the San Bernardino Valley landscape that can be viewed overall from the higher elevations along SR-18. The landform of the Waterman Spreading Grounds has been in existence since approximately the 1950s. The Project does not propose to alter the landform in a manner that will substantially change the existing feature or existing visual character of the San Bernardino Valley floor that has historically been viewed from the higher elevations. Therefore, none of the proposed activities would substantially degrade the existing visual character or quality of the public views.

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

No Impact. All SBCFCD maintenance activities and the Valley District water spreading and will be performed during daylight hours. Therefore, there will be no impact to day and nighttime views.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusions:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
II. AGRICULTURE AND FORESTRY RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

SUBSTANTIATION: (Check ☐ if project is located in the Important Farmlands Overlay):

Environmental Setting

The Waterman Spreading Grounds are all located in an area identified in the State Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) as Urban and Built-Up Land – land that is occupied by structures with a building density of at least 1 unit to 1.5 acres or approximately 6 structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sweater treatment and water control facilities.

The latest FMMP map for the San Bernardino South area is dated 2014 and was accessed on September 16, 2018 (https://www.conservation.ca.gov/dlrp/fmmp). Immediately north of the Basins is land identified as Other Land which consists of land that is not included in any other mapping category. Other Land includes but is not limited to brush, timber, wetland and riparian areas not suitable for livestock, poultry or aquaculture. The area immediately north of the Basins is within the San Bernardino National Forest and represents the westerly front of the San Bernardino Mountain range.

Impact Analysis

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

No Impact. The Project site is not identified within the survey limits of California Department of Conservation, Farmland Mapping and Monitoring Important Farmland Finder. No land under Williamson Act Contract occurs at the Project site, therefore no impacts will occur.

b) Conflict with existing zoning for agricultural use or a Williamson Act contract?

No Impact. None of the land on or near the Project site is currently under agricultural production, nor are any parcels under a Williamson Act contract. Therefore, no impact is anticipated from the Proposed Project.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. Forest land is defined in Public Resources Code section 12220(g) as "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." As the Project site has been identified as Urban and Built-Up Land in the FMMP, none of the proposed activities will impact the ability of the land around any of the basins to support 10 percent native tree cover of any species; thus, no forest lands will be reclassified as non-forest lands under Public Resources Code Section 12220(g).

No timberland as defined in Public Resources Code section 4526 or lands zoned Timberland Production as defined in Government Code section 51104(g) are within the Project sites. None of the maintenance activities or water spreading activities are located in areas zoned for forest land or timber production. Therefore, there will be no impacts under this criterion.

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

No Impact. As mentioned above, the disturbances associated with the Project activities would not impact the land's ability to support 10 percent native tree cover of any species, and thus no forest lands as defined in Public Resources Code Section 12220(g) would be lost. In addition, no such lands would be converted to non-forest use as a result of the project construction and operations activities. Therefore, there will be no impacts under this criterion.

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

No Impact. The Proposed Project involves the maintenance and recharge of pre-existing percolation basins, and thus does not involve other changes in the existing environment that could result in the conversion of farmland to non-agricultural use or forest land to non-forest land use. Therefore, there will be no impacts to this criterion.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusions:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

SUBSTANTIATION: (Discuss conformity with the South Coast Air Quality Management Plan, if applicable):

Environmental Setting

The Valley District proposes to conduct specific maintenance activities in 10 existing percolation basins in the Waterman Spreading Grounds to facilitate groundwater recharge. To facilitate the recharge, specific maintenance activities are required. Maintenance-would generally be conducted in two cycles, one in the late winter/early spring (3 weeks) and again in the late summer/early fall (3 weeks). As shown in **Table 4**, maintenance activities (1 through 5) are estimated to occur over a 6-week period. Maintenance activities will not overlap. Therefore, the equipment list listed in Activity 1 represents typically daily equipment.

Regulatory Setting

Health-based air quality standards are established by the United States Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) for the following criteria air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), particulate matter less than 10 microns (PM_{10}) and 2.5 microns in diameter ($PM_{2.5}$), sulfur dioxide (SO_2), and lead. The federal standards are called National Ambient Air Quality Standards (NAAQS) and the California standards are called California Ambient Air Quality Standards (CAAQS).

The USEPA classifies air basins as either attainment or non-attainment for each criteria pollutant, based on whether or not the NAAQS have been achieved. Similarly, air basins are designated as attainment or non-attainment with respect to the CAAQS.

The Project is located in San Bernardino County, within the South Coast Air Basin (SCAB). The SCAB is a sub-area of the South Coast Air Quality Management District (SCAQMD) jurisdiction that is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, encompassing all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The SCAQMD is the regulatory agency responsible for ensuring that the SCAB meets or has plans to

meet both federal and state air quality standards. The SCAB is in non-attainment status for both the Federal and State ozone, PM_{10}, and $PM_{2.5}$ standards. For the purposes of evaluating air quality impacts of a project under CEQA, the SCAQMD has established quantitative thresholds. These significance thresholds are referenced in **Table 3**.

Impact Analysis

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

Less Than Significant. The applicable air quality plan is the SCAQMD's 2016 Air Quality Management Plan (AQMP). The AQMP is a regional blueprint for achieving air quality standards and healthful air. Conflicts with the AQMP would arise if Project activities result in a substantial increase in employment or population that was not previously adopted and/or approved in a General Plan. Large population or employment increases could affect transportation control strategies, which are among the most important in the air quality plan, since transportation is a major contributor to particulates and ozone for which the South Coast Air Basin (SCAB) is not in attainment. Because the Project does not propose activities that would change population or employment levels within the air basin, the Project would not conflict with or obstruct implementation of the applicable air quality plan. The Project would implement measures to control air emissions during material handling. Therefore, the proposed Project would not conflict with the SCAQMD's AQMP.

The proposed Project would require earthmoving, material removal, and other activities such as removal of plants and/or other organics. The project's maintenance activities were screened for emission generation using SCAQMD "Air Quality Handbook" guidelines, Emission Factors for On-Road Heavy-Heavy Duty Diesel Trucks (2019) and SCAQMD Off-Road Mobile Source Emissions Factors (2019). These tables are used to generate emissions estimates for development projects. The criteria pollutants screened for included: reactive organic gases (ROG), nitrous oxides (NO_x), carbon monoxide (CO), and particulates (PM_{10} and $PM_{2.5}$). Two of these, ROG and NO_x, are ozone precursors.

Project emissions are mainly resulting from the Project maintenance activities and are considered short-term, temporary emissions due to the relative infrequency of such maintenance activities. The emissions were calculated based on the estimated construction parameters listed below. The resulting emission levels as compared to SCAQMD thresholds are shown in **Table 3**. The typical daily equipment assumptions included: 2 Dozers, 2 Water Trucks; 1 Loader; 1 Scraper; and Export Material (Refer to **Table 2** for truck trip assumptions)

Table 3
Maintenance Emissions (Pounds per Day)

Source	**ROG**	**NO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Dozer	3.6	27.1	13.4	1.1	1.1
Water Truck	1.0	6.4	5.6	0.6	0.6
Loader	1.1	8.0	4.5	0.2	0.2
Scraper	1.6	11.8	6.5	0.5	0.5
Export Material	0.5	6.1	2.5	0.5	0.5
On-Site Dust	0.0	0.0	0.0	4.3	4.3
Totals (lbs/day)	7.8	59.4	32.5	7.2	7.2
SCAQMD Threshold	75	100	550	150	55
Significant	**No**	**No**	**No**	**No**	**No**

Source: SCAQMD Off-Road Mobile Source Emissions Factors (2019)

As shown in **Table 3**, project emissions would not exceed SCAQMD thresholds. Further, the Project will not result in any long-term impacts from emissions associated with Project operations. Therefore, less than significant impacts are anticipated.

Compliance with SCAQMD Rules 402 and 403

Although the Proposed Project does not exceed SCAQMD thresholds during construction activities, the SBCFCD is required to comply with all applicable SCAQMD rules and regulations as the SCAB is in non-attainment status for ozone and suspended particulates (PM_{10} and $PM_{2.5}$). The project shall comply with, Rules 402 -Nuisance, and 403 - Fugitive Dust, which require the implementation of Best Available Control Measures (BACM) for each fugitive dust source; and the AQMP, which identifies Best Available Control Technologies (BACT) for area sources and point sources, respectively. This would include, but not be limited to the following BACMs and BACTs:

Exhaust emissions from construction vehicles and equipment and fugitive dust generated by equipment traveling over exposed surfaces would increase NO_X and PM_{10} levels in the area. Although the Proposed Project does not exceed SCAQMD thresholds during construction, the SBCFCD and/or the Valley District will be required to implement the following conditions as required by SCAQMD**:**

1. To reduce emissions, all equipment used in earthwork must be tuned and maintained to the manufacturer's specification to maximize efficient burning of vehicle fuel.
2. The project proponent shall ensure that construction personnel are informed of ride sharing and transit opportunities.
3. The operator shall maintain and effectively utilize and schedule on-site equipment in order to minimize exhaust emissions from truck idling.
4. The operator shall comply with all existing and future CARB and SCAQMD regulations related to diesel-fueled trucks, which may include among others: (1) meeting more stringent emission standards; (2) retrofitting existing engines with particulate traps; (3) use of low sulfur fuel; and (4) use of alternative fuels or equipment.

Implementation of the Project does not exceed the SCAQMD significance thresholds for construction activities, and there would be no ongoing operational emissions because long-term impacts from Project emissions are not anticipated. Although there would be emissions from vehicles and equipment during construction, the emissions would be temporary, of short duration, and below the established thresholds. In addition, Project emissions of particulate matter would be reduced by implementing BACMs as outlined in SCAQMD dust control Rules 402 - Nuisance and 403 - Fugitive Dust. The Project would not generate long-term emissions of criteria pollutants in excess of thresholds and would therefore not cause a cumulatively considerable increase in criteria pollutants. A less than significant impact is identified, and no mitigation measures are proposed.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less Than Significant. There will be no long-term impacts from the emissions resulting from implementation of the Project. However, as described above the Project would result in temporary air-quality emissions consisting of ROG and NO_x from the operation of gas and diesel-powered equipment, as well as fugitive dust resulting from earth moving activities, including the removal and transportation of sediments. **Table 3** shows that the project emissions would be below levels of significance, therefore the Proposed Project would not cumulatively generate a considerable net increase of any criteria pollutant nor violate any air quality standard. Less than significant impact is anticipated, and no mitigation measures are proposed.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant. As shown in **Table 3**, impacts are not anticipated to exceed SCAQMD thresholds. With adherence to SCAQMD Rules 402 and 403, emissions of dust or vehicle exhaust fumes associated with earthwork activities would be short-term and would not expose sensitive receptors to substantial pollutant concentrations as emissions would dissipate. It is anticipated that maintenance activities would be short-term in nature, less than 6 weeks over a one-year period. Refer to **Table 2** for project assumptions.

The SBCFCD will implement feasible BACMs and BACTs to reduce construction-related air quality impacts. With the implementation of those best practices, potential impacts to sensitive receptors would be expected to be less than significant, and no mitigation measures are proposed.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant. Project construction equipment would generate odors from the combustion of fuels and any short-term stockpiling of removed organic materials. The determination of an impact from Project-generated odors is dependent on a number of variables including:

- Nature of the odor source;
- Frequency of odor generation (e.g., daily, seasonal, activity-specific);
- Intensity of the odor (e.g., concentration);
- Wind direction (e.g., upwind or downwind); and
- Sensitivity of the receptor.

Impacts associated with odors would be temporary during Project construction activities. It is also anticipated that any short-term odors generated by construction equipment would dissipate. Due to the temporary nature of Project activities (approximately 22 days, twice per year) and the standard construction requirements imposed on construction activities, impacts associated with construction-generated odors would be less than significant and no mitigation measures are proposed.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusions:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		X		
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		X		
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

SUBSTANTIATION: (☐ Check if project is located in the Biological Resources Overlay or Contains habitat for any species listed in the California Natural Diversity Database).

A Biological Resources Assessment/Jurisdictional Delineation was prepared by Jericho Systems, Inc. in November 2018 (Appendix A). The purpose of the Biological Resources Assessment was to provide sufficient baseline information to the Valley District, and, if required, to federal and state regulatory agencies, including the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW), to determine if impacts will occur on special-status plant and wildlife species and to identify mitigation measures to offset those impacts. Particular attention was given to the suitability of the habitat to support San Bernardino kangaroo rat (*Dipodomys merriami parvus*), southwestern willow flycatcher (*Empidonax traillii extimus*), California gnatcatcher (*Polioptila californica*), and thread-leaved brodiaea (*Brodiaea filifolia*). It should be noted that the project site is located in proximity to designated Critical Habitat for San Bernardino kangaroo rat, southwestern willow flycatcher, and thread-leaved brodiaea, but is not located within federally designated Critical Habitat. For California

gnatcatcher, the Project site is not in proximity of a designated Critical Habitat, but the habitat onsite has the potential to be a suitable habitat to support the gnatcatchers.

The purpose of the jurisdictional delineation (JD) is to determine the extent of state and/or federal jurisdictional waters that are subject to Sections 404 and 401 of the federal Clean Water Act (CWA) regulated by the USACE and the Regional Water Quality Control Board (RWQCB) respectively; and/or Section 1602 of the California Fish and Game Code (FCG) administered by the CDFW.

Regulatory Setting

Special-status species are native species that have been afforded special legal or management protection because of concern for their continued existence. There are several categories of protection at both federal and state levels, depending on the magnitude of threat to the continued existence and existing knowledge of population levels.

Federal Endangered Species Act

The U.S. Fish and Wildlife Service (USFWS) administers the federal Endangered Species Act of 1973 (ESA). The ESA provides a legal mechanism for listing species as either threatened or endangered, and a process of protection for those species listed. Section 9 of the ESA prohibits "take" of threatened or endangered species. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. "Take" can include adverse modification of habitats used by a threatened or endangered species during any portion of its life history. Under the regulations of the ESA, the USFWS may authorize "take" when it is incidental to, but not the purpose of, an otherwise lawful act. Take authorization can be obtained under Section 7 or Section 10 of the ESA.

California Endangered Species Act

The CDFW administers the California Endangered Species Act (CESA). The State of California considers an endangered species one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is one present in such small numbers throughout its range that it is likely to become an endangered species soon, in the absence of special protection or management. A rare species is one present in such small numbers throughout its range that it may become endangered if its present environment worsens. Rare species applies to California native plants. Further, all raptors and their nests are protected under Section 3503.5 of the California FGC. Species that are California fully protected include those protected by special legislation for various reasons, such as the California condor. Species of Special Concern (SSC) is an informal designation used by CDFW for some declining wildlife species that are not proposed for listing as threatened or endangered. This designation does not provide legal protection, but signifies that these species are recognized as sensitive by CDFW.

The Migratory Bird Treaty Act

Nesting birds are protected under the federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C 703-711). The MBTA provides protection for nesting birds that are both residents and migrants whether or not they are considered sensitive by resource agencies. The MBTA prohibits take of nearly all birds. The MBTA makes it unlawful to kill or possess migratory birds, including feathers, other parts, nests, and eggs. The direct injury or death of a migratory bird, due to construction activities or other construction-related disturbance that causes nest abandonment, nestling abandonment, or forced fledging would be considered take under federal law. The USFWS, in coordination with the CDFW, administers the MBTA.

Clean Water Act

The Clean Water Act (CWA) is the principal federal law that governs pollution in the nation's lakes, rivers, and coastal waters. Originally enacted in 1972 as a series of amendments to the Federal Water Pollution Control Act of 1948, the Act was last amended in 1987. The overriding purpose of the CWA is to "restore and maintain the chemical, physical and biological integrity of the nation's waters." The USACE administers the federal sections of the CWA. Under Section 404 of the CWA, the USACE has the primary federal responsibility for administering regulations that concern the discharge of dredged or fill material into Waters of the U.S., including wetlands which are defined as 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". In California, the State Water Resources Control Board (SWRCB) and its nine RWQCBs are the designated authorities to administer Section 401 of the CWA. This Project is within the jurisdiction of the Santa Ana RWQCB.

Porter-Cologne Water Quality Control Act (Porter-Cologne)

The Porter-Cologne Water Quality Control Act (Porter-Cologne) is the principal State law that governs water quality protection efforts in California. Porter-Cologne establishes the SWRCB and each of the nine RWQCBs as the principal state agencies for coordinating and controlling water quality in California. The RWQCB's regulatory jurisdiction is pursuant to Section 401 of the Federal CWA. The RWQCB typically regulates discharges of dredged or fill material into Waters of the U.S. However, they also have regulatory authority over waste discharges into Waters of the State, which may be isolated, under Porter-Cologne. In the absence of a nexus with USACE, the RWQCB requires the submittal of a Waste Discharge Requirement (WDR) application. The RWQCB's role is to ensure that disturbances in the stream channel do not cause water quality degradation.

California Fish and Game Code (FGC)

Sections 1600 to 1616 of the California FGC require any person, state, or local government agency or public utility to notify the CDFW before beginning any activity that will substantially modify a river, stream, or lake. If it is determined that the activity could substantially adversely impact an existing fish and wildlife resource, then a Lake or Streambed Alteration Agreement is required. Like the USACE and RWQCB, CDFW also regulates discharges of dredged or fill material. The regulatory jurisdiction of CDFW is much broader than the USACE or RWQCB jurisdictions. CDFW regulates all activities that alter streams and lakes and their associated habitats. The CDFW, through provisions of the FGC Sections 1601-1603 is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. The CDFW typically extends the limits of their jurisdiction laterally beyond the water's edge to the outer dripline of the associated riparian vegetation. CDFW regulates wetland areas only to the extent that those wetlands are a part of a river, stream, or lake as defined by CDFW.

Environmental Setting

San Bernardino is subject to both seasonal and annual variations in temperature and precipitation. Average annual maximum temperatures typically peak at 96 degrees Fahrenheit (°F) in July and August and fall to an average annual minimum temperature of 41°F in December. Average annual precipitation is greatest from January through March and reaches a peak in February (3.7 inches). Precipitation is lowest in the month of July (0.04 inches). Annual precipitation averages 16.43 inches.

The Waterman Spreading Grounds consist of a series of basins mostly covered in low-growing native and non-native vegetation communities with small patches of riparian vegetation (i.e., willow scrub and mule fat scrub). Vegetation in the basins and surrounding areas is highly variable based on position in the basins (e.g., basin bottom, side slope) and ongoing disturbance regimes from maintenance activities and filling of the basins. These basins have been subject to anthropogenic routine anthropogenic disturbances from maintenance since the 1970s. It should

be noted that vegetation was removed in the basins in 2017 under an emergency permit. The majority of the plant communities described in the 2017 emergency permits continue to persist on-site, and the vegetation removed in 2017 was not observed during the 2018 field investigation.

Soils on site are comprised of Riverwash-Soboba families association (2-15% slopes), Soboba stony loamy sand (2-9% slopes), and Tujunga gravelly loamy sand (0-9% slopes). These soils are excessively drained to somewhat excessively drained soils that are formed in alluvium from granitic sources.

Summary of Biological Resources and Jurisdictional Delineation

Six (6) plant communities were observed within the boundaries of the project site during the habitat assessment: California Sagebrush-Buckwheat Scrub, Sagebrush-Scalebroom Scrub, Willow Scrub, Mulefat Scrub, Non-Native Grassland, and Eucalyptus Stand (Figure 6). In addition, two (2) land cover types were mapped: bare ground and open water. These plant communities and land cover types for each basin are described in further detail below. The Proposed Project impacts to these communities are identified in **Table 4**.

Table 4
Plant Communities Present in Each Basin

Facility	**California Sagebrush-Buckwheat Scrub** (acres)	**Sagebrush-Scalebroom Scrub** (acres)	**Willow Scrub** (acres)	**Mulefat Scrub** (acres)	**Non-Native Grassland** (acres)	**Eucalyptus Stand** (acres)	**Open Water** (acres)	**Bare Ground** (acres)
Basin 2A	1.42	–	–	0.48	–	–	2.94	1.12
Basin 2E and 2W	2.71	–	0.14	3.21	1.83	–	6.83	4.68
Basin 3A	1.95	–	–	0.20	–	1.2	1.74	0.82
Basin 3B	0.90	–	–	0.16	–	–	2.58	0.97
Basin 3C	2.26	–	–	0.91	4.44	–		0.69
Basin 3D	0.72	–	–	0.22		–	1.75	0.48
Basin 3E and 3W	12.49	–	0.18	2.61	3.94	–	4.64	4.64
Basin 4	–	10.07	–	–	3.30	0.98	–	0.16
Stockpile	–	–	–	–	–	–	–	0.96
Totals	**22.45**	**10.07**	**0.32***	**7.79**	**13.51**	**2.18**	**20.48**	**14.52**

**Willow scrub primarily exists around the inlets/outlets and will be cleared as necessary to maintain flow.*

Special-Status Wildlife Species

Least Bell's Vireo

Basin 1 of the Waterman Spreading Grounds, which is not a part of the Valley District's Proposed Project, has the potential to provide suitable nesting opportunities for the least Bell's vireo (LBV), listed as endangered by both the Federal Endangered Species Act (ESA) and California ESA (CESA). The remaining basins described as part of the Valley District's Proposed Project have the potential to provide suitable foraging habitat for this species, but the habitat in the basins is not expected to provide suitable nesting opportunities.

California Gnatcatcher

The Waterman Spreading Grounds is located within the upper limit of the elevation range for this species, and since the Waterman Spreading Grounds is isolated from known occupied habitat and subject to routine anthropogenic disturbances, it was determined that coastal California gnatcatcher has a low potential to occur within the boundaries of the project site. No focused surveys for California gnatcatcher are recommended.

San Bernardino Kangaroo Rat

The San Bernardino Kangaroo Rat (SBKR), federally listed as endangered, are typically confined to pioneer and intermediate Riversidean Alluvial Fan Sage Scrub (RAFSS) habitats, with sandy soils deposited by fluvial (water) rather than Aeolian (wind) processes. Burrows are typically dug in loose soil, usually near or beneath shrubs. The closest observation for SBKR was documented in a 1997 record approximately 1.25 miles east of the facility corridor. A focused trapping study for SBKR was conducted in August 2015 in the Waterman Spreading Grounds (Jericho, 2015). Trapping results were negative for this species.

Based on the 2018 field survey, the Project site does have some alluvial scrub habitat but does not support undisturbed RAFSS habitat and the scrub is no longer exposed to hydrological processes needed to maintain suitable SBKR habitat. Therefore, SBKR are not expected to occur within the basins where potentially suitable habitat is present due to the isolated nature of the habitat (not connected to a source population), suboptimal quality, small patch size, and the historical disturbance regime (since 1940). The 2018 survey concluded that focused surveys were not necessary.

Nesting Birds

The project site contains sufficient vegetation on site to provide suitable nesting bird habitat. No nesting birds were observed on site at the time of the 2018 survey.

Special-Status Plant Species

The basins within the Waterman Spreading Grounds have been subject to a variety of anthropogenic disturbances from maintenance activities and isolated from native plant populations within East Twin Creek. These disturbances have reduced the suitability of the habitat for special-status plant species known to occur in the general local vicinity of the Project site. Based on habitat requirements for specific special-status plant species and the availability and quality of habitats needed by each species, it was determined that none of the special-status plant species known to occur in the general vicinity of the project site are expected to occur. Focused surveys are not recommended.

Jurisdictional Delineation

Waters of the U.S.

The USACE has regulatory authority over the Waters of the U.S., which include wetlands pursuant to Section 404 of the CWA. Because the basins found on the project site have been identified as Waters of the US, a 404 permit will be required from the USACE and a 401 permit will be required from the RWQCB, Santa Ana River Region. Based on the proposed maintenance plan, approximately 30.88 acres of impacts will occur to USACE and RWQCB jurisdictional waters consisting primarily of the basin bottoms of open water and non-native grasslands, as identified in **Table 5**.

Riparian Habitat

Riparian habitat is defined as areas adjacent to the banks of rivers, streams, or other waterways that contain vegetation that is distinct from upland species. Riparian habitats are protected by CDFW under FGC sections 1600-1604. Because the basins found on the project site support areas identified as CDFW Jurisdiction, a Lake and Streambed Alteration Agreement (Section 1602) permit will be required prior to any ground disturbance within the identified areas. Based on the proposed maintenance plan, approximately 73.69 acres of impacts will occur to areas within CDFW jurisdiction, as identified in **Table 5**.

Table 5
Summary of Jurisdictional Impacts

Facility	**California Sagebrush Buckwheat scrub** (acres)	**Sagebrush scalebroom scrub** (acres)	**Willow Scrub** (acres)	**Mulefat Scrub** (acres)	**Eucalyptus Stand (acres)**	**Non-Native Grassland** (acres)	**Open Water/ Wetland** (acres)
	CDFW Streambed & Associated Vegetation					USACE/RWQCB/CDFW Jurisdiction	
Basin 2A	1.42	–	–	0.48	–	–	2.94
Basin 2E and 2W	2.71	–	0.14	3.21	–	–	6.83
Basin 3A	1.95	–	–	0.20	–	–	1.74
Basin 3B	0.90	–	–	0.16	1.2	–	2.58
Basin 3C	2.26	–	–	0.91	–	4.44	
Basin 3D	0.72	–	–	0.22	–		1.75
Basin 3E and 3W	12.49	–	0.18	2.61	–	2.66	4.64
Basin 4	–	10.07	–	–	0.98	3.30	–
Totals	**22.45**	**10.07**	**0.32**	**7.79**	**2.18**	**10.40**	**20.48**

Impact Analysis

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

Less Than Significant With Mitigation Incorporated. As discussed above, based on the 2018 Biological Resources Assessment, only the LBV has the potential to be present within the Waterman Spreading Grounds, specifically, within Basin 1, located at the northwestern portion of the spreading grounds and which is not a part of this Project. Noise and human presence from construction and maintenance activities could result in short-term, temporary disturbances of LBV potentially nesting or foraging in the Project area.

To ensure that impacts to the LBV are less than significant, **Mitigation Measure BIO-1** is required. Mitigation Measure BIO-1 would ensure that prior to any site activity, a pre-construction nesting bird clearance survey shall be conducted to document the presence/absence of LBV on the project site. If LBV are documented in the area, appropriate avoidance buffers will be installed around the occupied habitat to ensure no indirect impacts to LBV occur. This impact is less than significant with mitigation incorporated.

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

Less Than Significant With Mitigation Incorporated. All project-related impacts are permanent in nature due to the repeated clearing activities that will intentionally prevent vegetation from reestablishing in the basin bottoms or on the downstream slopes. This will result in a functionally permanent impact to the ecological communities in and adjacent to the basins. The purpose of the maintenance is to prevent vector propagation and return and maintain the design capacity and function of the existing facility.

In order to offset the loss of habitat and existing ecological function within the Waterman Spreading Grounds, the Valley District will mitigate these impacts at an offsite location either through a Permitee-Responsible restoration project or purchase of credits at an approved mitigation bank or in-lieu-fee program. The total acres of offsite restoration/enhancement or credits purchased will be applied to all regulatory permit requirements from the CDFW, Corps and RWQCB.

Impacts to Corps and RWQCB jurisdictions, which are included within the CDFW jurisdiction, total 30.88 acres. Impacts will occur to an additional 42.81 of CDFW jurisdictional areas, which include the streambed and associated riparian communities within the basins and on the adjacent slopes. In total, the Project will impact 73.69 acres of jurisdictional waters of the U.S. and State. Impacts that resulted from the 2017 emergency work totaled 1.77 acres and are located entirely within the described footprint above which is being mitigated for permanent loss as proposed below (**Table 6**).

Based on the plant communities potentially impacted as identified in **Table 5**, approximately 0.29 acres of willow scrub and 7.79 acres of mulefat scrub, totaling 8.11 total associated riparian, will be impacted by the Project maintenance activities. Approximately 22.45 acres of buckwheat scrub and 10.07 scalebroom scrub, of various condition, will be impacted by clearing of the basin slopes. The scalebroom scrub is concentrated in Basin 4 at the lower end of the Spreading Grounds. The buckwheat scrub, however, is located primarily on the upstream slopes of the basins which will only have access paths cleared for vector control. The buckwheat shrub vegetation is patchy and degraded due to past maintenance activities and isolation from the surrounding alluvial fan.

In addition to the slope and edge vegetation being removed there will be a loss of ecological value for approximately 20.48 acres of “open water”. Despite the fact that open water will still be present in between maintenance events, the impacts to open water will be mitigated based on the impacts to the ecological value it currently provides for wildlife habitat. At present, diverse and abundant vegetation is present within the basins and on the edges of the basins. The combination of the vegetation and open water has created semi-permanent wetland habitat. The permanent removal of the vegetation, as proposed by this project, will remove the ecological function currently associated with the open water and the habitat value will be lost to resident and migrating species. Therefore, it is appropriate that the Valley District will mitigate for the loss of open water for its seasonal or semi-permanent wetland habitat value in addition to the riparian vegetation.

The Valley District will prepare a Notification of Streambed Alteration to the CDFW that identifies the impact jurisdictional streambed and these plant communities. Mitigation Measure BIO-2 will be implemented to mitigate for the loss of these plant communities, and the mitigation will be identified in the Notification to CDFW to off-set the loss of CDFW resources. **Mitigation Measure BIO-2** is intended to also satisfy the mitigation that will be required as part of the issuance of CDFW’s Lake and Streambed Alteration Agreement, the USACE NW-3 permit, and the Regional Board 401 Water Quality Certification. Mitigation Measures are located at the end of this section.

Table 6
Proposed Mitigation for Loss of CDFW, USACE, and RWQCB Jurisdictional Resources

Type	Impact Acres	Mitigation Acres
Streambed/Open Water/Wetland	20.48	21.0
Associated riparian (willow/mulefat scrub)	7.54	19.0
Scalebroom Scrub	10.07	20.0
Buckwheat scrub (degraded and isolated)	22.45	0.0
Eucalyptus	2.18	0.0
Non-native Grasses	10.40	0.0

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less Than Significant. Based on the 2018 survey results, there were no federally protected wetlands as defined by Section 404 of the Clean Water Act located within the Project area.

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

Less Than Significant With Mitigation Incorporated. None of the Project activities will prevent the movement of wildlife. However, wildlife may temporarily avoid the area during SBCFCD maintenance activities due to the activities of heavy equipment. However, this will be confined to small areas at a time in each basin and temporary in nature. There are open corridors adjacent to the Waterman Spreading Grounds that would offer wildlife unimpeded movement through the area without disturbance. The temporary activities proposed are not anticipated to result in significant impacts. None of the basins represent a corridor or a nursery site for fish or aquatic species.

The Proposed Project is designed to occur outside of nesting bird season, typically February 1 to September 15. In the event the project activities would occur within nesting bird season, **Mitigation Measure BIO-3** will be implemented to reduce impacts to nesting birds.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less Than Significant. There is currently a stand of approximately 30 eucalyptus trees, a non-native species that exists within Basin 4. These trees are proposed to remain, but may be removed during the life of the project if it is determined that the trees interfere with percolation or slope integrity or if requested by a regulatory agency. The trees are not protected by any local policy. Therefore, there is a less than significant impact.

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

No Impact. There are no adopted Habitat Conservation Plans or Natural Community Conservation Plans or other approved local, regional or state habitat conservation plans. Therefore, there are no impacts.

Mitigation Measures:

BIO-1 Prior to the initiation of maintenance activities, a pre-construction nesting bird clearance survey shall be conducted to document the presence/absence of LBV on the project site. If LBV are documented within the Environmentally Sensitive Area appropriate avoidance buffers, as determined by a qualified biologist and approved by CDFW, shall be installed around the occupied habitat to ensure no indirect impacts to LBV occur.

BIO-2

Option 1 - Off-site Permittee Responsible Mitigation

The Valley District will create, rehabilitate, and/or enhance a total of 40 acres of wetland/riparian/streambed habitat which will include freshwater marsh and willow scrub habitat similar to the pre-2017 emergency Project conditions in the Waterman Spreading Grounds. The Valley District will also rehabilitate and/or enhance 20 acres of alluvial fan scalebroom scrub habitat similar to that which will be removed by the proposed Project.

Prior to initiation of the Project activities, a complete description of the proposed mitigation project(s) will be presented to the regulatory permitting agencies (CDFW, RWQCB, and USACE) for review and approval. The mitigation proposal will identify the current condition of habitat, proposed methods of restoration, goals and objectives for the restored areas, and will include measurable success criteria based on the suggestions and requirements of the regulatory agencies. The Valley District will fund the preparation of Habitat Mitigation and Monitoring Plans and an Adaptive Monitoring Management Plans that will include Annual Reports presenting the previous year's monitoring results and recommended future management activities in order to sustain or surpass the habitat quality of the mitigation site in perpetuity. If desired by the permitting agencies, the Valley District will host an annual work-plan meeting attended by technical experts and staff from the permitting agencies in order to consider the most appropriate adaptive management activities to implement in the following year. The Valley District will secure long-term conservation of the restoration site and establish financial assurances approved by the permitting agencies. This mitigation measure is intended to satisfy the Valley District's CEQA requirements in addition to all mitigation requirements associated with the issuance of a CDFW Lakes and Streams Alteration Agreement, the U.S. Army Corps of Engineers Nationwide-3 Permit, and the Regional Water Quality Control Board 401 Water Quality Certification. Specific requirements associated with this mitigation option will be included in the above mentioned permits.

Option 2 - Purchase Credits from Mitigation Bank or Approved In-Lieu-Fee Program

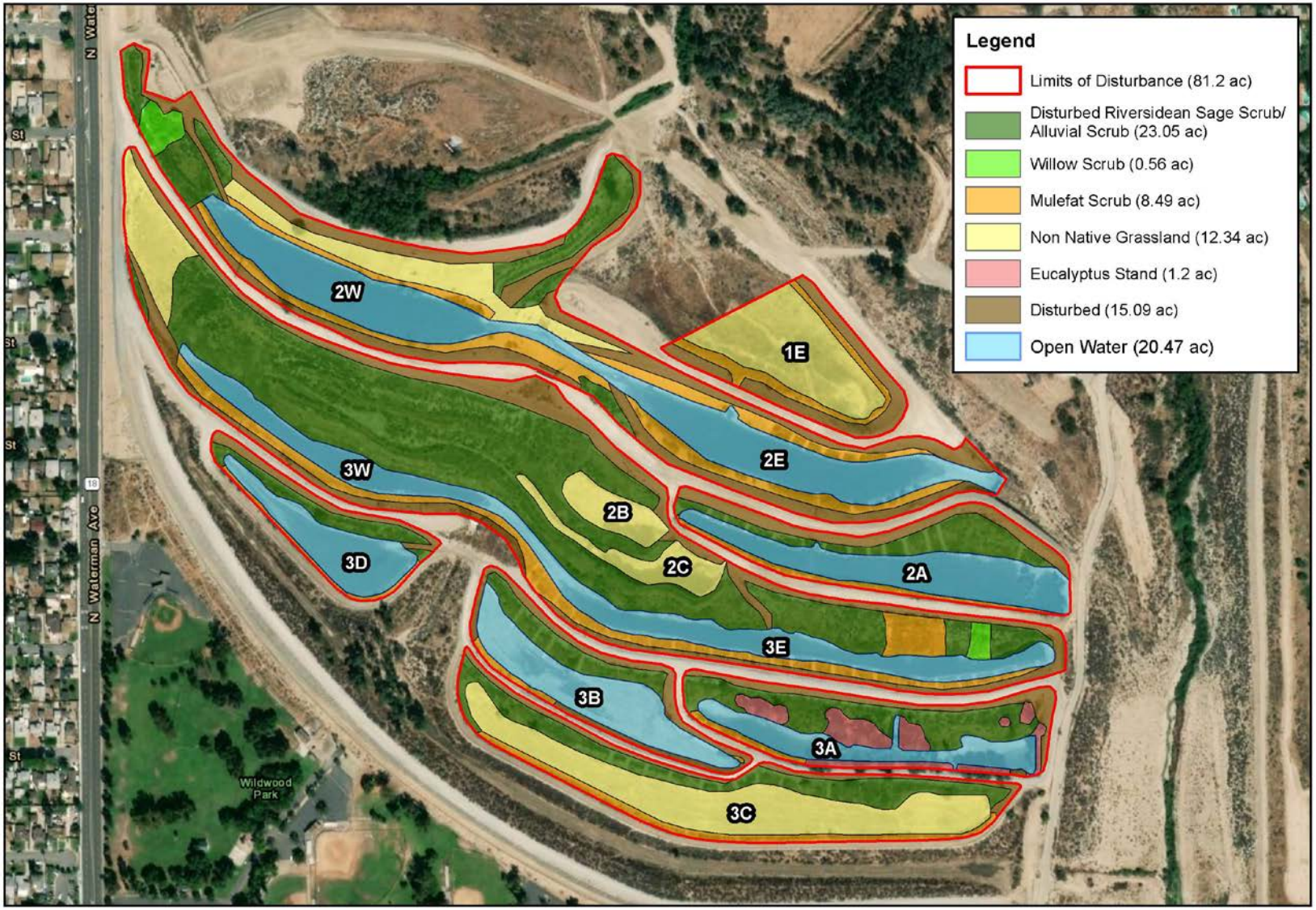
The Valley District will purchase 40 wetland/riparian rehabilitation and streambed enhancement credits and 20 credits of alluvial fan habitat credits from approved mitigation bank(s) or In-lieu-fee (ILF) program. The Valley District will obtain approval in the choice of mitigation bank or ILF program prior to the credit purchase and provide proof of purchase to the regulatory agencies.

BIO-3 Bird nesting season generally extends from approximately February 1 through September 15 in southern California and specifically, April 15 through August 31 for migratory passerine birds. To avoid impacts to nesting birds (common and special status) during the nesting season, a qualified Avian Biologist will conduct pre-construction Nesting Bird Surveys (NBS) prior

to project-related disturbance to nestable vegetation to identify any active nests. A nest shall be defined as active if it contains eggs or young, or potentially contains eggs or young if presence cannot be reasonably be determined. An inactive nest is defined as a nest that has been abandoned by the adult bird or once fledglings are no longer dependent on the nest site or parental care. If no active nests are found, no further action will be required. If an active nest is found, the biologist will set appropriate no-work buffers around the nest which will be based upon the nesting species, its sensitivity to disturbance, nesting stage and expected types, intensity and duration of disturbance. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved no-work buffer zone shall be clearly marked in the field, within which no disturbance activity shall commence until the qualified biologist has determined the young birds have successfully fledged and the nest is inactive.

Impact Conclusions:

No significant adverse effects are anticipated with the inclusion of the above mitigation measures.



JERICHO SYSTEMS INCORPORATED

0 500 1,000 2,000 Feet

Source: ESRI Aerial Imagery, San Bernardino County

WATERMAN BASIN SPREADING GROUNDS
BIOLOGICAL RESOURCES ASSESSMENT

Vegetation

Figure 6

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		

SUBSTANTIATION: (Check if project is located in the Cultural ☐ or Paleontologic ☐ Resources overlays or cite results of cultural resource review)

Environmental Setting

Regional History

The San Bernardino Valley, along with the rest of Alta California, was claimed by Spain in the late 18th century, and the first European explorers traveled through the area as early as 1772, three years after the beginning of Spanish colonization. For nearly four decades afterwards, however, the arid inland valley received little attention from the European colonizers, who concentrated their efforts along the Pacific coast. Following the establishment of Mission San Gabriel in 1771, the San Bernardino Valley became a part of the vast land holdings of that mission. The name "San Bernardino" was bestowed on the region at least by 1819, when the Asistencia and an associated mission rancho, both bearing that name, were established in the eastern end of the valley.

Mexico gained independence from Spain in 1821 and the new authorities in Alta California began secularization of the mission system in 1834. During the next 12 years, mission lands throughout Alta California were surrendered to the Mexican government and subsequently granted to various prominent citizens of the province. In 1842, the former mission rancho of San Bernardino was granted to the Lugos, a prominent Los Angeles family, who were engaged in cattle-raising on the more than 35,000-acre domain. After the American annexation of Alta California in 1848, the Lugos sold the rancho in 1851 to a group of Mormon settlers sent by church leaders in Utah. The group promptly established a fortified settlement and named it Fort San Bernardino.

The early growth of the Mormon colony was promising. It became county seat of the newly created San Bernardino County in 1853, and incorporated as a city the next year. In 1857, however, half of the population was recalled to Utah by Mormon leaders, and the budding town was disincorporated. In the 1880s, spurred by the selection of San Bernardino as the Atchison, Topeka and Santa Fe Railway's regional headquarters, the rise of the profitable citrus industry, and a general land boom that swept through much of southern California, San Bernardino gradually recovered and reincorporated in 1886, embarking on a period of steady growth that lasted well into the 20th century.

During World War II, the growth of San Bernardino was further boosted when a U.S. Army Air Corps pilot training base was established in the southeastern portion of the city in 1941. Renamed Norton Air Force Base in 1950, over the next 45 years this major military installation proved to be an important driving force in the local economy. In 1994, however, the base was officially closed, and its 2,400-acre site was transferred to local civilian authorities for redevelopment in 1999, ultimately becoming today's San Bernardino International Airport.

The original townsite of San Bernardino, as recorded in 1854, was bounded by present-day Tenth Street, Sierra Way, Rialto Avenue, and I Street. By 1907, the urbanized area of the city had expanded to 16th Street on the north, Waterman Avenue on the east, Mill Street on the south, and beyond Mount Vernon Avenue on the west. The project area lies well to the west of the original townsite and, due to its location in the Lytle Creek flood plain, was developed later and more slowly in the past than the urban core area. In more recent times, however, commercial and retail development along Foothill Boulevard has increased, lending the historic avenue in the vicinity a more contemporary visage.

Project Vicinity History

The historical background review was conducted on the basis of published literature in local and regional history, U.S. General Land Office (GLO) land survey plat maps dated 1878, U.S. Geological Survey (USGS) topographic maps dated 1901-1996, and aerial photographs taken in 1938-2018 (CRM Tech, 2018).

The historic maps demonstrate a typical rural settlement pattern in the project vicinity in the 1890s, featuring widely scattered buildings and a crisscrossing web of winding roads (CRM Tech, 2018). One of the buildings, probably a farmstead, was located in the central portion of the project area, and three of the roads crossed the eastern half of the property before merging into one and leading to the Arrowhead Springs Hotel (CRM Tech, 2018). By the 1930s, in contrast, the project area no longer contained any building or major roads (CRM Tech, 2018). Instead, the first few of the percolation basins appeared to have been built in the southeastern end of the property (CRM Tech, 2018).

By the 1950s, all of the basins in the project area today have been completed (CRM Tech, 2018). Since then, no substantial changes in land use have occurred within the project boundaries (CRM Tech, 2018). The basins appear to have been periodically regraded over the years, but without any major reconfiguration. To the west of the project area, it is interesting to note that the original alignment of Rim of the World Drive (Site 36-007049) in fact did not extend into the immediate vicinity of the project area but followed the course of present-day Sierra Way further to the west. The segment of Waterman Avenue adjacent to the project area, according to the historic maps and aerial images, did not exist until 1966-1967 (CRM Tech, 2018).

Cultural Resources Study

A cultural resource records search was conducted in July 2018 by CRM Tech (CRM Tech, September 14, 2018). There have been no studies of the Project site; however, a linear survey along the Project site's property boundary was conducted in 2015, with negative results. Outside the Project site, but within a 1-mile radius, records identified 14 other studies for various tracts of land and linear features, resulting in 22 historical/archaeological sites and five isolates (i.e., localities with fewer than three artifacts). The historic Arrowhead Springs Hotel and a Serrano campsite near a cluster of hot springs exist approximately 1 mile northeast of the Project site.

Native American Records Search

The Sacred Lands File search request was sent by CRM Tech to the NAHC on July 13, 2018. In response, the NAHC states in a letter dated July 16, 2018 that unspecified Native American cultural sites have been identified in the vicinity of the project area and refers further inquiries regarding these sites to the Chemehuevi Indian Tribe, the San Manuel Band of Mission Indians, and Lynn Valbuena, Chairwoman of the San Manuel Band. In addition, the NAHC provided a list of 20 tribal representatives in the region for further consultation. The NAHC's reply is attached to this report to facilitate further government-to-government consultation with the Native American tribes by the Valley District. The Valley District completed consultation with tribal entities in December 2018. Please see above for response to question 13 regarding consultation with traditionally and culturally affiliated tribes with

the project area pursuant to Public Rresources Code section 21080.3.1 in Environmental Checklist Form regarding details of the consultation.

Paleontological Resources

The paleontological resources records search service for this study was provided by the Regional Paleontological Locality Inventory at the San Bernardino County Museum (SBCM) in Redlands on August 7, 2018. The records search results identified no paleontological localities within the project area or a one-mile radius (Gilbert 2018:2; see Attachment B). The nearest paleontological locality, which produced a mammoth specimen, was discovered more than three miles to the southwest (*ibid.*).

The paleontological resources records search indicate that the project area lies upon late Holocene-aged very young wash deposits and late Holocene to late Pleistocene young alluvial fan deposits (Gilbert 2018:1). The Holocene-aged sediments have a low potential to contain significant, nonrenewable paleontological resources, but some of the late Pleistocene-aged alluvial-fan deposits may have a high paleontological sensitivity, depending upon the lithology (*ibid.*:2). According to the SBCM:

> *Elsewhere in inland southern California, such Pleistocene-aged sediments have high potential to contain significant fossil resources. Such sediments, often found at depths of ~10' below the existing ground surface, have been reported to yield significant fossils of plants and extinct Ice Age animals. Fossils recovered from these Pleistocene-aged sediments represent extinct taxa including mammoths, mastodons, ground sloths, dire wolves, short-faced bears, sabre-toothed cats, large and small horses, large and small camels, and bison. For this reason, Pleistocene-aged sediments in this region have demonstrated high potential to yield significant nonrenewable paleontological resources subject to adverse impact during development related excavation, and are therefore assigned high paleontological sensitivity.*

The results of the paleontological records search suggest that the surface deposits of Holocene sediments in the project area is low in sensitivity for significant nonrenewable paleontological resources, but the sensitivity is high in the Pleistocene sediments occurring subsurface as well as on the surface as outcrops.

<u>Impact Analysis</u>

a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

Less Than Significant with Mitigation Incorporated. No historical resources have been identified within or adjacent to the project area, but the project area has not been surveyed systematically in the past. Because the facility appears have begun in the 1930s, completed in the 1960s, and maintained in its current configuration since that time, is it unlikely that any historical resource will be uncovered in the course of the Proposed Project. Additionally, the routine maintenance proposed consists of removal of sediment deposited by the most recent storm events between maintenance cycles. However, to accommodate a potentially unanticipated find, **Mitigation Measures CUL-1 and CUL-2** will be implemented, which will minimize the potential for the Proposed Project to adversely affect unique cultural or historical resources. Therefore, this impact is less than significant with mitigation incorporated.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Less Than Significant with Mitigation Incorporated. No archaeological resources have been identified within or adjacent to the project area, but that the project area has not been surveyed systematically in the past. Because the facility appears to have begun in the 1930s, completed in the 1960s, and maintained in its current configuration since that time, is it unlikely that any historical resource will be uncovered in the course of the Proposed Project. Additionally, the routine maintenance proposed consists of removal of sediment deposited by the most recent storm

events between maintenance cycles, as it has been performed routinely since the facility's construction. However, to accommodate a potentially unanticipated find, **Mitigation Measure CUL-1 and CUL-2** will be implemented, which will minimize the potential for the Project to adversely affect unique archaeological resources. Native American-related cultural and archaeological-related resources are not anticipated to be found within the Project area. However, **Mitigation Measure CUL-2** has been included to address any culturally significant tribal cultural resources that could be discovered during the construction activities at the Project site. Therefore, this impact is less than significant with mitigation incorporated.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant with Mitigation Incorporated. The Project Area does not contain any known cemeteries or burial features. The potential for encountering Native American human remains exists throughout California, and it is not always possible to predict where Native American human remains might occur outside of formal cemeteries. Therefore, ground-disturbing activities could disturb human remains, including those interred outside of formal cemeteries.

The Native American Graves Protection and Repatriation Act (NAGPRA) includes provisions for unclaimed and culturally unidentifiable Native American cultural items, intentional and inadvertent discovery of Native American cultural items on federal and tribal lands, and penalties for noncompliance and illegal trafficking. State of California Public Resources Health and Safety Code sections 7050.5-7055 describes the general provisions regarding human remains, including the requirements if any human remains are accidentally discovered during excavation of a site. As required by state law, the requirements and procedures set forth in Section 5097.98 of the California Public Resources Code would be implemented, including notification of the County Coroner, notification of the Native American Heritage Commission and consultation with the individual identified by the Native American Heritage Commission to be the "most likely descendant."

If human remains are found during excavation, excavation must stop within 100 feet of the find until the County Coroner has been called out by local law enforcement, and the remains have been investigated and appropriate recommendations have been made for the treatment and disposition of the remains. Implementation of **Mitigation Measure CUL-3** would ensure the proper management of human remains if encountered on the project site. Therefore, the inclusion of **Mitigation Measure CUL-3**, impacts would be less than significant.

Mitigation Measures:

CUL 1 In the event that evidence of historical resources are unearthed during construction activities, work in the immediate vicinity of the find (within a 60-foot buffer) will be stopped and a qualified archaeologist will be contacted to assess the find and recommend appropriate mitigation. No disturbance shall occur in the vicinity of the find until the site is evaluated by the archaeologist and the find is recorded or treated per the recommendations of the qualified archaeologist.

CUL 2 In the event that evidence of non-Native American archaeological resources are unearthed during construction activities, work in the immediate vicinity of the find will be stopped and a qualified archaeologist will be contacted to assess the find and recommend appropriate mitigation. No disturbance shall occur in the vicinity of the find until the site is evaluated by the archaeologist and the find is recorded or treated per the recommendations of the qualified archaeologist.

In the event that Native American cultural resources are discovered during project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified

archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the on the other portions of the project outside of the buffered area may continue during this assessment period. Additionally, pursuant to consultation with the San Manuel Band of Mission Indians (SMBMI), the SMBMI will be contacted if any such find occurs and be provided information and permitted/invited to perform a site visit when the archaeologist makes his/her assessment, so as to provide Tribal input. The archaeologist shall complete an isolate record for the find and submit this document to the applicant and Lead Agency for dissemination to the San Manuel Band of Mission Indians.

If significant Native American historical resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, an archaeologist qualified by the Secretary of the Interior (SOI) shall be retained to develop a cultural resources Treatment Plan, as well as a Discovery and Monitoring Plan, the drafts of which shall be provided to San Manuel Band of Mission Indians for review and comment. All in-field investigations, assessments, and/or data recovery enacted pursuant to the finalized Treatment Plan shall be monitored by a San Manuel Band of Mission Indians Tribal Participant(s). The Lead Agency and/or applicant shall, in good faith, consult with San Manuel Band of Mission Indians on the disposition and treatment of any artifacts or other cultural materials encountered during the project. Protocol for the inadvertent discovery of Native American archaeological resources will be followed as detailed within the Tribal Consultation Agreement.

CUL-3 In the event that human remains are discovered, there shall be no disposition of such human remains, other than in accordance with the procedures and requirements set forth in California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98. These code provisions require notification of the County Coroner and the Native American Heritage Commission, who in turn must notify those persons believed to be most likely descended from the deceased Native American for appropriate disposition of the remains. Excavation or disturbance may continue in other areas of the project site that are not reasonably suspected to overlie adjacent remains or archaeological resources.

Impact Conclusions:

No significant adverse effects are anticipated with the inclusion of the above mitigation measures.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VI. ENERGY: Would the project:				
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	

Environmental Setting

During maintenance activities, energy would be consumed in two general forms: (1) petroleum-based fuels used to power off-road construction vehicles and equipment on the Project Site, construction worker travel to and from the Project Site, as well as delivery and haul truck trips (e.g. hauling of vegetative material to off-site reuse and disposal facilities); (2) electricity associated with the conveyance of water that would be used during Project construction for dust control (supply and conveyance).

Impact Analysis

a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less Than Significant. The Project will utilize diesel- and petroleum-fueled equipment as identified on **Table 1**. Consumption of diesel and petroleum would be temporary (over one month) and would cease upon the completion of the maintenance activity. Additionally, the Project site is located within 5 miles of where equipment would be deployed to the Project site. Conducting maintenance activities in multiple, short-term sessions requires fewer pieces of equipment for shorter time periods, therefore, the Project does not result in an inefficient or unnecessary consumption of energy resources.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less Than Significant. The Project is to maintain a flood control facility in a manner that will promote groundwater recharge. Maintenance activities do not require excessive use of energy or renewable energy for routine maintenance and water spreading activities. Further, it is assumed that the Project maintenance activities will conform to the applicable plans, policies, or regulations of local and/or state energy standards that reduce fuel consumption and increase fuel efficiencies and energy conservation. The City of San Bernardino does not have an Energy Action Plan or a Climate Action Plan addressing energy policies. As such, the Project will result in less than significant impacts.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusions:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VII. GEOLOGY AND SOILS: Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
• Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
• Strong seismic ground shaking?			X	
• Seismic-related ground failure, including liquefaction?			X	
• Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?		X		
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

SUBSTANTIATION: (☐ Check if project is located in the Geologic Hazards Overlay District):

Environmental Setting

The Waterman Spreading Grounds facility is located in the San Bernardino area, which is in the eastern part of the upper Santa Ana Valley. It is one of the principal alluvial valleys of the south coastal basin in the Los Angeles area (Dutcher, LC and A.A. Garrett, 1963). The San Bernardino area is bounded on the north and east by the San Gabriel and San Bernardino mountains, respectively, and on the south by the Crafton Hills, the area known as the badlands and the Jurupa Mountains. The San Bernardino Mountains rise steeply from the east side of the San Bernardino Valley along the northwestward-trending San Andreas Fault. The straight, southwestward-facing mountain front is the dissected scarp of the San Andreas Fault and rises above the valley edge to heights ranging from about 2,700 feet at the mouth of Cajon Creek to more than 5,500 feet at the mouth of the Santa Ana River canyon.

The San Gabriel Mountains, which border the area on the north, form the central part of the transverse ranges and are separated from the San Bernardino Mountains by Cajon Pass and the San Andreas Fault. The San Gabriel Mountains rise steeply along the north side of Chino basin. The north side of the range, along most of its course, is bounded by the San Andreas Fault, which forms the boundary between the range and the Mojave Desert. Unlike the San Bernardino Mountains, the San Gabriel Mountains are characterized by an irregular, high, sharp crest and sharp topographic boundaries between resistant and relatively nonresistant rocks (Dutcher, LC and A.A. Garrett, 1963).

Soils

Soils within the Waterman Spreading Grounds are classified by the Natural Resource Conservation Service (NRCS), as Soboba stony loamy sand (SpC) typical of alluvial fans emanating from a mountain range. These excessively drained soils developed very gravelly, very cobbly, or stony granitic materials. Vegetation in this soil type chiefly consists of annual grasses, forbs, and chamise.

Faults

The Waterman Spreading Grounds facility is located in the foothills of the San Bernardino Mountains. According to the City of San Bernardino General Plan Figure S-3, the Waterman Spreading Grounds facility lies partially within the Alquist Priolo Fault Zone for the San Andreas Fault.

Landslides

Landslides are the result of natural or man -aided erosional processes involving downslope transport of unstable soil and rock. The speed of landslide movement ranges from tens of miles per hour (30-60 kph) for rockfalls, mud flows, and debris flows on steep slopes to intermittent and almost imperceptible creep on gentler slopes. Important factors influencing slope stability are soil and rock types, moisture, climate, rainfall intensity, relief, geologic structure, and human activity.

The Waterman Spreading Grounds are classified by the Department of Conservation as, Area 3 - Generally Susceptible Area, defined as slopes within area are at or near their stability limits due to a combination of weaker materials and steeper slopes. Although most slopes within area do not currently contain landslide deposits, some materials that underlie the area be expected to fail, locally, when modified by natural processes or the activities of man because they are close to their stability limits.

Liquefaction

Liquefaction is a term used to describe a condition that occurs when saturated sandy soil loses strength and cohesion due to ground shaking during an earthquake. Lateral spreading occurs when liquefaction of a subsurface layer causes the mass to flow down the slope, moving blocks of ground at the surface. Areas at risk of lateral spreading are generally considered to be coincident with potential liquefaction areas.

The City of San Bernardino Liquefaction Susceptibility Overlay maps contained within the General Plan identifies that the Waterman Spreading Grounds are in an area of high susceptibility to liquefaction.

Impact Analysis

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

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

- *Strong seismic ground shaking?*

- *Seismic related ground failure, including liquefaction?*

- *Landslides?*

Less Than Significant. There are no habitable structures associated with the proposed maintenance of the Basins. The project consists of the following elements that will be undertaken in each of the Basins: 1) regular removal of vegetation in the bottom and on the sides of the basins; 2) regular removal of sediment from the bottom of the basins; 3) scraping the bottom of the basins, as needed, to improve recharge efficiency: 4) minor repair/rehabilitation of existing basin and structures, as needed; and 5) filling the basins with water from the State Water Project and monitoring by the Valley District.

All work is to be conducted within the existing basins and no new area outside existing disturbance is proposed. Therefore, the Basins will not experience geologic hazards that are new or different than that which occurs under existing conditions and impacts would remain less than significant.

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

Less Than Significant With Mitigation Incorporated. Proposed maintenance activities include the removal of vegetation and sediment from the basins that have the potential to expose soils to erosion. To ensure the control of erosion, the Valley District is required to implement Best Management Practices (BMPs) for both wind and water erosion. For potential wind erosion, during construction, contractors will be required to use water trucks to control dust and stabilize any temporary stockpiles of soil (until removed from the sites). Dust control is evaluated in more detail in Section III, Air Quality. For potential soil erosion associated with storm events and runoff during construction, contractors will be required to comply with each site's Stormwater Pollution Prevention Plan (SWPPP) BMPs that may include a combination of erosion control blankets, fiber rolls, silt fences, and stabilized construction methods to prevent trackout of soil onto roadways. Also see Section IX, Hydrology and Water Quality for a discussion of these requirements.

For potential wind erosion, contractors must comply with SCAQMD Rule 403 which requires the implementation of best available dust control measures (BACM) during active operations that are capable of generating fugitive dust. These may include but are not limited to applying water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes and using tarps or other suitable enclosures on haul trucks.

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

Less Than Significant. The proposed maintenance projects do not include the construction of any habitable structures or urban infrastructure associated such as roads, wet and dry utilities or storm drains that would be adversely affected by any of these geologic hazards. Each site consists of a series of basins created by the construction of berms, terraced into the sloped ground surface, and accessed from internal roads. Maintenance activities will occur within the existing basins at each site and consist of vegetation and sediment removal, scraping the bottom of the basins to improve recharge efficiency. No new basin construction is proposed that could cause

landsliding and the alluvial soils are not conducive to spreading. Alluvial soils are known to be susceptible to subsidence and liquefaction; however, because there are no habitable structures in any of the Basin sites and no human activities other than periodic routine maintenance are proposed, this impact would be less than significant.

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

No Impact. Expansive soils are considered those that contain a significant amount of clay and are subject to swelling as a response to changes in water content. Soils with a high content of expansive material can form cracks in drier seasons, and impact building loads. As described in the Soils Reports for each of the Basins, soils are well drained soils consisting of alluvial material (sand, gravel, cobble, and some boulders at higher elevations. Therefore, there is no impact under this criterion.

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

No Impact. None of the Project activities propose or involve the use of septic tanks or alternative wastewater disposal systems. Therefore, there is no impact under this criterion.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant with Mitigation Incorporated. The results of the paleontological records search suggest that the surface deposits of Holocene sediments in the Project area are low in sensitivity for significant nonrenewable paleontological resources, but the sensitivity is high in the Pleistocene sediments occurring subsurface as well as on the surface as outcrops. Because excavation of the facility appeared have begun in the 1930s and appeared to have been completed in the 1960s and maintained in its current configuration since that time, is it unlikely that any paleontological resource will be uncovered with the proposed Project. Additionally, routine maintenance proposed consists of removal of sediment deposited by the most recent storm events between maintenance cycles, which is the same practice that has been performed routinely since the facility's completion. However, to accommodate a potentially unanticipated paleontological find, implementation of **Mitigation Measure GEO-1**, located at the end of this section, is incorporated to ensure any potential impact will be less than significant.

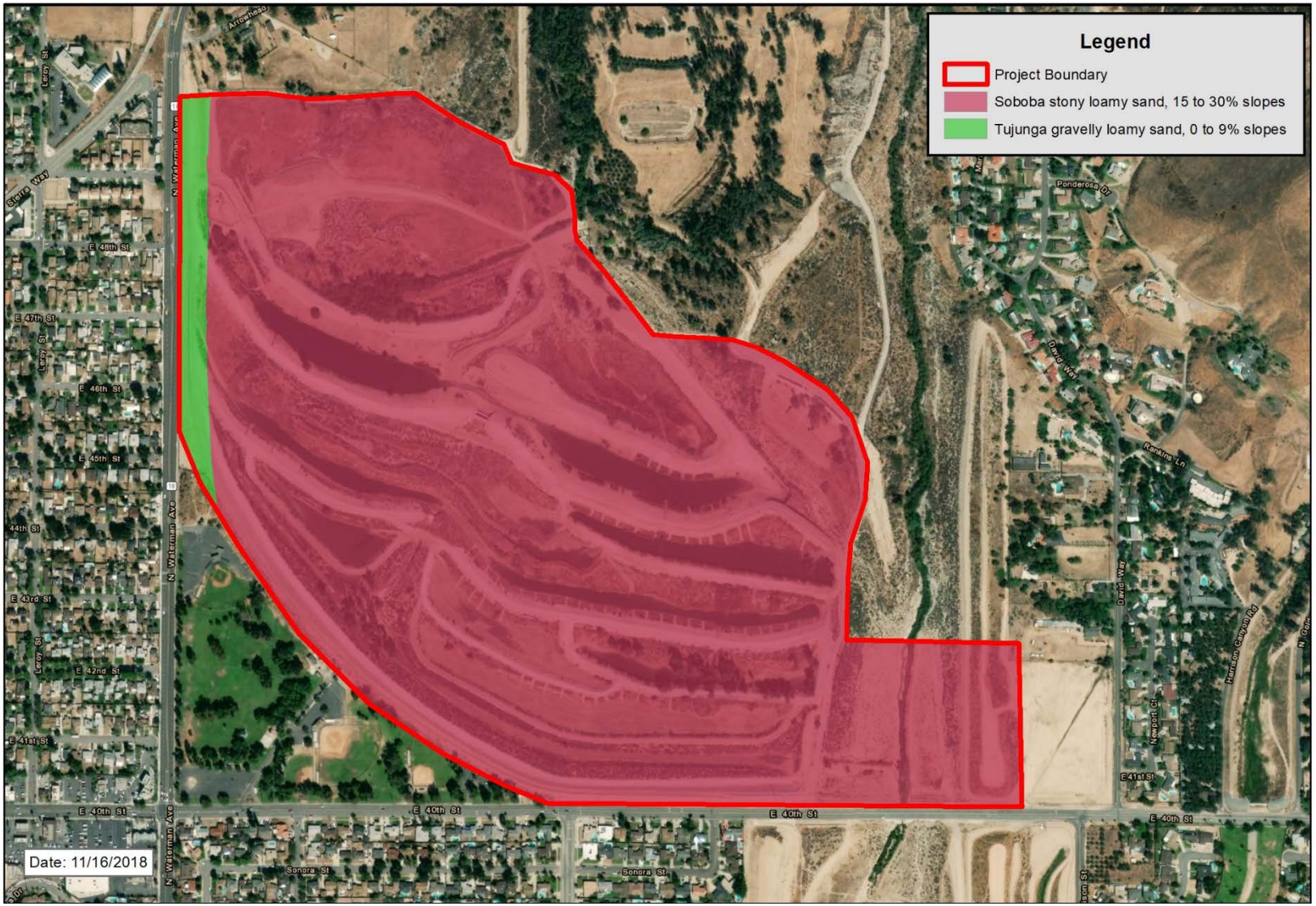
Mitigation Measures:

GEO-1 In the event paleontological resources are discovered, all work will stop, and a qualified paleontologist shall be retained to recover any fossils that are discovered. In the instance of an extended salvage period, the paleontologist shall work with the construction manager to temporarily direct, divert, or halt earthwork to allow recovery of fossil remains in a timely manner. A final summary report shall be completed that includes discussions of the methods used, stratigraphic section(s) exposed, fossils collected, photographs, and significance of recovered fossils.

Impact Conclusions:

No significant adverse effects are anticipated with the inclusion of the above mitigation measure.

Figure 6
Soils Overlay



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VIII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Environmental Setting

"Greenhouse gases" emitted by human activity are implicated in global climate change, commonly referred to as "global warming." These greenhouse gases contribute to an increase in the temperature of the earth's atmosphere by transparency to short wavelength visible sunlight, but near opacity to outgoing terrestrial long wavelength heat radiation in some parts of the infrared spectrum. The principal greenhouse gases (GHGs) are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. For purposes of planning and regulation, Section 15364.5 of the California Code of Regulations defines GHGs to include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of GHG emissions, accounting for approximately half of GHG emissions globally. Industrial and commercial sources are the second largest contributors of GHG emissions with about one-fourth of total emissions.

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases. GHG statues and executive orders (EO) include AB 32, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07.

AB 32 is one of the most significant pieces of environmental legislation that California has adopted. Among other things, it is designed to maintain California's reputation as a "national and international leader on energy conservation and environmental stewardship." It will have wide-ranging effects on California businesses and lifestyles as well as far reaching effects on other states and countries. A unique aspect of AB 32, beyond its broad and wide-ranging mandatory provisions and dramatic GHG reductions are the short time frames within which it must be implemented. Major components of the AB 32 include:

- Requires the monitoring and reporting of GHG emissions beginning with sources or categories of sources that contribute the most to statewide emissions.
- Requires immediate "early action" control programs on the most readily controlled GHG sources.
- Mandates that by 2020, California's GHG emissions be reduced to 1990 levels.
- Forces an overall reduction of GHG gases in California by 25-40%, from business as usual practices by 2020.
- Dictates that any local initiatives must complement efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminants.

Statewide, the framework for developing the implementing regulations for AB 32 is under way. Maximum GHG reductions are expected to derive from increased vehicle fuel efficiency, from greater use of renewable energy and from increased structural energy efficiency.

In 2006, the Legislature passed the California Global Warming Solutions Act of 2006 [Assembly Bill 32 (AB 32)], which created a comprehensive, multi-year program to reduce greenhouse gas (GHG) emissions in California. AB 32 required the California Air Resources Board (ARB or Board) to develop a Scoping Plan that describes the approach California will take to reduce GHGs to achieve the goal of reducing emissions to 1990 levels by 2020. The Scoping Plan was first approved by the Board in 2008 and must be updated every five years. The First Update to the Climate Change Scoping Plan was approved by the Board on May 22, 2014. In 2016, the Legislature passed SB 32, which codifies a 2030 GHG emissions reduction target of 40 percent below 1990 levels. With SB 32, the Legislature passed companion legislation AB 197, which provides additional direction for developing the Scoping Plan. ARB is moving forward with a second update to the Scoping Plan to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32.

CEQA and Greenhouse Gases

Per CEQA guidelines, new project emissions are treated as standard emissions, and air quality impacts are evaluated for significance on an air basin or even at a neighborhood level. Greenhouse gas emissions are treated differently as the perspective is global, not local. Therefore, emissions for certain types of projects might not necessarily be considered as new emissions if the project is primarily population driven.

According to CEQA Guidelines Section 15064.4, when making a determination of the significance of greenhouse gas emissions, the "lead agency shall have discretion to determine, in the context of a particular project, whether to (1) use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use." In addition, CEQA Guidelines section 15064.7(c) provides that "a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts" on the condition that "the decision of the lead agency to adopt such thresholds is supported by substantial evidence." For the purpose of this initial study SCAQMD guideline will be adhered to.

Impact Analysis

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant. The Proposed Project requires earthmoving, material removal, and other activities such as removal of plants and /or other organics. The project's construction activities were screened for emission generation using SCAQMD "Air Quality Handbook" guidelines, Emission Factors for On-Road Heavy-Heavy Duty Diesel Trucks (2019), SCAQMD Off-Road Mobile Source Emissions Factors (2019) and California Climate Action Registry General Reporting Protocol, 2009I; Table A9-8-C. These tables are used to generate emissions estimates for development projects. Many gases make up the group of pollutants that are believed to contribute to global climate change. However, three gases are currently evaluated and represent the highest concentration of GHG: carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). SCAQMD provides guidance methods and/or Emission Factors that are used for evaluating a project's emissions in relation to the thresholds. A threshold of 3,000 metric tons of carbon dioxide equivalent ($MTCO_2e$) per year has been adopted by SCAQMD for non-industrial type projects as potentially significant or global warming. The following assumptions were modeled:

Typical daily equipment:

- 2 Dozers
- 2 Water Trucks
- 1 Loader
- 1 Scraper
- Export Material (10 days, 22 mile haul distance, roundtrip)

Note: 44 day construction period

The modeled emissions anticipated from the Proposed Project, compared to the SCAQMD thresholds, are shown in **Table 7**. Because emissions would be well below SCAQMD thresholds, less than significant impact is anticipated.

Table 7
Construction Emissions
"Maintenance Activity Emissions"
(Pounds per Day)

Source	CO_2	CH_4	N_2O[3]
Dozer	3,824	0.3	0.0
Water Truck	1,968	0.1	0.0
Loader	872	0.1	0.0
Scraper	2,096	0.1	0.0
Export Material	925.3	0.0	0.0
Total Lbs. per day	9,685.9		
MTCO2e	**192.2**		
SCAQMD Threshold	3,000		
Significant	**No**		

[1] SCAQMD Off-Road Mobile Source Emissions Factors (2018)
[2] Emission Factors for On-Road Heavy-Heavy Duty Diesel Trucks (2018)
[3] California Climate Action Registry General Reporting Protocol, 2009I; Table A9-8-C]
SCAQMD Handbook; Climate Leaders EPA, Section 3, Table 2.
Note: Construction Period (6 weeks, 44 days)

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

Less Than Significant. There are no existing GHG plans, policies, or regulations that have been adopted by CARB or SCAQMD that would apply to this type of emissions source. However, the operator shall comply with CARB and SCAQMD regulations related to diesel-fueled trucks, which may include among others: (1) meeting more stringent emission standards; (2) retrofitting existing engines with particulate traps; (3) use of low sulfur fuel; and (4) use of alternative fuels or equipment.

It is possible that CARB may develop performance standards for Project-related activities prior to construction of the Proposed Project. In this event, these performance standards would be implemented and adhered to, and there would be no conflict with any applicable plan, policy, or regulation; therefore, impacts would be less than significant and no mitigation would be required. The Proposed Project is consistent with CARB scoping measures and therefore does not conflict with local or regional greenhouse gas plans.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusions:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IX. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?		X		
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		X		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?			X	

Environmental Setting

The Waterman Spreading Grounds facility is located within the City of San Bernardino and are adjacent to urban development. The San Bernardino National Forest lies to the north of the facility.

Hazardous Waste

State and Federal databases were reviewed to identify hazardous waste facilities including Federal Superfund sites, State Response sites, Voluntary Cleanup sites, School Cleanup sites, Permitted Operating sites, Corrective Action sites, and Tiered Permit sites within or adjacent to the Project. There were no other sites identified within the Waterman Spreading Grounds facility. The closest facility is a completed Leaking Underground Storage Tank cleanup site located approximately 0.25 mile southwest of the Waterman Spreading Grounds southern boundary.

Construction General Permit Order 2009-0009-DWQ

The State Regional Water Quality Control Board requires dischargers whose projects disturb one (1) or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ (CGP). Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation. However, the CGP specifically exempts routine maintenance activities performed to restore the original line, grade, or capacity of the facility. Although the Valley District's activities will disturb more than 1 acre of soil as defined by the CGP, the Valley District's routine maintenance is exempt from obtaining coverage under the CGP, per the maintenance exemption allowed by the CGP.

Airports, Heliports, Airstrips

There are no airports or private airstrips located within proximity to the Waterman Spreading Grounds.

Schools

The Waterman Spreading Grounds facility is not located within one-quarter of a mile of a school.

Wildland Fires

CAL FIRE adopted Fire Hazard Severity Zone maps for State Responsibility Areas in November 2007. The Waterman Spreading Grounds facility is within an area of Local Responsibility, and no fire severity is assigned.

Impact Analysis

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

Less Than Significant With Mitigation Incorporated. Potential impacts are as follows: limited quantities of hazardous materials will be used during Project activities including gasoline, diesel fuel, oil, solvents, and lubricants associated with the heavy equipment and vehicles and used for operation and maintenance activities. The potential reasonably foreseeable upset and accident conditions may include minor spills and/or drips onto the exposed surfaces. However, all Project activities will utilize best management practices (BMPs) that are designed to contain any spills. Additionally, the Valley District's employees and construction contractors will be trained to properly prevent and clean up minor spills, as well as familiar with protocols to manage larger spills should they occur. Therefore, the impact of risk of upset by a potential release of hazardous waste is less than significant due to the limited quantities used.

However, to ensure less than significant impacts will occur, **Mitigation Measure HAZ-1** will be implemented to notify the Department of Toxic Substances Control (DTSC) and San Bernardino County Fire Department Hazardous Materials Division in the event materials known or suspected to contain hazardous materials and/or contaminants are encountered during Project activities. The removal and/or disposal of any such contaminants shall be in accordance with all applicable local, state, and federal standards, thus making any impacts less than significant with mitigation incorporated.

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

Less Than Significant With Mitigation Incorporated. Limited quantities of hazardous materials will be used during construction including gasoline, diesel fuel, oil, solvents, and lubricants associated with the heavy equipment and vehicles and used for operation and maintenance activities. Reasonably foreseeable upset and accident conditions may include minor spills and/or drips. However, SBCFCD and the Valley District contractors and employees are trained to properly prevent and clean up minor spills, as well as familiar with protocols to manage larger spills should they occur. Therefore, the impact of risk of upset by a potential release of hazardous waste is less than significant due to limited quantities used and the experience of the maintenance/construction personnel. To further ensure less than significant impacts will occur, **Mitigation Measure HAZ-1,** located at the end of this section, will be implemented to notify the Department of Toxic Substances Control (DTSC) and San Bernardino County Fire Department Hazardous Materials Division in the event materials known or suspected to contain hazardous materials and/or contaminants are encountered during Project activities. The removal and/or disposal of any such contaminants shall be in accordance with all applicable local, state, and federal standards, thus making any impacts less than significant with mitigation incorporated.

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

Less Than Significant. The Proposed Project will not emit hazardous emissions, handle acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school because no school exists within one-quarter mile. Additionally, there are no long-term operations proposed that would produce emissions. Proposed maintenance activities consist of: 1) regular removal of vegetation in the bottom and on the sides of the basins; 2) regular removal of sediment from the bottom of the basins; 3) scraping the bottom of the basins, as needed, to improve recharge efficiency: 4) minor repair/rehabilitation of existing basin and structures, as needed; and 5) filling the basins with water from the State Water Project and monitoring by the Valley District. Hazardous materials generally consist of gasoline, diesel fuel, oil, solvents, and lubricants associated with the heavy equipment and vehicles that are for operation and maintenance activities. Therefore, the impacts associated with the Proposed Project are less than significant under this criterion.

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

No Impact. A search of the Department of Toxic Substances Control (DTSC) conducted on September 20, 2018 and November 5, 2018 showed that the Waterman Spreading Grounds facility is not on the list of hazardous material sites. Therefore, there is no impact under this criterion.

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

No Impact. There are no airports or airport land use plans within two miles of the Waterman Spreading Grounds. Therefore, there is no impact under this criterion.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. All maintenance activities are proposed to occur within stormwater/recharge basins that are all separated from adjacent urban areas by internal access roads so that maintenance activities would not interfere with

traffic circulation or increase demands on existing emergency response activities, or impact emergency access in the area. Therefore, the impacts associated with the proposed maintenance activities are less than significant under this criterion.

g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?

Less Than Significant. There are no existing or proposed habitable structures associated with any of the basins, and no permanent or temporary residents are allowed at the Basins sites. The purpose of the Project is to reduce excess vegetation which will reduce the potential for fires. During maintenance activities if workers are exposed to wildland fires, there is more than one access road to each of the basins that would allow workers to exit the site and leave the area as well as access by emergency personnel. Therefore, this impact would be less than significant under this criterion.

Mitigation Measures:

HAZ-1 The Department of Toxic Substances Control (DTSC) and San Bernardino County Fire Department Hazardous Materials Division shall be immediately notified in the event malodorous or discolored soils, liquids, containers, or other materials known or suspected to contain hazardous materials and/or contaminants are encountered during activities associated with the Proposed Project. Earthmoving activities in the vicinity of said material shall be halted until the extent and nature of the suspect material are determined by qualified personnel (as determined by the DTSC). The removal and/or disposal of any such contaminants shall be in accordance with all applicable local, State, and Federal standards.

Impact Conclusion:

No significant adverse effects are anticipated with the inclusion of the above mitigation measure.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
X. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?		X		
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:		X		
• result in substantial erosion or siltation on- or offsite;				
• substantially increase the rate or amount of surface water runoff in a manner which would result in flooding on- or offsite;				
• create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or				
• impede or redirect flood flows?				
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation??			X	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

Regulatory Setting

State Water Resources Control Board Order No. R8-2010-0036 - Area-wide Urban Storm Water Runoff Management Program – San Bernardino County MS4 Permit

In 1990, the U.S. Environmental Protection Agency (USEPA) promulgated rules establishing Phase I of the National Pollutant Discharge Elimination System (NPDES) storm water program. The Phase I program for municipal separate storm sewer systems (MS4s) requires operators of “medium” and “large” MS4s, that is, those that generally serve populations of 100,000 or greater, to implement a storm water management program as a means to control polluted discharges from these MS4s.

In San Bernardino County, the San Bernardino County Flood Control District is the principal NPDES Permittee under Order No. R8-2010-0036, NPDES NO. CAS618036. This order identifies the post-construction urban storm water control requirements for the unincorporated county and 17 incorporated cities in the County.

State Water Resources Control Board Order No. 2013-0002-DWQ – Statewide General NPDES Permit for Residual Aquatic Pesticide Discharges to Waters of the United States from Algae and Aquatic Weed Control Applications

The CWA is the principal federal law that governs pollution in the nation's lakes, rivers, and coastal waters. Originally enacted in 1972 as a series of amendments to the Federal Water Pollution Control Act of 1948, the Act was last amended in 1987. The overriding purpose of the CWA is to "restore and maintain the chemical, physical and biological integrity of the nation's waters." The CWA section 301(a) broadly prohibits the discharge of any pollutant to waters of the United States, except in compliance with an NPDES permit. Porter-Cologne establishes the nine RWQCBs as the principal state agencies for coordinating and controlling water quality in California in order to regulate the discharge of waste. (Water Code, § 13263.) The Statewide General NPDES Permit under SWRCB Order No. 2013-0002-DWQ covers the point source discharge to waters of the United States of residues resulting from pesticide applications using enumerated chemicals. The San Bernardino County Agricultural Department utilizes aquatic pesticides and herbicides to assist the SBCFCD in maintaining its facilities when they are inundated with water or used for water spreading and operates with all applicable state and federal permits.

Environmental Setting

Regional Hydrology

The proposed project would be located in the Santa Ana River watershed, which drains from the steep-slopes of the San Bernardino Mountains to the valley floor of the Inland Empire, through the Prado Basin and on to Orange County and the Pacific Ocean. The Santa Ana River travels 75 miles from its origins near Big Bear Lake to the Pacific Ocean. In the mountainous areas, perennial surface water exists in segments of the Santa Ana River and tributaries. Big Bear Dam impounds surface water high in the mountains. Below Big Bear, Seven Oaks Dam built by the US Army Corps of Engineers in the 1990s provides flood control protection to the urbanized valley below. From below the dam at the base of the mountains through the City of San Bernardino, the river is a soft-bottom channel that is generally dry in the summer, but contains some seasonal flows in the winter and spring. Historically, the Santa Ana River likely exhibited perennial flows from groundwater upwelling. However, groundwater levels have declined since the 1800s eliminating perennial flows in much of the river.

Groundwater

The project overlies the Upper Santa Ana Valley Groundwater Basin, Bunker Hill Subbasin, designated by the California Department of Water Resources as a high priority basin. Three water-bearing zones (the upper, middle, and lower) and three confining members (the upper, middle, and lower) have been defined in the subbasin and are within the uppermost 1,000 feet of unconsolidated deposits below the San Bernardino Valley. The Santa Ana River Watermaster prepares an annual report required by the Stipulated Judgment (Judgment) in the case of *Orange County Water District v. City of Chino, et al.*, Case No. 117628-County of Orange that became effective on October 1, 1970. The Judgment designated four public agencies to represent the Upper and Lower Areas and gave them the responsibility to meet the obligations set forth in the Judgment to implement the physical solution. Orange County Water District (OCWD) represents the Lower Area while Valley District, Western Municipal Water District (WMWD), and Inland Empire Utilities Agency (IEUA) represent the Upper Area. Valley District has an obligation to assure an average annual Adjusted Base Flow of 15,250 acre-feet (af) at Riverside Narrows. Adjusted Base flow refers to the actual base flow each year adjusted for water quality pursuant to formulas specified in the Judgment.

Water Quality

The Waterman Spreading Grounds facility is located within the Santa Ana River Hydrologic Unit, within the hydrological boundary of the South Coast Hydrologic Region. The Santa Ana River watershed encompasses more than 2,800 square miles in northwestern Riverside County, Orange County, southwestern portion of San Bernardino County, and a small portion of Los Angeles County. The watershed originates on the San Gorgonio Peak in San Bernardino County, drains southwesterly towards northwestern Riverside County and Orange County into the coastal plain and finally into the Pacific Ocean at Newport Beach. The principal tributaries include the San Timoteo, Reche, Mill, Plunge, City, East Twin, Waterman Canyon, Devil Canyon, and Cajon Creeks and University Wash from the San Bernardino Mountains. The Santa Ana River Hydrologic Unit is under the jurisdiction of the Santa Ana Regional Water Quality Control Board, Region 9 (SARWQCB).

Groundwater quality in the Bunker Hill Subbasin has been affected by past agriculture and aerospace industrial activities. Farming practices and dairy operations have increased salinity and nitrates in the groundwater in large areas of the Bunker Hill Subbasin.

The DWR has conducted water quality monitoring for the SWP since 1968. This program is currently managed by the Division of Operations and Maintenance, Environmental Assessment Branch. Initially, this program sought to monitor eutrophication (an increase in chemical nutrients) and salinity in the SWP. Over time, the water quality program expanded to include parameters of concern for drinking water, recreation, and wildlife. Water quality samples collected for SWP water include chemical, physical, and biological parameters, collected at regular intervals throughout the year. There will be positive effects to groundwater quality of the Bunker Hill groundwater Subbasin since generally imported water has lower total dissolved solids than the water quality in the receiving groundwater basin.

Seiches

A seiche is a free or standing-wave oscillation of the surface of the water in an enclosed or semi-enclosed basin, such as a lake, bay or harbor. Seiches are typically caused when strong winds and rapid changes in atmospheric pressure push water from one end of a body of water to the other, typically occurring in the longest diameter of the water body. Or, a seiche can occur after a strong earthquake.

Impact Analysis

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant With Mitigation Incorporated. The California SWRCB requires that entities whose construction projects disturb 1 acre of soil or more obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit [CGP]; Water Quality Order 2009-0009-DWQ). Construction activities include clearing, grading, and ground disturbances such as stockpiling, or excavation. However, the CGP specifically exempts routine maintenance activities performed to restore the original line, grade, or capacity of the facility. Although the SBCFCD's maintenance activities will disturb more than 1 acre of soil as defined by the CGP, the SBCFCD's routine maintenance is exempt from obtaining coverage under the CGP, per the maintenance exemption allowed by the CGP.

Routine maintenance primarily includes short-term grading and localized excavation of basins and road networks, vegetation removal, and the use of limited quantities of herbicides. Potential water quality impacts during maintenance activities include potential erosion/sedimentation and accidental hazardous material discharge during equipment and vehicle refueling, cleaning and repairs. If not properly controlled, sedimentation or spilled hazardous substances could potentially be washed off-site during a rainstorm, blown off during high winds, or could possibly percolate into the subsurface, where it could eventually reach the water table. If loose soils, litter, vegetation debris

or hazardous substances are allowed to flow off-site, nearby drainage inlets and storm drains could become clogged and could carry impacted runoff into downstream waters, potentially resulting in adverse or significant water quality impacts.

However, while maintenance is exempt from the CGP, the SBCFCD does implement standard construction best management practices (BMPs) for its maintenance activities. These BMPs are County-wide minimization measures. They are listed below under **Mitigation Measures** as **HYD-BMP 1 through HYD-BMP 9**. In addition, annual training is provided to Operations staff of both the SBCFCD and the Valley District regarding implementing BMPs.

The Valley District will ensure the SBCFCD follows these measures, as well as any third-party contractor who will conduct maintenance activities. With incorporation of **Mitigation Measures HYD-BMP 1 through HYD-BMP 9**, potential impacts to water quality resulting from construction and maintenance activities would be less than significant with mitigation incorporated.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

No Impact. The Proposed Project is a groundwater recharge project therefore it will not substantially decrease groundwater supplies. The purpose of the Proposed Project is to maximize recharge capability of the Waterman Spreading Grounds in order to recharge SWP water into the aquifer. The Valley District recharges water in accordance with its SWP allotment. Recharge activities are in addition to the water the Valley District provides for general delivery. Therefore, there will be no impact to this criterion.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:

- *result in substantial erosion or siltation on- or offsite;*
- *substantially increase the rate or amount of surface water runoff in a manner which would result in flooding on- or offsite;*
- *create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or*
- *impede or redirect flood flows?*

Less Than Significant With Mitigation Incorporated. The Proposed Project will not alter the drainage pattern of any stream course or river. All work is proposed for within basins of the existing Waterman Spreading Grounds facility which has historically (since the 1930s) accepted water from Waterman Creek. The basins are designed to both retard and detain flood flows, as well as serve as groundwater recharge. To facilitate groundwater recharge, SWP water enters the site from a gate located at the northwesternmost portion of the facility and flows through each of the basins. Each basin contains a spillway and a gate to control flows. The BMPs described previously and identified as **Mitigation Measures HYD-BMP 1** through **HYD-BMP 9,** located at the end of this section, will further help attenuate flows and control suspended sediment from entering any watercourse, such that any impact resulting from the Proposed Project will be less than significant.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less Than Significant. The Waterman Spreading Grounds is not located in an area that would be subject to a flood hazard or tsunami. While a seiche can occur during an earthquake within the basin impoundment areas, the basins

are between 8 and 15 feet deep and do not contain the depth or structure to promote the wave action where a seiche within the basins would be significant. Therefore, the impact is less than significant.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant. None of the Proposed Project activities will conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. The purpose of the Proposed Project is to maintain the soils and vegetation in a manner that will optimize groundwater recharge. All Project activities will occur in accordance with all applicable regulations. There is a less than significant impact.

Mitigation Measures:

The MS4 permit requires the Valley District and the SBCFCD to implement the recommendations in the CASQA Stormwater Best Management Practice Handbook for Municipal activities (https://www.casqa.org/sites/default/files/BMPHandbooks/BMP_Municipal_Complete.pdf) to ensure that public agency facilities and activities do not contribute pollutants to receiving waters. The following conditions apply:

- **HYD-BMP 1: Avoid Channel Work during the Rainy Season to the Greatest Extent Practicable**

  The greatest potential to transport pollutants or debris/soil/sediment from work activity occurs while water is present in the channel. Within the County of San Bernardino's diverse watersheds, the rainy season is typically from October through April, with summer monsoons occurring in the desert during the summer months. The SBCFCD will prepare a water diversion plan should maintenance activities occur while flowing water is present.

- **HYD-BMP 2: Avoid Spills and Leaks**

  The SBCFCD will ensure that equipment operating in and near the facility is in good working condition and free of leaks. No equipment maintenance and/or refueling will occur within District Facilities. Equipment used during routine maintenance activities will be parked outside of channels and/or washes on the road tops and/or adjacent roadway. All operations staff working with heavy equipment have been trained in the use of the equipment, and in spill containment and response for any unforeseeable accidents that may occur; further, a spill kit will be kept on site at all times. Special care will be taken to prevent liquid paint from entering aquatic resources while painting associated with graffiti removal is conducted. Any spills that occur shall be reported to California State Warning Center (Cal OES) at (800) 852-7550. Additionally, a copy of the Cal OES California Hazardous Materials Spill/Release Notification Guidance will be kept on-site while all maintenance activities take place. Further, if necessary, operations stall will need to follow up with the appropriate agencies as outlined in the Cal OES guidelines, which can be located on the Cal OES website at www.calema.ca.gov.

- **HYD- BMP 3: Avoid Road Base Discharge**

  The SBCFCD will implement measures in order to prevent the discharge of road base, fill, sediment, concrete, and/or asphalt beyond the previously established roadbed when maintaining existing driveways and dirt access roads within the maintenance activity area.

- **HYD-BMP 4: Concrete Washout Protocols**

  The SBCFCD will implement the appropriate waste management practices during on-site concrete repair operations. Waste management practices shall be applied to the stockpiling of concrete, curing, and finishing of concrete as well as concrete washout operations. Waste management practices shall be adequate to ensure that all fluids associated with the curing, finishing, and washout of concrete shall not be discharged into any area with the potential to enter an aquatic resource. Further, all concrete waste will be stockpiled separately from sediment and protected with erosion control measures to ensure that concrete dust and/or debris is not discharged into an aquatic resource. The SBCFCD will determine the appropriate waste management practices based on considerations of flow velocities, site conditions, availability of stockpile locations, availability of erosion control materials, construction costs, and other requirements that may be outlined within the SBCFCD's MS4 permits.

- **HYD-BMP 5: Location of Temporary Stockpiles and Staging Areas**

  Stockpile locations and staging areas will be located within the disturbed/graded areas outside of the facility bottom and at the tops of the levees/banks to the greatest feasible extent. Silt fences, berms, or other methods of erosion control may be used if stockpiles are to remain in designated areas for greater than 10 days. Materials may be stored temporarily within the facilities during excavation activities if placed outside of watercourses and storm drain inlets. Additionally, heavy equipment may be staged on the access roads within the maintenance activity area, but will be confined to those locations where potential pollutants cannot enter into an aquatic resource; this will be conducted in combination with HYD-BMP-1

- **HYD-BMP 6: Location of Permanent Stockpiles**

  This project will include permanent or long-term stockpiles onsite that will be located outside of streambed areas identified as Waters of the State and Waters of the U.S. Any material not placed onsite will be removed offsite by a SBCFCD contractor or placed at the nearest Operations yards.

- **HYD-BMP 7: Application of Pesticides, Herbicides, and Fertilizers**

  The District Aquatic Pesticides permit outlines a schedule of monitoring requirements, BMPs, and conditions designed to promote the reduction of pollutants in stormwater discharges. This permit (Order Number 2013-0002-DWQ) requires the SBCFCD to manage pesticides and herbicide applications under specific criteria.

  <u>General Requirements</u>

  Apply pesticides and herbicides in accordance with California Department of Pesticide Regulation requirements: (1) Read and follow manufacturers' label requirements before each application; (2) Check sprinkler system for overflows into the streets and storm drain; (3) As much as possible, utilize safer alternatives such as insecticidal soaps and horticultural oils.

  <u>Herbicide Applicator Training Requirement</u>

  The San Bernardino County Department of Agriculture/Weights and Measures (Ag) is contracted by the SBCFCD to spray various flood control facilities throughout the County for vegetation control. Many times the Ag spray rigs are not able to spray close to fence lines and in tight areas. Spotty re-growth also occurs and is required to be re-sprayed.

The SBCFCD consulted with Ag to develop a plan for weed abatement that is an extension of Ag's current weed abatement program; using the same herbicide (Monsanto Roundup Pro Concentrate or similar glyphosate product). The application process has been approved by Ag and is determined not to require a California State Qualified Applicator License (QAL) or Certificate (CAC) per 3CCR section 6504. The District application of herbicide will be under the constant monitoring of Ag, who will be dispensing the herbicide and conducting random monitoring inspections in the field. SBCFCD staff will complete daily records of herbicide use by amount and location. These logs will be turned in to Ag monthly, to ensure no overuse of herbicides occurs.

At least annually, Ag will provide training to SBCFCD staff consisting of:

1. Classroom instruction on the laws and regulations governing the application of herbicides in the State of California.
2. Review of the functions of the Department of Agriculture/Weights and Measures Pest Management Division Written Employee Training Program for Pesticide Applicators, Herbicide Applications; including:
    a. Safety Procedures;
    b. MSDS for Monsanto Roundup Pro Concentrate (or similar glyphosate product), signs, symptoms & effects of exposure;
    c. Pesticide Safety Series N1, N2, N4, N5, N7, N8;
    d. Review of the Dept of Ag Pesticide Monitoring Inspection form;
    e. Instruction on completing and submission of the required daily use log;
    f. Practical demonstration of identification and proper use of items required for safe transport, mixing, pouring, application, clean up, storage, disposal of wastes, and emergency procedures associated with the Roundup Pro Concentrate (or similar glyphosate product) herbicide application procedure;
    g. The required personal protective equipment and hygiene practices.
3. Employee will perform a proficiency demonstration of knowledge of the above training items.
4. Employee will successfully complete a verbal/written post test on the above training. Herbicides shall be applied by the District on a limited basis. Licensing standards and procedures are established by DPR and are described in:
    - 1998 California Code of Regulations, Title 3 (Food and Agriculture); and
    - 1997 California Food and Agriculture Code (Divisions 6, 7, and 13).

- **HYD-BMP 8: Invasive Plant Removal Protocols**

Invasive plant species shall be removed in a manner that prevents propagation of those species in the same location and/or in other locations throughout the facility and/or County. Where maintenance activities are required, Operations staff will spray and/or mow invasive plant species before seeds ripen. All cut/removed invasive vegetation shall be taken to an approved refuse facility as a load designated for destruction. Operations staff shall prevent cut stems and/or seed material from being transported downstream and/or being left behind to allow the seed to propagate. In the case of giant reed (Arundo donax) removal, the SBCFCD shall minimize ground disturbance and use foliar glyphosate treatment on smaller infestations (see HYD-BMP-7 Aquatic Pesticide Applications, above). Stems shall be removed only when the plants are determined to be dead and unable to re-sprout and/or propagate.

- **HYD-BMP 9: Remove Debris**

Remove litter and debris from facility as necessary.

Impact Conclusion:

No significant adverse effects are anticipated with the inclusion of the above measures.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XI. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?				X
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X

Environmental Setting

The Waterman Spreading Grounds facility is designated as Public Flood Control by the City of San Bernardino. The Proposed Project is to maintain the existing flood control facility for the purpose of providing groundwater recharge opportunities.

Impact Analysis

a) Physically divide an established community?

No Impact. Maintenance activities will be conducted within existing disturbed basins that are not located within a community. The Waterman Spreading Grounds facility is located adjacent to existing residential communities but because no expansion of facilities is proposed, no communities would be affected. Therefore, there is no impact under this criterion.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. All maintenance activities are proposed to occur within existing disturbed areas in existing basins. None of these activities requires a general plan or specific plan amendment or a conditional use permit. No aspect of this project will conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, there is no impact under this criterion.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusions:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XII. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?			X	
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

Environmental Setting

The Waterman Spreading Grounds are utilized as existing flood control facilities and are located in an area of the City of San Bernardino where there is no active mining.

The State of California Department of Conservation classifies areas of important minerals:

> MRZ-1: Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
>
> MRZ-2: Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists.
>
> MRZ-3: Areas containing mineral deposits, the significance of which cannot be evaluated from available data.
>
> MRZ-4: Areas of no known mineral occurrences where geologic information does not rule out the presence or absence of significant mineral resources.

The Department of Conservation has mapped the Waterman Spreading Grounds facility as MRZ-3, where there are areas of mineral deposits, the value of which cannot be evaluated.

Impact Analysis

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

Less Than Significant. The Department of Conservation has mapped the Waterman Spreading Grounds facility as MRZ-3, where there are areas of mineral deposits, the value of which cannot be evaluated. Additionally, all materials excavated will be disposed of at sites within the vicinity for reuse or landfilled. Therefore, there is a less than significant impact to this criterion.

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

No Impact. The Waterman Spreading Grounds facility does not contain any mineral resource recovery sites identified as locally important on any general plan, specific plan or other land use plan. Therefore, there is no impact.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusion:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIII. NOISE: Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

Environmental Setting

Noise is generally described as unwanted sound. Sound is a physical disturbance in a medium, such as air, that is capable of being detected by the human ear. Sound waves in air are caused by variations in pressure above and below the static value of atmospheric pressure. The unit of sound pressure ratio to the faintest sound detectable to a person with normal hearing is called a decibel (dB) on a logarithmic scale. The “pitch” (high or low) of the sound is a description of the frequency, which is measured in Hertz (Hz). Most common environmental sounds are a composite of frequencies. A normal human ear can usually detect sounds within frequencies from 20 to 20,000 Hz. However, humans are most sensitive to frequencies in the range of 500 to 4,000 Hz.

Certain frequencies are given more “weight” during assessment because human hearing is not equally sensitive to all frequencies of sound. The A-weighted decibel (dBA) scale corresponds to the sensitivity range for human hearing. Noise levels capable of being heard by humans are measured in dBA. A noise level change of 3 dBA or less is barely perceptible to average human hearing. However, a 5 dBA change in noise level is clearly noticeable. A 10 dBA change is perceived as a doubling or halving of noise loudness, while a 20 dBA change is considered a “dramatic change” in loudness.

Sound from a source spreads out as it travels away from the source, and the sound pressure level diminishes with distance. Individual sound sources are considered “point sources” when the distance from the source is large compared to the size of the source (e.g., construction equipment, and turbines). Sound from a point source radiates hemispherically, which yields a 6 dB sound level reduction for each doubling of the distance from the source. If the sound source is long in one dimension, the source is considered a “line source,” (i.e., roadways and railroads). Sound from a line source radiates cylindrically, which typically yields a 3 dB sound level reduction for each doubling of the distance from the source.

The metrics for evaluating the community noise environment are based on measurements of the noise levels over a period of time. These metrics are used in order to characterize and evaluate the cumulative noise impacts. The Community Noise Equivalent Level (CNEL) represents a 24-hour A-weighted sound level average from midnight to midnight, where sound levels during the evening hours of 7:00 p.m. to 10:00 p.m. have an added 5 dB weighting, and nighttime hours of 10:00 p.m. to 7:00 a.m. have an added 10 dB weighting.

Noise standards typically apply to permanent activities. The recommended noise exposure levels are established for permanent noise sources and receptors where noise can be generated over a 24-hour period with penalties applied for permanent noise generated during the night time hours. Construction related noise is short-term and generally considered a nuisance. Construction noise is generally not of sufficient magnitude that is considered health threatening.

City of San Bernardino Noise Standards

The City of San Bernardino Noise Control ordinance set forth in Chapter 8.54 of the San Bernardino Municipal Code identifies acceptable hours of operation for powered motor vehicles and equipment to be between 8 am and 8 pm in residential zones and between 7 am and 8 pm in all other zones.

Proposed Noise Sources

Maintenance activities and the proposed facility upgrade projects will utilize a variety of construction equipment. The potential equipment and their expected noise levels are identified on **Table 8**.

Table 8
Typical Construction Equipment Noise Levels

Equipment	Noise Level (dBA) at 50 feet
Backhoe	80
Concrete mixer	85
Pump truck	82
Crane, Mobile	85
Dozer	85
Excavator	85
Generator	82
Grader	85
Man lift	85
Loader	80
Paver	85
Roller	85
Scraper	85
Trucks	80-84

Source: FHWA 2009

Impact Analysis

a) *Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Less Than Significant. Noise-generating activities associated with the Proposed Project include use of vehicles and equipment described in the Project Description. Maintenance activities would be restricted to Mondays through Saturdays between the daytime hours of 7:00 a.m. and 8:00 p.m. which is allowed by the City of San Bernardino

Municipal Code. There are no residences or sensitive receptors adjacent to the work area or access roads. Therefore, less than significant impacts will occur under this criterion as a result of the Project.

As is typical for maintenance projects, activities would involve short-duration activities at individual sites along the basin roads, side slopes and basin bottoms, resulting in construction duration at any single location lasting no more than a period of days or weeks. As a result, maintenance activities would not involve permanent increases in ambient noise levels, and therefore there would be no impact under this criterion.

Vacant lands exist to the north, south and east of the Waterman Spreading Grounds. A residential neighborhood exists approximately 150 feet to the west of the Waterman Spreading Grounds, and is separated from the area by Waterman Avenue/SR-18, a major roadway to the San Bernardino mountain area. The SR-18 represents significant ambient noise due to vehicles traveling the roadway. Due to the short-term and temporary nature of construction activities, the distance between the residences and the Waterman Spreading Grounds, and the limitation of maintenance activities to daytime hours, the increase in ambient noise levels is not anticipated to be substantial, and thus impacts are anticipated to be less than significant.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant. Sources of groundborne vibration can include geotechnical drill rigs, excavators, dump trucks, backhoes, and other general construction equipment (**Table 9**). According to the Federal Transportation Administration (FTA) guidelines, a vibration level of 65 decibel notation (VdB) is the threshold of perceptibility for humans. The FTA guidelines also state that, for a significant impact to occur, vibration levels must exceed 80 VdB during infrequent events (FTA 2006). Based on the approach set forth in the FTA guidelines, this analysis adopts a threshold of significance of 80 VdB for groundborne vibration impacts.

Table 9
Vibration Source Levels for Typical Construction Equipment

Equipment	Vibration Level at 25 feet (VdB)
Large bulldozer	87
Caisson drilling	87
Loaded trucks	86
Jackhammer	79
Small bulldozer	58

Source: FTA 2011

Maintenance activities will utilize heavy equipment along the basin bottoms and side slopes, however, there are no residences adjacent to the Waterman Spreading Grounds. The majority of heavy equipment work would be confined within the recharge basins fenced area. The nearest residences are located greater than 100 feet to the west of the site, west of Waterman Avenue. This setback distance decreases the vibration from the construction locations because vibration attenuates quickly in soil. Based on the FTA screening criteria, impacts of the use of heavy equipment are anticipated to be less than FTA guidelines threshold of significance of 80 VdB for groundborne vibration impacts. Therefore, the impact is anticipated to be less than significant.

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

No Impact. The Waterman Spreading Grounds is not located within 2 miles of any private airport or within the area of the land use plan for the airport. The closest airport is the San Bernardino International Airport, located approximately 9 miles to the southeast of the Waterman Spreading Grounds. Therefore, there is no impact.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusion:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIV. POPULATION AND HOUSING: Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

Environmental Setting

The Project involves the maintenance of the existing Waterman Spreading Grounds to enhance groundwater recharge rates to ensure adequate water supplies for the San Bernardino valley. The project does not involve housing or the construction of structures for housing.

Impact Analysis

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

No Impact. The Proposed Project will not induce growth in the area because the Project involves the maintenance of existing flood control facilities for the purpose of groundwater recharge of SWP water. Groundwater recharge is not an indirect growth inducing activity because growth in the City of San Bernardino is not dependent upon groundwater supplies.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The proposed Project will occur within an existing flood control facility where there is no housing. Therefore, the proposed Project will not displace any housing, or require the construction of replacement housing.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusions:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XV. PUBLIC SERVICES: a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?			X	
Police protection?			X	
Schools?			X	
Recreation/Parks?			X	
Other public facilities?			X	

Environmental Setting

The City of San Bernardino provides essential public services in the Project area.

Fire Protection

Fire protection services and emergency medical services are provided by the San Bernardino City Fire Department. The City Fire Department has mutual joint response agreements with the cities of Loma Linda, Colton, Rialto, and Central Valley Fire District (Station #75, in Muscoy), and the U.S. Forest Service. City Fire Station 7, located at 282 W. 40th Street is situated approximately 1 mile west of the Waterman Spreading Grounds and is staffed full time, and can provide a response time of 4 to 6 minutes.

Police Protection

Police services are provided by the San Bernardino City Police Department within the City limits and the San Bernardino County Sheriff in the adjacent unincorporated areas. A main police station, located at 710 N D St, San Bernardino, and six community service offices serve five designated geographical patrol districts within the City of San Bernardino. The Waterman Avenue Spreading Grounds are served by the City's Northeast District Command. The City Police Department also operates under a mutual aid agreement with police agencies in the surrounding cities. This allows use of up to fifty percent of adjacent agency resources upon request and for automatic response within zones of mutual aid (City of San Bernardino, November 1, 2005).

Schools

The Waterman Spreading Grounds is within the San Bernardino City Unified School District's service boundary. There are three schools located slightly greater than one-half mile south of the Waterman Spreading Grounds: Golden Valley Elementary, Parkside Elementary, and Arrowhead Elementary. Hillside Elementary School is also located slightly greater than one-half mile west of the Waterman Spreading Grounds.

Recreation and Parks

The City of San Bernardino operates numerous parks throughout the City. Wildwood Park, located directly adjacent to the south of the Waterman Spreading Grounds, is approximately 24 acres and offers picnicking and ball fields.

Impact Analysis

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire Protection, Police Protection, Schools, Recreation/Parks, or Other Public Facilities.

Less Than Significant. The Proposed Project is to maintain existing flood control facilities for the purpose of enhancing existing groundwater recharge that has historically occurred in the basin. Maintenance activities in the Waterman Spreading Grounds will not increase the need for police or fire services, increase school enrollment; or an increase the use of libraries, hospitals, parks, or other public facilities that would result in a lowering of acceptable service ratios, response times, or other performance objectives. Because service ratios, response times, and performance objectives will not be reduced to an unacceptable level, the maintenance activities will not necessitate the provision of new or physically altered governmental facilities, or a need for new or physically altered governmental facilities, to maintain acceptable service. Therefore, less than significant impacts will occur under this criterion as a result of the Project.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusion:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVI. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

Environmental Setting

The Waterman Spreading Grounds facility is designed as a Flood Control facility by the City of San Bernardino, and is fenced to prevent public access. Wildwood Park is located at the northeast corner of Waterman Avenue and 40th Street, outside of the boundaries of and immediately adjacent to the southern portion of the Waterman Spreading Grounds.

Impact Analysis

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

No Impact. The proposed Project would not result in increased use of existing neighborhood and regional parks or recreational facilities because the Project is to maintain existing flood control facilities. Wildwood Park would not be affected by the proposed Project because all Project activities will all take place within the existing basins and no expansion of spreading grounds is proposed that may impact Wildwood Park. Therefore, there is no impact under this criterion.

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

No Impact. The Proposed Project does not include any new recreational facilities or require the construction or expansion of recreational facilities. Maintenance activities are limited to those that will improve the efficiency of the spreading grounds for groundwater recharge Therefore, there is no impact under this criterion.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusion:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVII. TRANSPORTATION: Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?			X	
c) For a transportation project, would the project conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(2)?				X
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
d) Result in inadequate emergency access?			X	
				X

Environmental Setting

Streets and highways serve as the dominant system of transportation in San Bernardino County and the City of City of San Bernardino. Other transportation systems in the county and the city include mass transit, bicycle routes, and air transportation.

The City of San Bernardino has the County's largest transportation system, serving the mobility of over 186,000 residents. The City of San Bernardino is considered a gateway into Southern California from the Cajon Pass and Interstate 215, to the Inland Empire via Interstate 10, and to the San Bernardino Mountains from State Routes 18, 30, and 330. The grid system of streets was developed early in the City's history and directly connects to a valley-wide street system linking a string of foothill and valley communities as far west as Pomona (approximately 30 miles). Some of these east-to-west arterials retain the same name through much of the valley (e.g., Baseline Street, Foothill Boulevard, and Highland Avenue [City of San Bernardino, November 1, 2005]).

The Proposed Project includes the haul-off of soil and waste plant materials from the Waterman Spreading Grounds to the Mid-Valley Landfill, or other landfill or soil vendor within a similar distance. The Proposed Project is easily accessed using local streets and existing disturbed easements, which are generally accessed from major thoroughfares.

Impact Analysis

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less Than Significant. Plans affecting the Project area include the City of San Bernardino – Circulation Element, California Department of Transportation (Caltrans), the San Bernardino Associated Governments (SANBAG), the Southern California Association of Governments (SCAG), and various transit agencies. The mission of each of these organizations is to develop transportation and transit projects that result in an efficient, cost-effective and

comprehensive transportation system which is consistent with regional plans, local needs, and the City's character. Project activities would occur at or below grade within existing flood control basins that are not accessible to the public and are not used for transit, bicycle or pedestrian facilities. The Waterman Spreading Grounds facility is not identified as a public transit, bicycle or pedestrian facility.

Project maintenance activities will include the movement of light and medium-duty vehicles along the main roadways, primarily Waterman Avenue/SR-18. Project-related vehicles and equipment will travel from the Waterman Spreading Grounds primarily to the County of San Bernardino equipment yard, located at 825 E. Third Street, which is approximately 5 miles south of the Waterman Spreading Grounds. Approximately 800 truck trips per year would occur taking material to the landfill. The temporary increase in Project-related traffic during project activities is anticipated to account for an increase of approximately 2 trips per day over average daily volumes along the roadways and at the intersections. Based on the number of anticipated daily vehicle trips to be generated during Project activities, and the fact that no permanent or temporary lane closures are anticipated, impacts to the performance of the circulation system will be less than significant. Therefore, these activities of Project will not create any inconsistency or conflict with an applicable plan, ordinance or policy that establishes measures of effectiveness.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less Than Significant. Section 15064.3, subdivision (b)(3) of the CEQA Guidelines allows for qualitative analysis of a project's transportation impacts when vehicle miles traveled are not readily estimated by models or other methodologies. Relevant factors for this consideration include the availability of transit, proximity to other destinations, and other factors that may affect the amount of driving required by the Proposed Project. Where a project generates or attracts fewer than 110 trips per day, it may generally be assumed to cause a less than significant transportation impact. (Technical Advisory on Evaluating Transportation Impacts in CEQA, Governor's Office of Planning and Research, November 2017, p. 10.)

The maintenance activities for the Proposed Project will primarily use major roadways and local roads for hauling waste soil and vegetation from the Waterman Spreading Grounds in San Bernardino to the Mid-Valley Landfill in Rialto, located approximately 10 miles west of the Waterman Spreading Grounds. The Project site is primarily served by Waterman Avenue/SR-18, with the haul route to the Mid-Valley Landfill primarily served by I-210.

Because the roadways operate at good to excellent levels of service, the addition of Project trucks and equipment is not expected to cause a significant degradation of service levels for any project route. Vehicle miles traveled for the Proposed Project will largely be limited to haul trips occurring during temporary maintenance periods, twice a year, and are expected to total approximately 4,000 miles per year, based on an estimated 800 trips. Thus any transportation impacts under this criterion will be less than significant.

c) For a transportation project, would the project conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(2)?

No Impact. The Proposed Project is not a transportation project, subject to CEQA Guidelines section 15064.3, subdivision (b)(2). All project activities will occur at or below grade. The Project will not result in a change of air traffic patterns, or increase traffic levels or create a change in location that results in safety risk. Therefore, there is no impact.

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

No Impact. All project activities will occur within a facility utilized for flood control, and which is closed to the public and not accessible for public transportation. Implementation of the Project will not require any design changes, and all maintenance activities are compatible with the existing facility. Therefore, there is no impact.

e) Result in inadequate emergency access?

Less Than Significant. Construction equipment will utilize Waterman Avenue/SR-18 primarily between E. Third Street and 40th Street in San Bernardino to travel to and from the Waterman Spreading Grounds and the Mid-Valley Landfill. However, the equipment travels short distances, and therefore does not block or create inadequate emergency access for public response. Emergency vehicles would only respond to the Project site in the event of an injury or fire. Therefore, there is a less than significant impact.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusion:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVIII. TRIBAL CULTURAL RESOURCES: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or		X		
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		X		

Environmental Setting

CRM Tech completed a cultural resources records search to identify prehistoric or historic-period resources within one mile of the Project site (CRM Tech, September 14, 2018). Native American input during the study did not identify any sites of traditional cultural value in the vicinity, and no notable cultural features were known to exit in the Project area throughout the historic period. Based on these considerations, the CRM Tech research concluded that no “historic properties,” “historical resources,” or “tribal cultural resources” are present within or adjacent to the Project area.

Native American Consultation

Assembly Bill (AB) 52 established a formal consultation process with all Native American Tribes on the NAHC list (effective July 1, 2015). A Sacred Lands File search request was sent by CRM Tech to the NAHC on July 13, 2018. In response, the NAHC states in a letter dated July 16, 2018 that unspecified Native American cultural sites have been identified in the vicinity of the project area and refers further inquiries regarding these sites to the Chemehuevi Indian Tribe, the San Manuel Band of Mission Indians, and Lynn Valbuena, Chairwoman of the San Manuel Band. In addition, the NAHC provided a list of 20 tribal representatives in the region for further consultation. The NAHC’s reply is attached to this report to facilitate further government-to-government consultation with the Native American tribes by the Valley District. The Valley District completed consultation with tribal entities in December 2018.

Impact Analysis

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k),

Less Than Significant with Mitigation. There are no resources that have been identified as eligible for listing to the California Register of Historic Places. Therefore, there is no impact. However, to ensure that there will be no impact to unanticipated finds, **Mitigation Measures TRC-1** and **TRC-2** shall be implemented, such that any impacts are rendered less than significant with mitigation.

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less Than Significant With Mitigation Incorporated. There are no resources supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. Therefore, there is no impact. However, to ensure the protection of unanticipated resources, **Mitigation Measures TRC-1** and **TRC-2** shall be implemented, such that any impacts are rendered less than significant with mitigation.

Mitigation Measures:

TRC-1 In the event that pre-contact and/or post-contact cultural resources are discovered during project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the other portions of the project outside of the buffered area may continue during this assessment period. Additionally, the San Manuel Band of Mission Indians Cultural Resources Department (SMBMI) as well as the Most Likely Descendent (MLD) shall be contacted, if any such find occurs and be provided information after the archaeologist makes his/her initial assessment of the nature of the find, so as to provide Tribal input with regards to significance and treatment. The SMBMI shall be contacted regarding any pre-contact and/or post-contact cultural resources discovered during project implementation, and provided information regarding the nature of the find, so as to provide Tribal input with treatment. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a cultural resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with SMBMI and other tribal entities to be determined as necessary, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents SMBMI for the remainder of the project, should SMBMI elect to place a monitor on-site. Any and all archaeological/cultural documents created as a part of the project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the applicant and Lead Agency for dissemination to SMBMI. The Lead Agency and/or applicant shall, in good faith, consult with SMBMI throughout the life of the Proposed Project.

TRC-2 If significant Native American historical resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to SMBMI for review and comment. Comments from the SMBMI would be incorporated into the Treatment Plan. The archaeologist shall monitor the remainder of the project and implement the Plan accordingly.

Impact Conclusions:

No significant adverse effects are anticipated with the inclusion of the above mitigation measures.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIX. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				X

Environmental Setting

Domestic Water Service

The City of San Bernardino Municipal Water Department (SBMWD) is the domestic water provider for all of the City of San Bernardino. It has a service area of approximately 45 square miles and provides water service to some 215,000 people within the City of San Bernardino, with a small percentage of out-of-city accounts (Kennedy-Jenks, June 17, 2005).

SBMWD relies solely on water extracted from the underlying aquifer, the Bunker Hill Groundwater Basin to meet its demands. This water is distributed via SBMWD's water distribution system consisting of pipelines, storage reservoirs, pumping stations, hydroelectric generating stations, manual and automatic control valves, fire hydrants, and water meters located throughout 19 individual pressure zones (Kennedy-Jenks, June 17, 2005).

A small amount of imported State Water Project water can be made available to SBMWD via purchase from the Valley District. Currently, SBMWD does not use recycled water within its service area. However, the SBMWD Water Reclamation Division is pursuing the Clean Water Factory project to treat effluent from the San Bernardino Water Reclamation Plant to a quality approved for recharge and convey the recycled water to the Waterman Basins, the East Twin Creek Spreading Grounds, and the Devil Canyon and Sweetwater Basins for surface spreading in the northern portion of the SBMWD service area. The Clean Water Factory will also be designed to treat a side stream of San Bernardino Water Reclamation Plant effluent to a quality approved for direct non-potable use and convey the tertiary treated recycled water to customers that can benefit from a non-potable water supply. For the future, it is projected that SBMWD will continue to receive the majority of its water supply from groundwater. Recycled

water and imported water are expected to augment the groundwater to complete the future water supply portfolio (Kennedy-Jenks, June 17, 2005).

Waste soil and vegetation will be transported to the Class III Mid Valley Landfill, located at 2390 N. Alder Avenue, Rialto. It is owned by San Bernardino County. The remaining capacity as of September 1, 2009 was approximately 67,520,000 cubic yards, with a permitted throughput of 7,500 tons per day. We estimate the Project will deliver up to approximately 12,237 cubic yards of material to the landfill per year. This amount results in an average daily throughput of approximately 47 tons per day therefore the Project will not result in exceedance of daily limits of the landfill.

Wastewater Service

The Public Works Department, in coordination with the SBMWD, maintains the City of San Bernardino's sewage collection system. There are approximately 510 miles of sewer main line throughout the City of San Bernardino.

Storm Water Facilities

The City of San Bernardino Public Works Department maintains approximately 118 miles of storm drains and 1,535 street culverts.

Impact Analysis

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less Than Significant. The amount of water and waste water to be generated during maintenance activities is limited to that of providing portable toilets for construction personnel. This will not result in the expansion or construction of water or waste water facilities.

Vegetation removal would potentially increase the potential quantities or rates of storm water runoff. However, because removal of vegetation is anticipated to be minimal and in the direct vicinity of the Project area, any potential change in storm water runoff would be minimal and would flow directly into the basins, and would not result in the need to construct new storm water drainage facilities or expansion of existing facilities.

There are no electric power, natural gas, or telecommunications facilities located within the Proposed Project area.

Therefore, the impact to this criterion will be less than significant.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less Than Significant. Construction activities may require water for some long-term maintenance activities, including dust suppression; however, the Valley District's existing entitlements and resources would be adequate to support potential demand as it has historically. The Valley District and the SBCFCD have sufficient water supplies available from existing sources. No new entitlements are required. Therefore, the impact would be less than significant.

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

Less Than Significant. The amount of waste water to be generated during maintenance activities is limited to that of providing portable toilets for construction personnel. This will not result in the need to obtain a determination of service by a wastewater treatment provider. Therefore, the impact would be less than significant.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less Than Significant. Construction activities may generate small quantities of solid waste, inert materials, and green waste. All waste would be properly disposed of in accordance with federal, state, and local statutes and regulations. Therefore, the impact is less than significant.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

No Impact. Maintenance activities will generate waste soil and vegetation to be transported to the Mid-Valley Landfill, which has sufficient permitted capacity to accommodate the Project's solid waste disposal needs. All solid waste generated by the Project during construction activities would be handled in accordance with all applicable federal, state, and local statutes and regulations. No impacts would occur under this criterion.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusion:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XX. WILDFIRE: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?			X	
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?			X	X
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				X

Environmental Setting

The approximately 150-acre Waterman Spreading Grounds facility is located in the City of San Bernardino, east of Waterman Avenue and north of E. 40th Street (just south of the foothills of the San Bernardino Mountains, Figure 1 and Figure 2). Waterman Avenue is a major arterial and serves as one of the main roadways that serve the San Bernardino mountain communities. The purpose of the site is to routinely remove excess soil and vegetation to promote groundwater recharge and to reduce excess vegetation that causes vector control problems.

Impact Analysis

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less Than Significant. The site is located off Waterman Avenue, which serves as one of the main routes for the San Bernardino Mountain communities and is an official San Bernardino County Emergency Evacuation Route for the Mountain Areas. Maintenance activities will require heavy equipment periodically travelling along Waterman Avenue, however, the distance is approximately 5 miles to the landfill each way. The Project will not result in any road or lane closures. Therefore, the Project activities will not interfere with any adopted emergency response or evacuation plan.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?

Less Than Significant. The Waterman Spreading Grounds will be typically inundated by water. The purpose of the Project is to control excess vegetation and non-native grasses. Therefore, the Project will not exacerbate wildfire risks, and there will be a less than significant impact.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No Impact. The Waterman Spreading Grounds will be typically inundated by SWP water that is being recharged in the basins. The purpose of the Project is to control excess vegetation and non-native grasses. The Project will not require the installation or maintenance of infrastructure that may exacerbate or result in wildfires.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. All project activities will occur at or below grade, therefore, the Project activities will not expose people or structures to risks from flooding or landslides.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusion:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XXI. MANDATORY FINDINGS OF SIGNIFICANCE:				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

SUBSTANTIATION:

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

Less Than Significant with Mitigation.

All impacts to the environment, including impacts to habitat for fish and wildlife species, fish and wildlife populations, plant and animal communities, rare and endangered plants and animals, and historical and pre-historical resources were evaluated as part of this IS/MND. There are potentially significant impacts associated with habitat for sensitive species located adjacent to the Proposed Project work areas. However, with the biological mitigation measures incorporated, which are listed below, these impacts would be less than significant. Section IV, Biological Resources, addresses the potential impacts and mitigation measures in detail [BIO 1-3]. Regarding cultural and tribal resources, there is a limited possibility for impacting potential resources because the project is to maintain an existing flood control facility that has been in existence since the 1960s. However, mitigation measures have been incorporated into Section V, Cultural Resources and Section XVIII, Tribal Cultural Resources to address potential unanticipated discoveries. The evaluation contained in this document determined that all potential impacts to the environment, plant and wildlife species and habitats, and historical and pre-historical resources can be reduced to a less than significant level with implementation of the identified mitigation measures.

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

Less than Significant.

The San Bernardino area is anticipated to experience some growth over the life of the Project, although no major developments have been identified that will occur during the same time as the Proposed Project. Additionally, the Proposed Project is a maintenance activity, short-term in nature, on developed facilities that have been in existence for decades. There are no residences or sensitive receptors adjacent to the work area or access roads. Local roadways operate at or just below free-flow conditions; therefore, the Project is not likely to have a cumulative impact even if other projects are on-going in the area.

Based on data provided in this document, including the type of project proposed and its location, it is concluded that implementation of the Proposed Project will not result in impacts that are either individually or cumulatively considerable or significant when viewed in relation to past, present or probable future projects.

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

Less Than Significant with Mitigation.

The Proposed Project will not result in any identifiable substantial adverse effects on humans either directly or indirectly. The goal of the Proposed Project is to maintain existing flood control basins to ensure they are conducive to water recharge and prevent the proliferation of vectors. Based on the analysis throughout this IS/MND, the Proposed Project will mostly result in no impacts or less than significant impacts. Mitigation measures have been identified to reduce identified potential impacts related to biological resources [BIO 1-3], ensuring the safety, rehabilitation, and enhancement of sensitive species habitat; cultural and tribal resources [CUL 1-3 and TRC 1-2], protecting cultural, archaeological, and historical resources in the event of inadvertent finds; geology [GEO-1], protecting potential paleontological resources; hazards & hazardous materials [HAZ-1], protecting the environment from accidental release of hazardous materials, and hydrology and water quality [HYD-BMP1-9], employing best management practices to protect water and soil resources from contamination and erosion.

Therefore, based on the findings in this Initial Study, the Valley District, acting as the CEQA lead agency for this Proposed Project, will process a Mitigated Negative Declaration (MND) as the appropriate CEQA environmental determination for the Proposed Project. The Valley District will issue a Notice of Intent to Adopt a Mitigated Negative Declaration and circulate the MND package for review for the required 30-day period. Following receipt of comments, the Valley District will compile responses to any comments and prepare a final MND package for consideration by the Valley District. Based on the final MND package, the Valley District will consider whether implementation of the Proposed Project as defined in this document can proceed as determined by the District at the completion of the review process.

If you or your agency comments on this proposed MND, you or your agency will be provided responses to comments and notified of the date of the District's final review and decision. A decision by the Valley District to approve the MND would be based on all of the information available in the whole of the record before the District at the conclusion of the CEQA environmental review process for this Proposed Project. Completion of the CEQA review process would allow implementation of the Proposed Project in accordance with any approved mitigation measures and conditions of approval for the project.

5 SUMMARY OF MITIGATION MEASURES

The following mitigation measures were identified to reduce impacts to less than significant:

BIOLOGICAL RESOURCES:

BIO-1 Prior to the initiation of maintenance activities, a pre-construction nesting bird clearance survey shall be conducted to document the presence/absence of LBV on the project site. If LBV are documented within the Environmentally Sensitive Area appropriate avoidance buffers shall be installed around the occupied habitat to ensure no indirect impacts to LBV occur.

BIO-2

Option 1 - Off-site Permittee Responsible Mitigation

The Valley District will create, rehabilitate, and/or enhance a total of 40 acres of wetland/riparian/streambed habitat which will include freshwater marsh and willow scrub habitat similar to the pre-2017 emergency Project conditions in the Waterman Spreading Grounds. The Valley District will also rehabilitate and/or enhance 20 acres of alluvial fan scalebroom scrub habitat similar to that which will be removed by the proposed Project.

Prior to initiation of the Project activities, a complete description of the proposed mitigation project(s) will be presented to the regulatory permitting agencies (CDFW, RWQCB, and USACE) for review and approval. The mitigation proposal will identify the current condition of habitat, proposed methods of restoration, goals and objectives for the restored areas, and will include measurable success criteria based on the suggestions and requirements of the regulatory agencies. The Valley District will fund the preparation of Habitat Mitigation and Monitoring Plans and an Adaptive Monitoring Management Plans that will include Annual Reports presenting the previous year's monitoring results and recommended future management activities in order to sustain or surpass the habitat quality of the mitigation site in perpetuity. If desired by the permitting agencies, the Valley District will host an annual work-plan meeting attended by technical experts and staff from the permitting agencies in order to consider the most appropriate adaptive management activities to implement in the following year. The Valley District will secure long-term conservation of the restoration site and establish financial assurances approved by the permitting agencies. This mitigation measure is intended to satisfy the Valley District's CEQA requirements in addition to all mitigation requirements associated with the issuance of a CDFW Lakes and Streams Alteration Agreement, the U.S. Army Corps of Engineers Nationwide-3 Permit, and the Regional Water Quality Control Board 401 Water Quality Certification. Specific requirements associated with this mitigation option will be included in the above mentioned permits.

Option 2 - Purchase Credits from Mitigation Bank or Approved In-Lieu-Fee Program

The Valley District will purchase 40 wetland/riparian rehabilitation and streambed enhancement credits and 20 credits of alluvial fan habitat credits from approved mitigation bank(s) or In-lieu-fee (ILF) program. The Valley District will obtain approval in the choice of mitigation bank or ILF program prior to the credit purchase and provide proof of purchase to the regulatory agencies.

BIO-3 Bird nesting season generally extends from approximately February 1 through September 15 in southern California and specifically, April 15 through August 31 for migratory passerine birds. To avoid impacts to nesting birds (common and special status) during the nesting season, a qualified Avian Biologist will conduct pre-construction Nesting Bird Surveys (NBS) prior to project-related disturbance to nestable vegetation to identify any active nests. A nest shall be defined as active if it contains eggs or young, or potentially contains eggs or young if presence cannot be reasonably be determined. An inactive nest is defined as a nest that has been abandoned by the adult bird or once fledglings are no longer dependent on the nest site or parental care. If no active nests are found, no further action will be required. If an active nest is found, the biologist will set appropriate no-work buffers around the nest which will be based upon the nesting species, its sensitivity to disturbance, nesting stage and expected types, intensity and duration of disturbance. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved no-work buffer zone shall be clearly marked in the field, within which no disturbance activity shall commence until the qualified biologist has determined the young birds have successfully fledged and the nest is inactive.

CULTURAL RESOURCES:

CUL 1 In the event that evidence of historical resources are unearthed during construction activities, work in the immediate vicinity of the find will be stopped and a qualified archaeologist will be contacted to assess the find and recommend appropriate mitigation. No disturbance shall occur in the vicinity of the find until the site is evaluated by the archaeologist and the find is recorded or treated per the recommendations of the qualified archaeologist.

CUL 2 In the event that evidence of non-Native American archaeological resources are unearthed during construction activities, work in the immediate vicinity of the find will be stopped and a qualified archaeologist will be contacted to assess the find and recommend appropriate mitigation. No disturbance shall occur in the vicinity of the find until the site is evaluated by the archaeologist and the find is recorded or treated per the recommendations of the qualified archaeologist.

In the event that Native American cultural resources are discovered during project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the on the other portions of the project outside of the buffered area may continue during this assessment period. Additionally, pursuant to consultation with the San Manuel Band of Mission Indians (SMBMI), the SMBMI will be contacted if any such find occurs and be provided information and permitted/invited to perform a site visit when the archaeologist makes his/her assessment, so as to provide Tribal input. The archaeologist shall complete an isolate record for the find and submit this document to the applicant and Lead Agency for dissemination to the San Manuel Band of Mission Indians.

If significant Native American historical resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, an archaeologist qualified by the Secretary of the Interior (SOI) shall be retained to develop a cultural resources Treatment Plan, as well as a Discovery and Monitoring Plan, the drafts of which shall be provided to San Manuel Band of Mission Indians for review and comment. All in-field investigations, assessments, and/or data recovery enacted pursuant to the finalized Treatment Plan shall be monitored by a San Manuel Band of Mission Indians Tribal Participant(s). The Lead Agency and/or applicant shall, in good faith, consult with San Manuel Band of Mission Indians on the disposition and treatment of any artifacts or other cultural materials encountered during the project.Protocol for the inadvertent

discovery of Native American archaeological resources will be followed as detailed within the Tribal Consultation Agreement.

CUL-3 In the event that human remains are discovered, there shall be no disposition of such human remains, other than in accordance with the procedures and requirements set forth in California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98. These code provisions require notification of the County Coroner and the Native American Heritage Commission, who in turn must notify those persons believed to be most likely descended from the deceased Native American for appropriate disposition of the remains. Excavation or disturbance may continue in other areas of the project site that are not reasonably suspected to overlie adjacent remains or archaeological resources.

GEOLOGY AND SOILS

GEO-1 In the event paleontological resources are discovered, all work will stop, and a qualified paleontologist shall be retained to recover any fossils that are discovered. In the instance of an extended salvage period, the paleontologist shall work with the construction manager to temporarily direct, divert, or halt earthwork to allow recovery of fossil remains in a timely manner. A final summary report shall be completed that includes discussions of the methods used, stratigraphic section(s) exposed, fossils collected, photographs, and significance of recovered fossils.

HAZARDS AND HAZARDOUS MATERIALS

HAZ-1 The Department of Toxic Substances Control (DTSC) and San Bernardino County Fire Department Hazardous Materials Division shall be immediately notified in the event malodorous or discolored soils, liquids, containers, or other materials known or suspected to contain hazardous materials and/or contaminants are encountered during activities associated with the Proposed Project. Earthmoving activities in the vicinity of said material shall be halted until the extent and nature of the suspect material are determined by qualified personnel (as determined by the DTSC). The removal and/or disposal of any such contaminants shall be in accordance with all applicable local, State, and Federal standards.

HYDROLOGY AND WATER QUALITY

The MS4 permit requires the Valley District and the SBCFCD to implement the recommendations in the CASQA Stormwater Best Management Practice Handbook for Municipal activities (https://www.casqa.org/sites/default/files/BMPHandbooks/BMP_Municipal_Complete.pdf) to ensure that public agency facilities and activities do not contribute pollutants to receiving waters. The following conditions apply:

- **HYD-BMP 1: Avoid Channel Work during the Rainy Season to the Greatest Extent Practicable**

  The greatest potential to transport pollutants or debris/soil/sediment from work activity occurs while water is present in the channel. Within the County of San Bernardino's diverse watersheds, the rainy season is typically from October through April, with summer monsoons occurring in the desert during the summer months. The SBCFCD will prepare a water diversion plan should maintenance activities occur while flowing water is present.

- **HYD-BMP 2: Avoid Spills and Leaks**

The SBCFCD will ensure that equipment operating in and near the facility is in good working condition and free of leaks. No equipment maintenance and/or refueling will occur within District Facilities. Equipment used during routine maintenance activities will be parked outside of channels and/or washes on the road tops and/or adjacent roadway. All operations staff working with heavy equipment have been trained in the use of the equipment, and in spill containment and response for any unforeseeable accidents that may occur; further, a spill kit will be kept on site at all times. Special care will be taken to prevent liquid paint from entering aquatic resources while painting associated with graffiti removal is conducted. Any spills that occur shall be reported to California State Warning Center (Cal OES) at (800) 852-7550. Additionally, a copy of the Cal OES California Hazardous Materials Spill/Release Notification Guidance will be kept on-site while all maintenance activities take place. Further, if necessary, operations stall will need to follow up with the appropriate agencies as outlined in the Cal OES guidelines, which can be located on the Cal OES website at www.calema.ca.gov.

- **HYD- BMP 3: Avoid Road Base Discharge**

  The SBCFCD will implement measures in order to prevent the discharge of road base, fill, sediment, concrete, and/or asphalt beyond the previously established roadbed when maintaining existing driveways and dirt access roads within the maintenance activity area.

- **HYD-BMP 4: Concrete Washout Protocols**

  The SBCFCD will implement the appropriate waste management practices during on-site concrete repair operations. Waste management practices shall be applied to the stockpiling of concrete, curing, and finishing of concrete as well as concrete washout operations. Waste management practices shall be adequate to ensure that all fluids associated with the curing, finishing, and washout of concrete shall not be discharged into any area with the potential to enter an aquatic resource. Further, all concrete waste will be stockpiled separately from sediment and protected with erosion control measures to ensure that concrete dust and/or debris is not discharged into an aquatic resource. The SBCFCD will determine the appropriate waste management practices based on considerations of flow velocities, site conditions, availability of stockpile locations, availability of erosion control materials, construction costs, and other requirements that may be outlined within the SBCFCD's MS4 permits.

- **HYD-BMP 5: Location of Temporary Stockpiles and Staging Areas**

  Stockpile locations and staging areas will be located within the disturbed/graded areas outside of the facility bottom and at the tops of the levees/banks to the greatest feasible extent. Silt fences, berms, or other methods of erosion control may be used if stockpiles are to remain in designated areas for greater than 10 days. Materials may be stored temporarily within the facilities during excavation activities if placed outside of watercourses and storm drain inlets. Additionally, heavy equipment may be staged on the access roads within the maintenance activity area, but will be confined to those locations where potential pollutants cannot enter into an aquatic resource; this will be conducted in combination with HYD-BMP-1

- **HYD-BMP 6: Location of Permanent Stockpiles**

  This project will include permanent or long-term stockpiles onsite that will be located outside of streambed areas identified as Waters of the State and Waters of the U.S. Any material not placed onsite will be removed offsite by a SBCFCD contractor or placed at the nearest Operations yards.

- **HYD-BMP 7: Application of Pesticides, Herbicides, and Fertilizers**

The District Aquatic Pesticides permit outlines a schedule of monitoring requirements, BMPs, and conditions designed to promote the reduction of pollutants in stormwater discharges. This permit (Order Number 2013-0002-DWQ) requires the SBCFCD to manage pesticides and herbicide applications under specific criteria.

General Requirements

Apply pesticides and herbicides in accordance with California Department of Pesticide Regulation requirements: (1) Read and follow manufacturers' label requirements before each application; (2) Check sprinkler system for overflows into the streets and storm drain; (3) As much as possible, utilize safer alternatives such as insecticidal soaps and horticultural oils.

Herbicide Applicator Training Requirement

The San Bernardino County Department of Agriculture/Weights and Measures (Ag) is contracted by the SBCFCD to spray various flood control facilities throughout the County for vegetation control. Many times the Ag spray rigs are not able to spray close to fence lines and in tight areas. Spotty re-growth also occurs and is required to be re-sprayed.

The SBCFCD consulted with Ag to develop a plan for weed abatement that is an extension of Ag's current weed abatement program; using the same herbicide (Monsanto Roundup Pro Concentrate or similar glyphosate product). The application process has been approved by Ag and is determined not to require a California State Qualified Applicator License (QAL) or Certificate (CAC) per 3CCR section 6504. The District application of herbicide will be under the constant monitoring of Ag, who will be dispensing the herbicide and conducting random monitoring inspections in the field. SBCFCD staff will complete daily records of herbicide use by amount and location. These logs will be turned in to Ag monthly, to ensure no overuse of herbicides occurs.

At least annually, Ag will provide training to SBCFCD staff consisting of:

1. Classroom instruction on the laws and regulations governing the application of herbicides in the State of California.
2. Review of the functions of the Department of Agriculture/Weights and Measures Pest Management Division Written Employee Training Program for Pesticide Applicators, Herbicide Applications; including:
    a. Safety Procedures;
    b. MSDS for Monsanto Roundup Pro Concentrate (or similar glyphosate product), signs, symptoms & effects of exposure;
    c. Pesticide Safety Series N1, N2, N4, N5, N7, N8;
    d. Review of the Dept of Ag Pesticide Monitoring Inspection form;
    e. Instruction on completing and submission of the required daily use log;
    f. Practical demonstration of identification and proper use of items required for safe transport, mixing, pouring, application, clean up, storage, disposal of wastes, and emergency procedures associated with the Roundup Pro Concentrate (or similar glyphosate product) herbicide application procedure;
    g. The required personal protective equipment and hygiene practices.
3. Employee will perform a proficiency demonstration of knowledge of the above training items.

4. Employee will successfully complete a verbal/written post test on the above training. Herbicides shall be applied by the District on a limited basis. Licensing standards and procedures are established by DPR and are described in:
   - 1998 California Code of Regulations, Title 3 (Food and Agriculture); and
   - 1997 California Food and Agriculture Code (Divisions 6, 7, and 13).

- **HYD-BMP 8: Invasive Plant Removal Protocols**

  Invasive plant species shall be removed in a manner that prevents propagation of those species in the same location and/or in other locations throughout the facility and/or County. Where maintenance activities are required, Operations staff will spray and/or mow invasive plant species before seeds ripen. All cut/removed invasive vegetation shall be taken to an approved refuse facility as a load designated for destruction. Operations staff shall prevent cut stems and/or seed material from being transported downstream and/or being left behind to allow the seed to propagate. In the case of giant reed (Arundo donax) removal, the SBCFCD shall minimize ground disturbance and use foliar glyphosate treatment on smaller infestations (see HYD-BMP-7 Aquatic Pesticide Applications, above). Stems shall be removed only when the plants are determined to be dead and unable to re-sprout and/or propagate.

- **HYD-BMP 9: Remove Debris**

  Remove litter and debris from facility as necessary.

TRIBAL CULTURAL RESOURCES

TRC-1 In the event that pre-contact and/or post-contact cultural resources are discovered during project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the other portions of the project outside of the buffered area may continue during this assessment period. Additionally, the San Manuel Band of Mission Indians Cultural Resources Department (SMBMI) as well as the Most Likely Descendent (MLD) shall be contacted, if any such find occurs and be provided information after the archaeologist makes his/her initial assessment of the nature of the find, so as to provide Tribal input with regards to significance and treatment. The SMBMI shall be contacted regarding any pre-contact and/or post-contact cultural resources discovered during project implementation, and be provided information regarding the nature of the find, so as to provide Tribal input with treatment. Should the find be deemed significant, as defined by CEQA (as amended,) 2015), a cultural resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with SMBMI and other tribal entities to be determined as necessary, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents SMBMI for the remainder of the project, should SMBMI elect to place a monitor on-site. Any and all archaeological/cultural documents created as a part of the project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the applicant and Lead Agency for dissemination to SMBMI. The Lead Agency and/or applicant shall, in good faith, consult with SMBMI throughout the life of the Project.

TRC-2 If significant Native American historical resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to SMBMI for review and comment. The archaeologist shall monitor the remainder of the project and implement the Plan accordingly.

6 REFERENCES

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APPENDICES

Appendix A
Biological Resources Report

Biological Resources Assessment
Jurisdictional Delineation

Waterman Spreading Grounds
San Bernardino, San Bernardino County, California

APN #'s: 0154-351-08

USGS 7.5' *San Bernardino North*, Quadrangle
Unsectioned, Township 1 North, Range 4 West

Prepared for:

San Bernardino Valley Municipal Water District
Attn: Heather Dyer
380 East Vanderbilt Way
San Bernardino, California 92408

March 2019

Prepared by:

Jericho Systems, Inc
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Certification

Jericho Systems, Inc
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Contact: Shay Lawrey, President, and Ecologist/Regulatory Specialist

Certification: I hereby certify that the statements furnished herein, and in the attached exhibits present data and information required for this analysis to the best of my ability, and the facts, statements, and information presented are true and correct to the best of my knowledge and belief. This report was prepared in accordance with professional requirements and standards. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the project proponent and that I have no financial interest in the project.

_____

Shay Lawrey, Ecologist/Regulatory Specialist

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Tables

Attachments

1 Introduction

Jericho Systems, Inc. (Jericho) is pleased to provide this report that details the results of biological resources surveys conducted for the proposed Waterman Spreading Grounds project (Project) located in the City of San Bernardino. The San Bernardino Valley Municipal Water District (Valley District) proposes to use a portion of the Waterman Spreading Grounds for groundwater recharge.

Studies completed for this Project include the following:

- Biological Resources Assessment
- Jurisdictional Delineation

Biologists conducted biological resources surveys on October 18, 2018 on behalf of the Valley District. The purpose of the biological resources assessment is to provide sufficient baseline information to the Valley District, and, if required, to federal and State regulatory agencies, including U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW), to determine if impacts will occur special-status plant and wildlife species and to identify mitigation measures to offset those impacts. Particular attention was given to the suitability of the habitat to support San Bernardino kangaroo rat (*Dipodomys merriami parvus*), southwestern willow flycatcher (*Empidonax traillii extimus*), California gnatcatcher (*Polioptila californica*), and thread-leaved brodiaea (*Brodiaea filifolia*). It should be noted that the project site is located in proximity to designated Critical Habitat for San Bernardino kangaroo rat, southwestern willow flycatcher, and thread-leaved brodiaea, but is not located within federally designated Critical Habitat.

The purpose of the jurisdictional delineation (JD) is determine the extent of State and /or federal jurisdictional waters that are subject to Sections 404 and 401 of the federal Clean Water Act (CWA) regulated by the U.S. Army Corps of Engineers (USACE) and Regional Water Quality Control Board (RWQCB) respectively; and/or Section 1602 of the California Fish and Game Code (FCG) administered by the CDFW.

1.1 Site History

Since the 1970s, the Valley District has been recharging SWP water in several detention basins owned and operated by the SBCFCD in the San Bernardino, Rialto and Yucaipa areas, when they are not needed for flood control. This activity was originally covered as part of a legal agreement but has been more informal in recent years. The agreement consists of the Valley District contracting with the SBCFCD to perform specific maintenance activities in an effort to support water recharge activities.

In July 2017, the SBCFCD notified Valley District that standing water and algae had created a condition that could present a vector control issue. Therefore, Valley District coordinated with the regulatory agencies to complete maintenance activities using an emergency authorization process. Valley District stopped discharging water into the Waterman basins and subsequently removed vegetation and algae from the basins using heavy machinery. After the bottom of the basins and a buffer on the slope were cleaned of vegetation Valley District resumed imported water discharge into Waterman Basins.

Work to clear the basins and outlets was conducted under emergency permit conditions from the USACE and CDFW and included the following scope:

- Clearing an area of up to 300 feet by 50 feet of vegetation and debris near the radial gate and culvert
- Clearing basin bottoms of six basins of the Waterman Spreading Grounds

The work resulted in a total of 1.77 acres of removal of various vegetation within the basin bottoms of the Waterman Spreading Grounds (Mikael Romich, November 17, 2017) as identified in Table 1. It should be noted that the impacts identified in Table 1 were subject to CDFW jurisdiction. Impacts to open water and non-native

grassland below the ordinary high water mark of the basins, which would fall under the USACE and RWQCB jurisdiction were not assessed. The USACE and RWQCB emergency permits allowed for 0.48 acre of impacts to both Waterman and Twin spreading basins during the emergency work.

Table 1
Vegetation Removal from 2017 Emergency Clearing Operations

Facility	Mulefat scrub	Willow thickets	Cattail or bulrush patches	Scalebroom scrub	Buckwheat scrub	Mixed native vegetation	Habitat suitable to LBVI
Basin 2W	0.005	--	0.046	--	--	--	0.005
Basin 2E	0.04	0.31	--	--	--	--	0.35
Basin 2W-2E Channel	--	0.35	--	--	--	--	0.35
Basin 2A	0.037	--	0.025	--	--	--	--
Basin 3E	--	--	--	--	--	--	--
Basin 3E north	--	--	--	--	0.176	--	--
Basin 3W	--	--	0.026	--	--	--	--
Basin 3A	--	--	0.002	--	--	--	--
Basin 3B	--	--	--	--	--	0.537	--
Basin 3D	0.004	--	--	0.04	--	--	--
Basin 4		--	--	--	--	0.167	--
Totals	**0.09**	**0.66**	**0.10**	**0.04**	**0.18**	**0.70**	**0.71**

1.2 Site Location

The basins are an existing SBCFCD facility (SBCFCD System # 2-403-4 A-D) located approximately 3.2 miles northeast of the 210 Freeway/215 Freeway interchange in the City of San Bernardino, west of State Route 330, and north of Interstate 10. The Site lies the southern foothills of the San Bernardino Mountains in the City of San Bernardino, San Bernardino County, California.). Specifically, the project site is bordered by North Waterman Avenue to the west, East 40th Street to the south within Assessor's Parcel Number (APN) 0154-351-08. The Site is identified on the *San Bernardino North* U. S. Geological Survey's (USGS) 7.5-minute topographic map in an unsectioned portion of Township 1 North, Range 4 West (Figures 1 & 2).

1.3 Environmental Setting

San Bernardino is subject to both seasonal and annual variations in temperature and precipitation. Average annual maximum temperatures typically peak at 96 degrees Fahrenheit (°F) in July and August and fall to an average annual minimum temperature of 41°F in December. Average annual precipitation is greatest from January through March and reaches a peak in February (3.7 inches). Precipitation is lowest in the month of July (0.04 inches). Annual precipitation averages 16.43 inches.

Figure 3 shows the location of the soils present onsite. Below is are the descriptions of each soil:

- Riverwash-Soboba families association, 2 to 15 percent slopes (EsD). Soils in this series are formed in alluvium from granitic rock sources and are found on alluvial fans and flood plains. These soils are excessively drained (USDA, 2018)

- Soboba stony loamy sand, 2 to 9 percent slopes (SpC). Soils in this series are formed in alluvium from granitic rock sources and are found on alluvial fans and flood plains. These soils are excessively drained with very slow runoff/very rapid permeability (USDA, 2018).

- Tujunga gravelly loamy sand, 0 to 9 percent slopes (TvC). Soils in this series are formed in alluvium from granitic sources and are found on alluvial fans and flood plains. These soils are somewhat excessively drained (USDA, 2018).

2 Project Description

The Valley District proposes to contract with the SBCFCD, or an outside contractor, to conduct specific maintenance activities in 10 of the 14 existing percolation basins in the Waterman Spreading Grounds to facilitate the groundwater recharge of up to 30,000AF of SWP per year, based on water availability. On average approximately 15,000 AFY would be recharged.

In general, the Valley District plans to conduct a maintenance-recharge cycle in the late winter/early spring and again in the late summer/early fall. With each cycle, Valley District would first remove vegetation and excess sediment from the sideslopes and basin floors, rip the basin floors, and repair inlet/outlet and gate structures of only the areas of the basins in the Spreading Grounds that will be used for recharge. The basins will continue to attenuate storm water when needed. The two basins outside the Valley District proposed project area would be maintained by SBCFCD for flood control purposes and are not part of the Valley District's recharge operations plan.

Once the basins have been cleared of vegetation and the bottom prepped for recharge, the Valley District would discharge SWP water on an ongoing basis. At the end of each six-month impoundment cycle, the Valley District will close the valves to not allow any additional water flow, and allow each of the basins to percolate the existing water so that each basin can dry (approximately 10 days). Once the basins are dry, vegetation will be removed from sideslopes and the basin floor and repairs of any gates, inlet/outlets, and sideslope repair will occur. Once the basin maintenance has been performed, the Valley District will initiate another cycle of water recharge.

During periods of inundation, vegetation will be sprayed for vector control and/or removed as necessary if posing a vector control problem. Any algae blooms will be controlled by chemical spraying as needed with chemicals as approved by the Santa Ana Regional Water Quality Control Board (SARWQCB) and applied by professional, licensed applicators.

Soil and vegetation removed from the operations will be placed in a stockpile location in an upland area on the north end of the facility. Once the stockpiled material is dry enough for transport, the material will be taken to the Mid-Valley Landfill in Fontana for disposal.

The maintenance activities would generally consist of the following but are not limited to:

Activity 1 - Regular removal of basin vegetation
Activity 2 - Regular removal of excess sediment
Activity 3 – Ripping/scraping the bottom of the basins
Activity 4 - Minor repair/rehabilitation of existing basin and structures
Activity 5 - Filling the basins with water from the State Water Project and monitoring

3 Survey Methods

Data regarding biological resources on the project site were obtained through literature review and field investigations.

3.1 Biological Resources Assessment

3.1.1 Literature Review

Prior to performing the field surveys, available databases and documentation relevant to the Project site were examined for documented occurrences of sensitive species in the area. The USFWS threatened and endangered species occurrence data overlay, as well as the most recent versions of the California Natural Diversity Database (CNDDB), Biogeographic Information and Observation System (BIOS), Calflora, and California Native Plant Society Electronic Inventory (CNPSEI) databases were searched for sensitive species data on the *San Bernardino North* and *Harrison Mountain* USGS 7.5-minute series quadrangles. The site's proximity to the *Harrison Mountain* quadrangle lead to its inclusion in the review. These databases contain records of reported occurrences of State- and federally-listed species or otherwise sensitive species and habitats that may occur within the vicinity of the Project site. As stated above, in addition to the databases, Jericho reviewed reports that were previously prepared for this Project including:

- Mikael Romich, *Biological Preconstruction and Monitoring Results for Waterman Basin Spreading Grounds Emergency Work, County of San Bernardino California* (November 17, 2017).

3.1.2 Field Surveys

Biologist Travis McGill conducted a general biological resources assessment on October 18, 2018, with an emphasis on species known to occur in the area. Mr. McGill has advanced degrees and multiple years of experience surveying within San Bernardino County. Systematic and comprehensive surveys were conducted with 100 percent coverage of the entire site.

Wildlife species were detected during field surveys by sight, calls, tracks, scat, or other sign. In addition to species observed, expected wildlife usage of the site was determined per known habitat preferences of regional wildlife species and knowledge of their relative distributions in the area. The focus of the faunal species surveys was to identify potential habitat for special status wildlife within the project area. Disturbance characteristics and all animal sign encountered on the site are recorded in the results section.

3.2 Jurisdictional Delineation

On October 18, 2018 biologist Travis McGill also evaluated the project site and adjacent areas for the presence of riverine/riparian/wetland habitat and jurisdictional waters, i.e. waters of the U.S. as regulated by the USACE and RWQCB, and/or jurisdictional streambed and associated riparian habitat as regulated by the CDFW.

Prior to field surveys, aerial imagery of the site was examined and compared with the surrounding USGS 7.5-minute topographic quadrangle maps to identify drainage features within the survey area as indicated from topographic changes, blue-line features, or visible drainage patterns. The USFWS National Wetland Inventory and Environmental Protection Agency (EPA) Water Program "My Waters" data layers were also reviewed to determine whether any hydrologic features and wetland areas had been documented within the vicinity of the site. Similarly, the Soil maps from the U.S. Department of Agriculture (USDA) - Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2018) were reviewed to identify the soil series on site and to check if they have been identified regionally as hydric soils. Upstream and downstream connectivity of waterways (if present) was reviewed in the field, on aerial imagery, and topographic maps to determine jurisdictional status.

During the field surveys, the project site was assessed for depressions, inundation, presence of hydrophytic vegetation, staining, cracked soil, ponding, and indicators of active surface flow and corresponding physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris. Suspected jurisdictional areas were checked for the presence of definable channels, soils, and hydrology.

Evaluation of potential federal jurisdiction followed the regulations set forth in 33CFR part 328 and the USACE guidance documents and evaluation of potential State jurisdiction followed guidance in the Fish and Game Code and A Review of Stream Processes and Forms in Dryland Watersheds (CDFW, 2010).

4 Results

4.1 Existing Biological and Physical Conditions

The Waterman Spreading Grounds consist of a series of basins mostly covered in low-growing native and non-native vegetation communities with small patches of riparian vegetation (i.e., willow scrub and mulefat scurb). Vegetation in the basins and surrounding areas is highly variable based on position in the basins (e.g., basin bottom, side slope) and ongoing disturbance regimes from maintenance activities and filling of the basins. These basins have been subject to anthropogenic routine anthropogenic disturbances from maintenance since the 1970s. It should be noted that vegetation was removed in the basins in 2017 under an emergency permit. The majority of the plant communities described in the 2017 emergency permit continue to persist on-site, and the vegetation removed in 2017 was not observed during the 2018 field investigation.

Soils on site are comprised of Riverwash-Soboba families association (2-15% slopes), Soboba stony loamy sand (2-9% slopes), and Tujunga gravelly loamy sand (0-9% slopes). These soils are excessively drained to somewhat excessively drained soils that are formed in alluvium from granitic sources.

Six (6) plant communities were observed within the boundaries of the project site during the habitat assessment (Exhibit 4, *Vegetation*): California Sagebrush-Buckwheat Scrub, Sagebrush-Scalebroom Scrub, Willow Scrub, Mulefat Scrub, Non-Native Grassland, and Eucalyptus Stand. In addition, two (2) land cover types were mapped: bare ground and open water. These plant communities and land cover types for each basin are described in further detail below. The proposed Project impacts to these communities are identified in Table 2.

Basins 2E and 2W

The bottom of Basins 2E and 2W were full of water at the time of the survey. The northern and southern margins of the basins support a sparse mulefat plant community dominated by mulefat (*Baccharis salicifolia*) at the highwater line. Within this plant community individual eucalyptus (*Eucalyptus* sp.), willow (Salix sp.), and cottonwood (*Popolus fremontii*) were observed. A non-native grassland plant community was observed near the northwest boundary of the basin. This area has previously been disturbed from maintenance activities, but supported brome species (*Bromus* ssp.), Russian thistle (*Salsola tragus*), and short-podded mustard (*Hirschfeldia incana*). The northwest corner of the basin, and middle of the northern and southern boundaries support a California sagebrush-buckwheat scrub plant community. This plant community is dominated by California sagebrush (*Artemesia californica*) and (*Eriogonum fasciculatum*). Other common plant species within this plant community include scalebroom (*Lepidospartum squamatum*), jimsonweed (*Datura wrightii*), prickly pear (*Opuntia littoralis*), telegraph weed (*Heterotheca grandiflora*), common sunflower (*Helianthus annuus*), Russian thistle, and non-native grasses. Near the northwest corner of the basin where the District Outlet Facility is located, is a willow scrub plant community. This plant community supports sparse willow (*Salix* sp.). with a mix of castor bean (*Ricinus communis*), fountain grass (*Pennisetum setaceum*), and mulefat.

Basin 2A

The bottom of Basin 2A supported water at the time of the survey. The southern boundary of the basin supports a sparse mulefat scrub plant community and the northern boundary consist of a California sagebrush-buckwheat scrub plant community. One large eucalyptus tree occurs in the eastern part of the basin.

Basin 3A

The bottom of Basin 3A contained water during the survey. Several eucalyptus stands were observed in the middle of the basin and on the southern boundary of the basin. A small mulefat scrub plant community was observed on the southwest boundary of the basin. The northern slopes of the basin support a California sagebrush-buckwheat scrub pant community.

Basin 3B

The majority of Basin 3B contained water during the survey. The southern boundary of the basin supports a sparse mulefat scrub plant community and bare ground. There is also a small patch of mulefat scrub near the northeast corner of the basin. The northern boundary of the basin supports a California sagebrush-buckwheat scrub plant community.

Basin 3C

The bottom of Basin 3C primarily consisted of a dried non-native grassland plant community dominated by bromus species (*Bromus* ssp.). The southern boundary of the basin supports a sparse mulefat scrub plant community and the northern boundary consist of a California sagebrush-buckwheat scrub plant community.

Basin 3D

Basin 3D contained water during the survey, largely pooled in the eastern portion. The southern margins support a sparse mulefat scrub plant community while the northern banks support a California sagebrush-buckwheat scrub plant community. One large California sycamore (*Platanus racemosa*) tree occurs in the north-central part of the basin.

Basin 3E and 3W

The lower basin bottom of Basin 3W and Basin 3E were inundated with water at the time of the survey. The two upper basin bottoms of Basin 3W were dry and supported a non-native grassland plant community. A non-native grassland plant community was also observed on the northwest corner of Basin 3W. The southern margins of the basins support a sparse mulefat plant community dominated by mulefat (*Baccharis salicifolia*) at the highwater line. In addition, a mulefat scrub plant community was also observed in the middle of the northern portion of Basin 3E. The northern portion of Basin 3W around the two upper basin bottoms and the majority of the northern slope of Basin 3E support a California sagebrush-buckwheat scrub plant community. Near the northeast corner of Basin 3E where water is outlet into the basin is a willow scrub plant community.

Basin 4

The bottom of Basin 4 is very narrowly distributed and primarily supports a non-native grassland plant community. The bottom of the basins consists of a mix of knotweed, various sedges, perennial pepperweed, horseweed, cocklebur, ragweed, common sunflower, and non-native grasses. A eucalyptus stand was also observed in the middle of Basin 4. The slopes of Basin 4 are dominated by native vegetation, consisting of a sagebrush-scalebroom plant community. This plant community primarily consists of California sagebrush with patches of scalebroom. Other common plant species observed include California buckwheat, scalebroom, white sage (*Salvia apiana*), and yerba santa (*Eriodictyon trichocalyx*).

Table 2: Plant Communities in Each Basin

Facility	California Sagebrush-Buckwheat Scrub (acres)	Sagebrush-Scalebroom Scrub (acres)	Willow Scrub (acres)	Mulefat Scrub (acres)	Non-Native Grassland (acres)	Eucalyptus Stand (acres)	Open Water (acres)	Bare Ground (acres)
Basin 2A	1.42	–	–	0.48	–	–	2.94	1.12
Basin 2E and 2W	2.71	–	0.14	3.21	_	–	6.83	4.68
Basin 3A	1.95	–	–	0.20	–	1.2	1.74	0.82
Basin 3B	0.90	–	–	0.16	–	–	2.58	0.97
Basin 3C	2.26	–	–	0.91	4.44	–		0.69
Basin 3D	0.72	–	–	0.22	_	–	1.75	0.48
Basin 3E and 3W	12.49	–	0.18	2.61	2.66	–	4.64	4.64
Basin 4	–	10.07	–	–	3.30	0.98	–	0.16
Stockpile	–	–	–	–	–	–	–	0.96
Totals	**22.45**	**10.07**	**0.32***	**7.79**	**13.51**	**2.18**	**20.48**	**14.52**

**Willow scrub exists only near outlets.*

4.2 Special Status Species

4.2.1 Least Bell's Vireo

Least Bell's vireo is listed as endangered by both the Federal Endangered Species Act (ESA) and California ESA (CES). While Bell's vireo ranges throughout the southern American Southwest, the Midwest, and Mexico, the "least" subspecies only occurs in the coastal half of southern California and into Baja California. This species occurs in a variety of riparian habitats, including riparian woodlands, riparian scrub, brushy fields, young forests, scrub oaks, coastal chaparral, and mesquite brushlands. Surface water is preferred but is not required, and in California this species shows a high tendency toward willow (*Salix* sp.) cover. The Bell's vireo breeding season typically extends from early April to the end of July.

The area mapped as Environmentally Sensitive Area in Exhibit 4 provides suitable habitat for this species within in the Waterman Spreading Grounds, where a patch of dense Southern Willow Scrub is present. This area is known as Basin 1 of the Waterman Spreading Grounds, and is not a part of the Valley District's Proposed Project. According to eBird, a single male least Bell's vireo was recorded in 2015 within the ESA Environmentally Sensitive Area, but no nesting behaviors were observed. The basins described in this report have the potential to provide suitable foraging habitat for this species, but are not expected to provide suitable nesting opportunities. However, the habitat within the Environmentally Sensitive Area, outside of the proposed maintenance area, has the potential to provide suitable nesting opportunities.

Prior to the initiation of maintenance activities, a pre-construction nesting bird clearance survey shall be conducted to document the presence/absence of least Bell's vireo on the project site. If least Bell's vireo are documented within the Environmentally Sensitive Area appropriate avoidance buffers shall be installed around the occupied habitat to ensure no indirect impacts to least Bell's vireo occur.

1.1.1 California Gnatcatcher

California gnatcatcher is a federally threatened species with restricted habitat requirements, being an obligate resident of sage scrub habitats that are dominated by California sagebrush. This species generally occurs below 750 feet elevation in coastal regions and below 1,500 feet inland. It ranges from Ventura County south to San Diego County and northern Baja California and is less common in sage scrub with a high percentage of tall shrubs.

It prefers habitat with more low-growing vegetation. California gnatcatchers breed between mid-February and the end of August, with peak activity from mid-March to mid-May. Population estimates indicate that there are approximately 1,600 to 2,290 pairs of California gnatcatcher remaining. Declines are attributed to loss of sage scrub habitat due to development, as well as cowbird nest parasitism.

The PCEs essential to support the biological needs of foraging, reproducing, rearing of young, intra-specific communication, dispersal, genetic exchange, or sheltering for California gnatcatcher are:

1. Dynamic and Successional sage scrub Habitats and Associated Vegetation (RAFSS, Coastal Sage-Chaparral Scrub, etc.) that provide space for individual and population growth, normal behavior, breeding, reproduction, nesting, dispersal and foraging; and

2. Non-sage scrub habitats such as chaparral, grassland, and riparian areas, in proximity to sage scrub habitats that provide linkages to help with dispersal, foraging and nesting.

Although fragmented and subject to routine disturbances the California sagebrush-buckwheat scrub and sagebrush-scalebroom scrub plant communities have the potential to provide suitable habitat for California gnatcatcher. Per eBird, California gnatcatcher have been documented approximately 3.5 miles northwest of the project site near California State University San Bernardino (2013), and approximately 5.4 miles southeast of the project site along City Creek (2016). No observations have been recorded on-site or within East Twin Creek immediate east of the project site. The project site is on the upper limit of the elevation range for this species; coastal California gnatcatcher generally occurs below 1,500 feet inland. Since the project site is isolated form known occupied habitat, and subject to routine anthropogenic disturbances, coastal California gnatcatcher has a low potential to occur within the boundaries of the project site. No focused surveys for California gnatcatcher are recommended.

4.2.2 San Bernardino Kangaroo Rat

SBKR, a federally listed as endangered, is one of several kangaroo rat species in its range. The Dulzura, the Pacific kangaroo rat (*Dipodomys agilis*), and the Stephens' kangaroo rat (*Dipodomys stephensi*) occur in areas occupied by the SBKR, but these other species have a wider habitat range. The habitat of SBKR is described as being confined to pioneer and intermediate RAFSS habitats, with sandy soils deposited by fluvial (water) rather than Aeolian (wind) processes. Burrows are dug in loose soil, usually near or beneath shrubs.

SBKR is one of three subspecies of the Merriam's kangaroo rat. The Merriam's kangaroo rat is a widespread species that can be found from the inland valleys to the deserts. The subspecies known as the SBKR, however, is confined to inland valley scrub communities, and more particularly, to scrub communities occurring along rivers, streams and drainages. Most of the drainages have been historically altered as a result of flood control efforts and the resulting increased use of river resources, including mining, off-road vehicle uses and road and housing development. This increased use of river resources has resulted in a reduction in both the amount and quality of habitat available for the San Bernardino kangaroo rat. The past habitat losses and potential future losses prompted the emergency listing of the San Bernardino kangaroo rat as an endangered species (USFWS, 1998a). Primary Constituent Elements (PCE's) are a physical or biological features essential to the conservation of a species for which its designated critical habitat is based on. Examples of PCE's include food, water, space for individual and population growth, cover or shelter, etc. The PCEs essential to support the biological needs of foraging, reproducing, rearing of young, intra-specific communication, dispersal, genetic exchange, or sheltering for SBKR are:

1. River, creek, stream, and wash channels; alluvial fans, flood plains, flood benches and terraces; and historic braided channels that are subject to dynamic geomorphological and hydrological processes;

2. Alluvial sage scrub and associated vegetation such as coastal sage scrub and chamise chaparral with a moderately open canopy (Riversidean Alluvial Fan Sage Scrub [RAFSS]);

3. Soil series consisting of sand, sandy loam, or loam within its geographical range;
4. Upland areas proximal to flood plains containing suitable habitat (land adjacent to alluvial fan that provides Refugia); and
5. Moderate to low degree of human disturbances to habitat.

A CNDDB query was conducted for documented locations of SBKR, and the closest observation for SBKR was documented in a 1997 record approximately 1.25 miles east of the facility corridor. The project site does not support undisturbed RAFSS habitats and is no longer exposed to hydrological processes needed to maintain suitable SBKR habitat. A focused trapping study for SBKR was conducted in August 2015 in the Waterman Spreading Grounds (Jericho, 2015). Trapping results were negative for this species.

SBKR are not expected to occur within the basins where potentially suitable habitat is present due to the isolated nature of the habitat (not connected to a source population), suboptimal quality, small habitat patch size, and the historical disturbance regime (since 1940).

4.2.3 Special-Status Plant Species

The basins have been subject to a variety of anthropogenic disturbances from maintenance activities and isolated from native plant populations within East Twin Creek. These disturbances have reduced the suitability of the habitat for special-status plant species known to occur in the general vicinity of the project site. Based on habitat requirements for specific special-status plant species and the availability and quality of habitats needed by each species, it was determined that none of the special-status plant species known to occur in the general vicinity of the project site are expected to occur. It should be noted that focused surveys conducted in 2015 for special-status plant species were negative.

4.2.4 Nesting Birds

The project site contains sufficient vegetation on site to provide suitable nesting bird habitat. Although no nesting birds were observed on site, nesting bird surveys should be conducted prior to any construction activities taking place during the nesting season (generally February 15th to September 15th) to avoid potentially taking any birds or active nests. In general, impacts to all bird species (common and special status) can be avoided by conducting work outside of the nesting season, or between approximately September 16th and February 14th), and conducting a worker awareness training. However, if all work cannot be conducted outside of nesting season, a nesting bird survey can be conducted by a qualified avian biologist to determine if any active nests are present. If active nests are found, they would be avoided by way of a no-work buffer area until they become inactive.

4.3 Jurisdictional Delineation

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The USACE Regulatory Branch regulates discharge of dredge or fill materials into “waters of the United States” pursuant to Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFW regulates alterations to streambed and bank under Fish and Wildlife Code Sections 1600 et seq., and the RWQCB regulates discharges into surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

The on-site basins flow into East Twin Creek that borders the eastern boundary of the project site. East Twin Creek is tributary to the Santa Ana River (Relatively Permanent Water) which is ultimately tributary to the Pacific Ocean (Traditional Navigable Water). Therefore, the on-site basins would qualify as waters of the United States and fall under the regulatory authority of the USACE, RWQCB, and CDFW.

Waters of the U.S.

The USACE has authority to permit the discharge of dredged or fill material in waters of the U.S. (WoUS) under Section 404 CWA. WoUS are defined as: "All waters used in interstate or foreign commerce; all interstate waters including interstate wetlands; all other waters such as intrastate lakes, rivers, streams (including intermittent and ephemeral streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds, where the use, degradation, or destruction of which could affect interstate commerce; impoundments of these waters; tributaries of these waters; or wetlands adjacent to these waters" (Section 404 of the CWA; 33 CFR 328.3 (a). CWA jurisdiction exists over the following:

1. all traditional navigable waters (TNWs);
2. all wetlands adjacent to TNWs;
3. non-navigable tributaries of TNWs that are relatively permanent waters (RPWs) i.e., tributaries that typically flow year-round or have continuous flow at least seasonally; and
4. every water body determined to have a significant nexus with TNWs.

The bottom of all of the basins, to the highwater line, which are depicted as open water and the non-native grassland in the middle of Basins 3W, 3C, and 4 were determined to fall under the jurisdictional authority of the USACE and the RWQCB.

Based on the proposed maintenance plan, approximately 30.87 acre of impacts will occur to USACE and RWQCB jurisdictional waters. Table 3 details the summary of impacts within each Basin.

State Lake/Streambed

In addition to the bottom of the basins, the fringe mulefat scrub and willow scrub plant communities associated with the basins would qualify as CDFW jurisdictional areas. Based on the proposed maintenance plan, approximately 73.69 acre of impacts will occur to CDFW jurisdiction. Table 3 details the summary of impacts within each Basin.

Table 3: Summary of Jurisdictional Impacts

Facility	**California Sagebrush Buckwheat scrub** (acres)	**Sagebrush scalebroom scrub** (acres)	**Willow Scrub** (acres)	**Mulefat Scrub** (acres)	**Eucalyptus Stand (acres)**	**Non-Native Grassland** (acres)	**Open Water** (acres)
	CDFW Streambed & Associated Vegetation					USACE/RWQCB/CDFW Jurisdiction	
Basin 2A	1.42	–	–	0.48	–	–	2.94
Basin 2E and 2W	2.71	–	0.14	3.21	–	–	6.83
Basin 3A	1.95	–	–	0.20	–	–	1.74
Basin 3B	0.90	–	–	0.16	1.2	–	2.58
Basin 3C	2.26	–	–	0.91	–	4.44	
Basin 3D	0.72	–	–	0.22	–		1.75
Basin 3E and 3W	12.49	–	0.18	2.61	–	2.66	4.64
Basin 4	–	10.07	–	–	0.98	3.30	–
Totals	**22.45**	**10.07**	**0.32**	**7.79**	**2.18**	**10.40**	**20.48**

Survey Limitations

No limitations significantly affected the results and conclusions given herein. Surveys were conducted during the appropriate season to observe the target species, in good weather conditions, by a qualified biologist who followed all pertinent protocols.

5 Conclusions and Recommendations

The Project proposes to increase groundwater supplies through water storage in the basins. Silt and debris will be removed from the basin bottoms a maximum of twice per year to increase percolation. Vegetation and debris removal will occur primarily along the slopes of the wet sides of the basins as necessary, or a maximum of twice per year, to reduce potential for vector control.

5.1 Special Status Species

1.1.2 Least Bell's Vireo

Basin 1 of the Waterman Spreading Grounds, which is not a part of the Valley District's Proposed Project, has the potential to provide suitable nesting opportunities for the least Bell's vireo. The remaining basins described as part of the Valley District's Proposed Project have the potential to provide suitable foraging habitat for this species, but the habitat in the basins is not expected to provide suitable nesting opportunities.

- Recommendation: Prior to the initiation of maintenance activities, a pre-construction nesting bird clearance survey shall be conducted to document the presence/absence of least Bell's vireo on the project site. If least Bell's vireo are documented within the Environmentally Sensitive Area appropriate avoidance buffers shall be installed around the occupied habitat to ensure no indirect impacts to least Bell's vireo occur.

1.1.3 California Gnatcatcher

The Waterman Spreading Grounds is located within the upper limit of the elevation range for this species, and since the Waterman Spreading Grounds is isolated from known occupied habitat and subject to routine anthropogenic disturbances, it was determined that coastal California gnatcatcher has a low potential to occur within the boundaries of the project site. No focused surveys for California gnatcatcher are recommended.

1.1.4 San Bernardino Kangaroo Rat

SBKR are not expected to occur within the basins where potentially suitable habitat is present due to the isolated nature of the habitat (not connected to a source population), suboptimal quality, small patch size, and the historical disturbance regime (since 1940). Focused surveys are not recommended.

1.1.5 Special-Status Plant Species

The basins within the Waterman Spreading Grounds have been subject to a variety of anthropogenic disturbances from maintenance activities and isolated from native plant populations within East Twin Creek. These disturbances have reduced the suitability of the habitat for special-status plant species known to occur in the general vicinity of the project site. Based on habitat requirements for specific special-status plant species and the availability and quality of habitats needed by each species, it was determined that none of the special-status plant species known to occur in the general vicinity of the project site are expected to occur. Focused surveys are not recommended.

1.1.6 Nesting Birds

The project site contains sufficient vegetation on site to provide suitable nesting bird habitat. Although no nesting birds were observed on site, the following is recommended to avoid potential impacts:

- Recommendation: Nesting bird surveys should be conducted prior to any construction activities taking place during the nesting season (generally February 15th to September 15th) to avoid potentially taking any birds or active nests. In general, impacts to all bird species (common and special status) can be avoided by conducting work outside of the nesting season, or between approximately September 16th and February 14th), and conducting a worker awareness training. However, if all work cannot be conducted outside of nesting season, a nesting bird survey can be conducted by a qualified avian biologist to determine if any active nests are present. If active nests are found, they would be avoided by way of a no-work buffer area until they become inactive.

5.2 Jurisdictional Delineation

Waters of the US

Because the basins found on the project site have been identified as Waters of the US, a 404 permit will be required from the ACOE and a 401 permit will be required from the RWQCB, Santa Ana River Region. Based on the proposed maintenance plan, approximately 30.88 acre of impacts will occur to USACE and RWQCB jurisdictional waters consisting primarily of the basin bottoms of open water and non-native grasslands, as identified in Table 3.

Waters of the State

Because the basins found on the project site have been identified as CDFW Jurisdiction, a Lake and Streambed Alteration Agreement (1602) permit will be required prior to any ground disturbance within the identified areas. Based on the proposed maintenance plan, approximately 73.69 acre acres of associated riparian habitat of impacts will occur to CDFW jurisdiction, as identified in Table 3.

Table 4. Proposed Mitigation for Loss of CDFW, USACE, and RWQCB Jurisdictional Resources

Type	Impact Acres	Mitigation Acres
Streambed/Open Water/Wetland	20.48	21.0
Associated riparian (willow/mulefat scrub)	7.54	19.0
Scalebroom Scrub	10.07	20.0
Buckwheat scrub (degraded and isolated)	22.45	0.0
Eucalyptus	2.18	0.0
Non-native Grasses	10.40	0.0

Recommendation:

Option 1 - Off-site Permittee Responsible Mitigation Project(s)

Valley District will create, rehabilitate, and/or enhance a total of 40 acres of wetland/riparian/streambed habitat which includes freshwater marsh and willow scrub habitat similar to the habitat being impacted in the Waterman Basins. This mitigation project will offset impacts to of 20.48 acres of streambed/open water/wetland habitat and the loss of 8.11 acres to associated riparian vegetation within and adjacent to

the basins. Valley District will rehabilitate and/or enhance 20 acres of alluvial fan scrub habitat similar to the community that will be impacted by clearing the side slopes.

Prior to initiation of Project activities, a complete description of the proposed permittee-responsible mitigation project(s) will be presented to the regulatory permitting agencies (CDFW, RWQCB, and USACE) for review and approval. The mitigation proposal will identify the current condition of habitat, proposed methods of restoration, goals and objectives for the restored areas, and will include measurable success criteria based on the suggestions and requirements of the regulatory agencies. Valley District will fund the preparation of Habitat Mitigation and Monitoring Plans and Adaptive Monitoring Management Plans, which will include Annual Reports presenting the previous year's monitoring results and recommended future management activities in order to sustain or surpass the habitat quality of the mitigation site in perpetuity. If desired by the permitting agencies, Valley District will host an annual work-plan meeting attended by technical experts and staff from the permitting agencies in order to consider the most appropriate adaptive management activities to implement in the following year. Valley District will secure long-term conservation of the restoration site and establish financial assurances approved by the permitting agencies. This mitigation measure is intended to satisfy Valley District's CEQA requirements in addition to all mitigation requirements associated with the issuance of a CDFW Lakes and Streams Alteration Agreement, the USACE Nationwide-3 Permit, and the Regional Water Quality Control Board 401 Water Quality Certification

If Valley District is not able or willing to implement the permittee-responsible mitigation project(s) as stated above then Valley District may meet the mitigation obligations via Option 2 below.

Option 2 - Purchase Credits from Mitigation Bank or Approved In-Lieu-Fee Program

Valley District will purchase 40 wetland/riparian rehabilitation and streambed enhancement credits and 20 alluvial fan scrub habitat credits from an approved mitigation bank or In-lieu-fee (ILF) program. Valley District will obtain approval in the choice of mitigation bank or ILF program and credit type prior to the purchase.

6 References

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Sawyer, John O., and Todd Keeler-Wolf. 1995. *A Manual of California Vegetation*. California Native Plant Society, Sacramento, California. 471pp.

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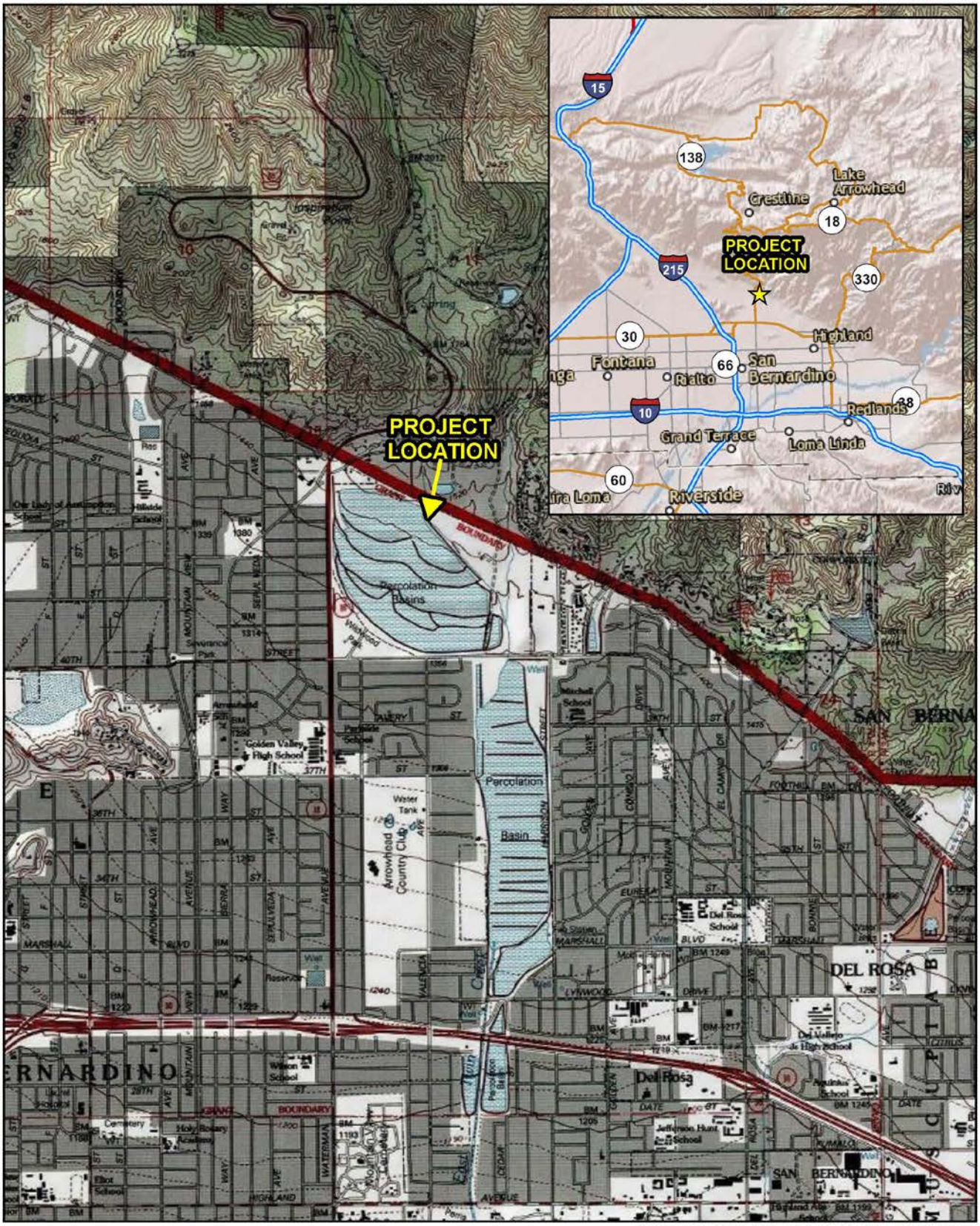
Attachment A



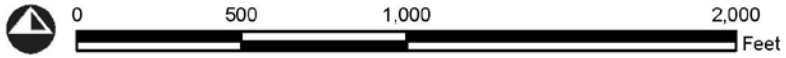
WATERMAN BASIN SPREADING GROUNDS
BIOLOGICAL RESOURCES ASSESSMENT

Regional Vicinity

0 1,250 2,500 5,000 Feet

Source: Federal Highway Administration, US Department of Transportation, USA Topographic Map, San Bermardino County

Exhibit 1



Source: ESRI Aerial Imagery, San Bernardino County

WATERMAN BASIN SPREADING GROUNDS
BIOLOGICAL RESOURCES ASSESSMENT

Project Site

Exhibit 2

0 500 1,000 2,000 Feet

Source: ESRI Aerial Imagery, NRCS Soil Survey Geographic Database, San Bernardino County

WATERMAN BASIN SPREADING GROUNDS
BIOLOGICAL RESOURCES ASSESSMENT

Soils

Exhibit 3

0 500 1,000 2,000 Feet

Source: ESRI Aerial Imagery, San Bernardino County

WATERMAN BASIN SPREADING GROUNDS
BIOLOGICAL RESOURCES ASSESSMENT

Vegetation

Exhibit 4

0 500 1,000 2,000 Feet

Source: ESRI Aerial Imagery, San Bernardino County

WATERMAN BASIN SPREADING GROUNDS
BIOLOGICAL RESOURCES ASSESSMENT

Maintenance Impacts

Exhibit 5

Attachment B

	Photo 1 – From the eastern edge of Basin 4 looking west..
	Photo 2 – Looking at the sagebrush-scalebroom scrub on the slopes of Basin 4.

	Photo 3 – From the western end of Basin 3B looking east..
	Photo 4 – From the western end of Basin 3A looking east.

	Photo 5 – From the eastern end of Basin 3C looking west.
	Photo 6 – From the southern boundary of Basin 3E looking northwest.

	Photo 7 – Looking at the two upper basin bottoms in Basin 3W.
	Photo 8 – From the western end of Basin 2W looking east at the district outlet facility.

	Photo 9 – Looking east from the western end of Basin 2W.
	Photo 10 – Willow scrub plant community near the northeast corner of Basin 3E.

	Photo 11 – Looking east at the eastern end of Basin 2E.

Attachment C

Regulatory Framework

Federal Endangered Species Act (ESA)

The U.S. Fish and Wildlife Service (USFWS) administers the federal ESA of 1973. The ESA provides a legal mechanism for listing species as either threatened or endangered, and a process of protection for those species listed. Section 9 of the ESA prohibits "take" of threatened or endangered species. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. "Take" can include adverse modification of habitats used by a threatened or endangered species during any portion of its life history. Under the regulations of the ESA, the USFWS may authorize "take" when it is incidental to, but not the purpose of, an otherwise lawful act. Take authorization can be obtained under Section 7 or Section 10 of the act.

California Endangered Species Act (CESA)

The CDFW, formerly Fish and Game, administers the State CESA. The State of California considers an endangered species one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is one present in such small numbers throughout its range that it is likely to become an endangered species soon, in the absence of special protection or management. And a rare species is one present in such small numbers throughout its range that it may become endangered if its present environment worsens. Rare species applies to California native plants. Further, all raptors and their nests are protected under Section 3503.5 of the California Fish and Game Code (FGC). Species that are California fully protected include those protected by special legislation for various reasons, such as the California condor. Species of Special Concern (SSC) is an informal designation used by CDFW for some declining wildlife species that are not proposed for listing as threatened or endangered. This designation does not provide legal protection, but signifies that these species are recognized as sensitive by CDFW.

Migratory Bird Treaty Act (MBTA)

Nesting birds are protected under the federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C 703-711). The MBTA provides protection for nesting birds that are both residents and migrants whether or not they are considered sensitive by resource agencies. The MBTA prohibits take of nearly all native birds. The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed under 50 CFR 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The direct injury or death of a migratory bird, due to construction activities or other construction-related disturbance that causes nest abandonment, nestling abandonment, or forced fledging would be considered take under federal law. The USFWS, in coordination with the CDFW administers the MBTA. CDFW's authoritative nexus to MBTA is provided in FGC Sections 3503.5 which protects all birds of prey and their nests and FGC Section 3800 which protects all non-game birds that occur naturally in the State.

Clean Water Act (CWA)

The CWA is the principal federal law that governs pollution in the nation's lakes, rivers, and coastal waters. Originally enacted in 1972 as a series of amendments to the Federal Water Pollution Control Act of 1948, the Act was last amended in 1987. The overriding purpose of the CWA is to "restore and maintain the chemical, physical and biological integrity of the nation's waters." The statute employs a variety of regulatory and non-regulatory tools to eliminate the discharge of pollutants into the nation's waters and achieve water quality that is both "swimmable and fishable".

Under Section 404 of the CWA, the Corps has primary federal responsibility for administering regulations that concern the discharge of dredged or fill material into WoUS (including wetlands). WoUS are defined

as: “All waters used in interstate or foreign commerce; all interstate waters including interstate wetlands; all other waters such as intrastate lakes, rivers, streams (including intermittent and ephemeral streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds, where the use, degradation, or destruction of which could affect interstate commerce; impoundments of these waters; tributaries of these waters; or wetlands adjacent to these waters” (Section 404 of the CWA; 33 CFR 328).

The limit of the Corps jurisdiction for non-tidal waters (including non-tidal perennial and intermittent watercourses and tributaries to such watercourses) in the absence of adjacent wetlands is defined by the ordinary high water mark (OHWM). The OHWM is defined as: “The line on the shore established by the fluctuations of water and indicated by physical characteristics such as a 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 the characteristics of the surrounding areas” (Section 404 of the CWA; 33 CFR 328). Wetlands are defined 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” (Section 404 of the CWA; 33 CFR 328).

Porter-Cologne Water Quality Control Act (Porter-Cologne)

The Porter-Cologne Water Quality Control Act (Porter-Cologne) is the principal State law that governs water protection efforts in California. Porter-Cologne establishes the State Water Resources Control Board (SWRCB) and each of the nine Regional Water Quality Control Boards (RWQCBs) as the principal state agencies for coordinating and controlling water quality in California. The RWQCB’s regulatory jurisdiction is pursuant to Section 401 of the Federal CWA. The RWQCB typically regulates discharges of dredged or fill material into WoUS. However, they also have regulatory authority over waste discharges into Waters of the State, which may be isolated, under Porter-Cologne. In the absence of a nexus with the Corps, the RWQCB requires the submittal of a Waste Discharge Requirement (WDR) application, which must include a copy of the project Storm Water Pollution Prevention Plan (SWPPP) and a copy of the project Water Quality Management Plan (WQMP), otherwise called a Standard Urban Stormwater Management Plan (SUSMP). The RWQCB’s role is to ensure that disturbances in the stream channel do not cause water quality degradation.

California Fish and Game Code (FGC)

Sections 1600 to 1616 of the California FGC require any person, state, or local government agency or public utility to notify the CDFW before beginning any activity that will substantially modify a river, stream, or lake. If it is determined that the activity could substantially adversely impact an existing fish and wildlife resource, then a Lake or Streambed Alteration Agreement is required.

Like the Corps and RWQCB, the CDFW also regulates discharges of dredged or fill material. The regulatory jurisdiction of CDFW is much broader however, than Corps or RWQCB jurisdictions. CDFW regulates **all** activities that alter streams and lakes and their associated habitats. The CDFW, through provisions of the FGC Sections 1601-1603 is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks and at least an intermittent flow of water. The CDFW typically extends the limits of their jurisdiction laterally beyond the channel banks for streams that support riparian vegetation. In these situations, the outer edge of the riparian vegetation is generally used as the lateral extent of the stream and CDFW jurisdiction. CDFW regulates wetland areas only to the extent that those wetlands are a part of a river, stream, or lake as defined by CDFW.

Appendix B
Response to Comments