

**INITIAL STUDY  
FOR  
PHELAN PIÑON HILLS  
COMMUNITY SERVICES DISTRICT  
CHROMIUM 6 (CR+6) BLENDING PLAN PROJECT**

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Prepared for:

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### List of Abbreviations and Acronyms

AAQS	ambient air quality standards
AFY	acre-feet per year
APE	Area of Potential Effect
ARB	Air Resources Board
BACMs	Best Available Control Measures
BMPs	Best Management Practices
CAAA	Clean Air Act Amendment
CCAR	California Climate Action Registry
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
CNDDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CR+6	hexavalent chromium
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
EPA	Environmental Protection Agency
FTA	Federal Transit Association
GHG	greenhouse gas
gpm	gallons per minute
ITP	Incidental Take Permit
LUST	Leaking Underground Storage Tanks
MCL	maximum contaminant level
MDAB	Mojave Desert Air Basin
MDAQMD	Mojave Desert Air Quality Management District
MG	million gallons
MGD	million gallons per day
MGS	Mojave ground squirrel
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
PCE	Tetrachloroethylene
ppb	parts per billion
PPHCSD	Phelan Piñon Hills Community Services District
PZ	pressure zone
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SBCFD	San Bernardino County Fire Department
SCAQMD	South Coast Air Quality Management District

SIP	State Implementation Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TCE	Trichloroethylene
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VdB	vibration decibel

## **PROJECT DESCRIPTION**

### **Introduction**

The Phelan Piñon Hills Community Services District (District) currently operates seven wells in which the level of hexavalent chromium (CR+6) exceeds the maximum contaminant level (MCL) standard effective July 1, 2014. The project proposes to install various improvements to support the District's Chromium 6 (CR-6) Blending Plan Project within the District's service area. The District proposes the installation of several miles of new pipeline; several new reservoirs and a new booster pump station. The District has purchased property to the north of the District, which includes three wells for which the current level of CR-6 is non-detect. The District has developed a method of blending low chromium content wells with water from high chromium content wells to result in a supply of water that will be below the CR+6 MCL. Blending at two or more sites is anticipated.

The District, formed as an independent District by voters in 2008, is located in the High Desert area of San Bernardino County between the Los Angeles/San Bernardino County Line and Victorville. The District operates under Domestic Well Supply Permit No. 05-13-10-P-005 issued in September 2010, and as System No. 361020. Users within the District are largely single family residences on large parcels. Approximately 99% of the water produced in the District is for residential customers with only about 79 commercial/industrial businesses in the Service Area. The District's water distribution system is composed of approximately 337 miles of pipelines ranging from 4 to 16 inches in diameter. Due to the large change in elevation, the District Service Area is divided into 16 Pressure Zones with 32 pressure reducing stations, 24 booster pump stations, and 35 storage reservoirs, aggregating to approximately 11.5 million gallons total. The District's water supply is obtained exclusively from groundwater via wells with natural inflow. The Groundwater Basin underlying the District has been adjudicated through the Mojave River Groundwater Basin Adjudication of 1993. The District overlies Subareas Oeste and Alto, identified in the adjudication. The need for the Project's Blending Plan emanates from the need for continued use of water obtained from the seven high CR+6 content wells. Also exacerbating prospective production need is the anticipated restriction of production capacity from Well No. 14, located in Los Angeles County due to an adjudication of the groundwater basin in that area. Capacity restriction is projected to be limited to 400 acre-feet per year (AFY).

### **Location**

The proposed project would be located in the communities of Phelan and Piñon Hills in San Bernardino County. The Service Area lies north and south of Highway 138 and west of Interstate 15 and State Highway 395. The District has a Water Service Area of approximately 118 square miles with elevations ranging from 3,200 feet at the northeast side to approximately 5,350 feet closer to the mountains on the southwest. Specifically, the project is located in the Sheep Creek Quadrangle, 7.5 Minute Series topographic map. Refer to Figures 1 and 2 for regional and site location maps.

### **Proposed Action**

The need for this Blending Plan emanates from the need for continued use of water obtained from seven high CR+6 content wells. Also exacerbating prospective production need is the anticipated restriction of production capacity from Well No. 14, located in Los Angeles County

due to an adjudication of the groundwater basin in that area. Capacity restriction in the future is projected to be limited to 400 acre-feet per year (AFY).

Production of the seven wells with high CR+6 concentrations aggregates to approximately 3,122 gallons per minute (gpm), equivalent to 4.5 million gallons per day (MGD) based on 24-hour operation. Three of the wells, 10, 11, and 12, are located about 3,600 feet north of Well No. 14, which is located at the extreme west central side of the District; the other three wells, 2, 6A, and 6B, are located somewhat to the southeast and east, respectively (refer to Figure 3).

Three wells to which pumping rights were acquired in recent years by property purchase are located within the north central portion of the District and are designated by the project as the Dairy site wells. These wells are separated by approximately 12 miles from the aforementioned Well Nos. 10, 11, and 12, as measured along existing County road right-of-way. Also available in close proximity to the Dairy site wells are two steel reservoirs, both in usable condition. These Dairy site wells are the proposed wells that will be used to reduce hexavalent chromium concentrations through the proposed blending process.

The need to develop a plan to reduce the content of CR+6 in the District's water supply is due to the most current adopted CR+6 MCL of 10 parts per billion (ppb). As previously stated, seven of the District's wells have chromium levels exceeding that MCL and all are required to be used in the future to meet the water demand. Source water facilities available for blending to lower the CR+6 concentration include the three Dairy site wells, Georges (1,200 gpm), Center (500 gpm), and Dairy Corner (250 gpm). Wells for which blending is required to lower CR+6 water concentrations to meet the MCL include Well Numbers 2 (if run less than two hours), 6A, 6B, 10, 11, 12 and 14 (refer to Figure 4). The CR+6 content of the Dairy site wells, as well as Well No. 2 (when run for an extended period) and Well No. 5, is Non-Detect or considerably below the CR+6 MCL of 10 ppb, while those for the wells in the west part of the District, excepting Well No. 2 when run for less than 2 hours and No. 5, consistently exceed the standard of CR+6 MCL of 10 ppb. CR+6 contamination, as well as other contaminants, from the Ducommun Aerostructures site to the east of George's well could potentially cause the water drawn from George's well to become contaminated with CR+6, Nitrates, Tetrachloroethylene (PCE), and Trichloroethylene (TCE). However, though George's well is close to the contamination site at Decommun Aerostructures, the water drawn from that well lies within a separate, deeper aquifer that has not shown any signs of containing contaminants, as indicated through well monitoring sample data gathered over a period of several months. George's well will be monitored closely for signs of contaminants in this individual water supply in order to prevent any further contaminated water from blending with the District's existing water supply.

The objective of the Blending Plan proposed is to allow the District to continue to use the seven high CR+6 wells and to safely and reliably be in compliance with the hexavalent chromium MCL standard. This will be achieved by blending of the discharge of six of these wells with discharge from the three Dairy site wells from which a projected CR+6 level of 80% MCL will be attained. Additional well capacity can be constructed on the Dairy site if needed, though not anticipated in the near future.

Discharging piping from Well No. 5 (low CR+6) and Well No. 2 (short-term high CR+6) already are connected to the same storage reservoirs, 2-1 and 2-2, thus blending can be accomplished with no additional infrastructure. Facilities arrangement for this circumstance is shown on the District's site plan (refer to Figures 5 and 6).

All discharge from Well Nos. 10, 11, and 12 is pumped/delivered to Reservoirs 10-1 and 10-2, and then pumped to Reservoirs 1B-1 and 1B-2, which is located southerly on the same site as Wells 6A and 6B, both high CR+6 producers. This practice will be maintained for the water transfer and thence for the booster station at Reservoir Site 1B.

The proposed blending program will include delivery and mixing of the waters from six of the District's seven high CR+6 wells (Nos. 6A, 6B, 10, 11, 12, and 14) with that from the three Dairy site wells. Mixing of the waters from the six wells will be accomplished at two locations. The primary element will be erection of a new large reservoir at which discharge from the Dairy site wells will be blended with that of Wells 10, 11, 12, and 14 by means of a new pipeline. The optimal location for a blending reservoir is within or near the District's Well No. 12 site of 6.3 acres where room is available to move the water up-gradient into the District's system for which no increase in discharge capacity is anticipated to be needed. Specifics of the transfer, blending, and delivery system are as follows (refer to Figures 5 and 6).

1. Mixing and blending of Wells 2 and 5 will be achieved by continued pumping of waters to Reservoir 2-2, which has a capacity of 182,080 gallons.
2. Equipping of the George's, Center, and Dairy Corner Wells with vertical turbine pumps to pump 1,200, 500, and 250 gpm, respectively.
3. Discharge from the three Dairy site wells will be delivered to one of the existing reservoirs nearby to function as a collection/suction reservoir where a booster station will be constructed. The booster station will then move and lift the water through a lengthy transmission pipeline southerly on Sheep Creek Road or on the proposed alternative alignment on Meridian Road and Beekley Road to a new reservoir, suggested to have around 200,000 gallons of storage capacity the Reservoir 2-1 and 2-2 site. A new booster pumping station will be constructed to lift the output of the Dairy site wells.
4. An 8-inch supply connection will be made from the new reservoir to the existing booster pumping station to allow Dairy site well water to be utilized for an additional supply to Pressure Zone 1 (see Figure 7 showing pressure zones).
5. From the new reservoir at Site 2-1 and the new booster station, a transmission pipeline will be constructed southerly on Sheep Creek Road. Under either alternative alignment the transmission pipeline will be constructed southerly on Meridian Road, then westerly on Rancho Road, then easterly on South Road. The pipeline will then continue south from the new reservoir site to Dos Palmas Road where it will continue west to a new blending reservoir on the Well 12 site. Under Alternative 1 and Alternative 2 the pipeline will meet the reservoir by continuing south to the new reservoir site on Sheep Creek Road. Under Alternative 1 the pipeline will continue south on Beekley Road to Dos Palmas Road and will follow the Original path west on Dos Palmas Road to the new blending reservoir. Under Alternative 2 the pipelines will continue east on South Road until it reaches Soledad Road and will continue south on Soledad road to the new blending reservoir. Capacities of two-2 MG reservoirs or one-5 MG will be constructed. Either will be satisfactory for blending purposes.
6. Discharge piping from Well Nos. 10, 11, and 12 would be reoriented from reservoir 10-2 to discharge directly to the new blending reservoir to mix with waters from the lower concentration CR+6 wells.
7. Well 14 discharges into the District's west side distribution system, Pressure Zone (P.Z.) 2, and ultimately also to reservoirs 1B-1 and 1B-2 at Reservoir Site 1B. Alternate methods of blending Well 14 discharge were explored. An Initial option would entail destaging of Well 14, delivery of the Blending Reservoir at Well 10 site via



an 8-inch pipeline of 3,600 linear feet, a 12-inch return pipeline to the Well 14 site, and connection to the wellhead discharge. From this location, the blended water of the Dairy site well(s) and Wells 10, 11, and 12, as selected, would be delivered into the distribution system of P.Z. 2.

8. Blended water will then be lifted to Reservoirs 1B-1 and 1B-2, also site of Wells 6A and 6B, by means of the existing booster pumping station at Reservoir site well 10 and existing 8-inch and 12-inch discharge pipelines. Greater up-gradient capacity will be achieved by the proposed 12-inch blended water pipeline, Well 10 Booster to the Well 14 16-inch pump discharge pipeline.
9. As in the current operation, water from the Reservoir 10 site, now a blend of the Wells 10, 11, 12, 14, and the Dairy site wells will be mixed with Wells 6A and 6B discharge in reservoirs 1B-1 (0.3 MG) and 1B-2 (1.0 MG). Then the blend of the Dairy site wells and Wells 6A, 6B, 10, 11, 12, and 14 will be pumped into the District's P.Z. 2 system.
10. Mixed and blended waters of the Dairy site wells, Wells 10, 11, 12, 14, and Wells 6A and 6B will then be lifted again by Booster Pumping Station 1B to reservoirs 2A-1 and 2 which delivers by gravity to Reservoirs 2C-1 and 2C-2 in the same pressure zone.

It is evident from the District's theoretical calculations that there are opportunities and limitations or constraints of well operation scenarios available to the District for use of the high CR+6 wells. Operational protocol, reinforced with SCADA controls, need to be adopted by the District to assure compliance with theoretical results. Only monitoring plan sampling will verify prospective results. Adjustments may then be required to finalize the plan. If production from the low CR+6 wells can be reliably maintained, additional near-term source capacity is not needed. Additionally, the notably high content of arsenic in George's Well will not be of concern, as it will always be blended with other sources.

### **Environmental Setting**

The proposed project is located at the southwestern edge of the Mojave Desert, where it transitions to the San Gabriel Mountain foothills overlooking the Victor Valley. The Mojave Desert is characterized by broad alluvial fans, dissected terraces, playas, and scattered mountains. The general region is seismically active and subject to potential significant regional seismic events. Runoff from the San Gabriel Mountains is the primary source of surface stream flows. The project site has a shallow slope from south to north with no stream channels crossing the property. The climate is that of an arid, upland desert, with a mean summer temperature of 88°F and a mean winter temperature of 49°F. Overall air quality is fair to poor.

### **Construction Scenario**

The Project is expected to being construction in July 2017. It is estimated that the project will be completed in approximately February 2019. The Project will require preparing and grading of the reservoir and booster pump station sites, and finally installation of structures (two booster pump stations, a blending reservoir, and additional reservoir) and pipelines/pumps (vertical turbine pumps at each of the proposed well sites, and pipeline installation along Sheep Creek Road and Dos Palmas Road to the proposed blending reservoir site).

## **ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED**

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

- |  |   |  |
|--|---|--|
| <input checked="" type="checkbox"/> Aesthetics               | <input type="checkbox"/> Agriculture and Forestry Resources       | <input checked="" type="checkbox"/> Air Quality                        |
| <input checked="" type="checkbox"/> Biological Resources     | <input checked="" type="checkbox"/> Cultural Resources            | <input checked="" type="checkbox"/> Geology / Soils                    |
| <input type="checkbox"/> Greenhouse Gas Emissions            | <input checked="" type="checkbox"/> Hazards & Hazardous Materials | <input checked="" type="checkbox"/> Hydrology & Water Quality          |
| <input type="checkbox"/> Land Use / Planning                 | <input type="checkbox"/> Mineral Resources                        | <input checked="" type="checkbox"/> Noise                              |
| <input type="checkbox"/> Population / Housing                | <input type="checkbox"/> Public Services                          | <input type="checkbox"/> Recreation                                    |
| <input checked="" type="checkbox"/> Transportation / Traffic | <input checked="" type="checkbox"/> Utilities / Service Systems   | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

Note that all potentially significant impacts can be reduced to a less than significant impact level with implementation of identified mitigation measures.

**DETERMINATION:** (To be completed by the Lead Agency)

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

<input type="checkbox"/>	The proposed project <b>COULD NOT</b> have a significant effect on the environment, and a <b>NEGATIVE DECLARATION</b> will be prepared.
<input checked="" type="checkbox"/>	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 <b>MITIGATED NEGATIVE DECLARATION</b> will be prepared.
<input type="checkbox"/>	The proposed project <b>MAY</b> have a significant effect on the environment, and an <b>ENVIRONMENTAL IMPACT REPORT</b> is required.
<input type="checkbox"/>	The proposed project <b>MAY</b> 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 <b>ENVIRONMENTAL IMPACT REPORT</b> is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	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 <b>NEGATIVE DECLARATION</b> pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or <b>NEGATIVE DECLARATION</b> , including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Tom Dodson & Associates  
Prepared by

August 2016  
Date

\_\_\_\_\_  
Signature  
Phelan Piñon Hills Community Services District

\_\_\_\_\_  
Date

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

SUBSTANTIATION

- a. *Less Than Significant Impact* – The proposed project consists of blending water from three new wells with non-detectable levels of CR-6 with the District’s current water supply. The project footprint, which encompasses a variety of sites within the District’s service area, does have scenic vistas that are typically found in the Mojave desert due to lack of intervening vegetation. The San Gabriel Mountains lie to the south and provide the background scenic view to the south; to the east and west are the alluvial fans that extend from the San Gabriel Mountains to the Mojave River; to the north are the small mountains and mountain ranges that provide the background view on the north and west side of the Mojave River channel. Views in all directions from anywhere within the project footprint consist of open space and residential and limited institutional and commercial development in the foreground and middle ground view. The proposed project will include the construction of reservoirs that will be of a height that could obstruct views in their immediate vicinity; however, the proposed locations for these reservoirs are within established District well/reservoir locations and their presence would not substantially modify the referenced scenic vistas from that which already exists on the project sites. As a result, the scenic vistas from the project site and surrounding area will be altered but this change does not cause impacts to aesthetics to rise to a level of substantial adverse impact. Additionally, the proposed pipeline will be installed within existing roadways, thus the impact to any scenic vistas would be less than significant. No mitigation is required.
  
- b. *No Impact* – The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway corridor. No scenic resources, such as historical buildings, trees, or rock outcropping, would be removed, altered, or obstructed as part of the proposed project. The project sites are either within existing roadways or surrounded by local roadways on developed land, none of which have been designated as a state scenic highways. As a result, there is no potential to substantially damage scenic resources within a state scenic highway corridor. Also with no important any scenic resources or visual qualities within the project footprint, the proposed project does not have a potential to substantially degrade the visual character or quality of the site or its surroundings. No impact can occur under this issue and no mitigation is required.

- c. *Less Than Significant Impact* – The project footprint varies in visual character as it encompasses various visual settings within the District. The proposed booster pump stations, blending reservoir, and additional reservoir will be constructed within existing District facilities that already contain reservoirs and in some cases also contain existing wells. The proposed pipelines will occur within existing rights-of-way, and outfitting the proposed wells with vertical turbine pumps will occur within existing well sites. The visual character of each of the sites described above will not substantially change as the sites are outfitted with facilities similar to those proposed. The change in visual character that will result from constructing these facilities is considered minimal, and is not considered to be a degradation of the site's visual character. The Phelan Piñon Hills communities are slowly being developed with residential and commercial uses and the proposed blending plan is considered to be consistent with the evolution in the area landscape. Based on these findings, the proposed project is not forecast to cause a substantial degradation of the area visual character or quality. No mitigation is required.
- d. *Less Than Significant With Mitigation Incorporated* – The construction activities are limited to daylight hours unless an emergency occurs, and the amount of security lighting needed during construction will be minimal. However, the surrounding land uses within the project footprint include Rural Living (RL) -2.5 and Single Residential (RS) -1, with some residences directly adjacent to one of the proposed project sites. Thus, the proposed project has a potential to create a new source of substantial lighting or glare during construction that could adversely affect nighttime views at the adjacent residences, and residences can be considered a light sensitive land use. There may be some new permanent light sources to support operations of the booster pump, well, and reservoir facilities. This poses a potential to result in a substantial change to the area surrounding the project sites. To protect nearby residences from direct light and glare from new lighting, the following mitigation measure will be implemented.

***I-1 A facilities lighting plan shall be prepared and shall demonstrate that glare from operating and safety night lights that may create light and glare affecting adjacent occupied property are sufficiently shielded to prevent light and glare from spilling into occupied structures. This plan shall specifically indicate that the lighting doesn't exceed 1.0 lumen at the nearest residence to any lighting site within the project footprint. This plan shall be implemented by the District to minimize light or glare intrusion onto adjacent properties.***

With implementation of the above measure potential light and glare can be controlled to a less than significant impact level.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
<p><b>II. AGRICULTURE AND FORESTRY RESOURCES:</b> 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:</p>				
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?				<b>X</b>
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?				<b>X</b>
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))?				<b>X</b>
d) Result in the loss of forest land or conversion of forest land to non-forest use?				<b>X</b>
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?				<b>X</b>

SUBSTANTIATION

- a&b. *No Impact* – The proposed project would not convert prime farmland, unique farmland, or farmland of statewide importance, as shown on the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, to non-agricultural use. As shown in Figure II-1, the project sites are not on or near any prime farmland, unique farmland, or farmland of statewide importance with one exception. The dairy well sites are located on property that contains farmland of statewide importance, though this land will not be disturbed with implementation of the proposed project as the well sites are located at a distance from the adjacent farmland on land of no agricultural importance. Thus, there are no impacts anticipated to the nearby Farmland parcels. Additionally, implementation of the Project will not conflict with existing zoning for agricultural use or a Williamson Act Contract. Based on a review of Land Conservation Act Maps from the California Department of Conservation no known Williamson Act lands exist within the project footprint. No impacts are anticipated. No mitigation is required.
- c&d. *No Impact* – The project sites are not located within forest land, timberland or timberland zoned Timberland Production. Therefore, implementation of the project will not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)). Also, implementation of the Project will not result in the loss of forest land or conversion of forest land to non-forest production use. No impacts are anticipated. No mitigation is required.
- e. *No Impact* – This project does not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. Please reference Responses 2a-d, above. No impacts are anticipated. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
<b>III. AIR QUALITY:</b> Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?		<b>X</b>		
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		<b>X</b>		
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?		<b>X</b>		
d) Expose sensitive receptors to substantial pollutant concentrations?		<b>X</b>		
e) Create objectionable odors affecting a substantial number of people?		<b>X</b>		

**SUBSTANTIATION:** The information provided in the following text is abstracted from an air quality and greenhouse gas technical study titled: "Air Quality and GHG Impact Analyses: Phelan Piñon Hills Community Service District Chromium 6 (CR+6) Blending Plan Project." This study was prepared by Giroux & Associates and dated February 28, 2016. This study is provided as Appendix 1 of this document. Only the data from that portion of the technical study applicable to the blending plan is summarized below.

a-e. *Less Than Significant With Mitigation Incorporated* – The following information utilized in this section of the Initial Study was obtained from the Air Quality and GHG Impact Analyses: Phelan Piñon Hills Community Service District Chromium 6 (CR+6) Blending Plan Project, dated February 28, 2016 (AQ Analysis). Please refer to the AQ Analysis in Appendix 1 for a detailed discussion of the background and physical setting, as well as the regulatory setting for federal and California ambient air quality standards. The discussion below will center on the short- and long-term emissions as they relate to regional significance thresholds and localized significance thresholds. Background air quality is summarized in Appendix 1 and on Table III-3 provided in this section. In summary, peak daily construction activity emission are estimated to be below the Mojave Desert Air Quality Management District (MDAQMD) CEQA thresholds without the need for added mitigation even if the most intensive construction activities for each component of the overall project were to overlap.

Background

The climate of the Victor Valley, technically called an interior valley subclimate of southern California's Mediterranean-type climate, is characterized by hot summers, mild winters, infrequent rainfall, moderate afternoon breezes, and generally fair weather. The clouds and fog that form along the Southern



California coastline rarely extend across the mountains to Victorville and surrounding high desert communities. The most important local weather pattern is associated with the funneling of the daily onshore sea breeze through Cajon Pass into the upper desert to the northeast of the heavily developed portions of the Los Angeles Basin. This daily airflow brings polluted air into the area late in the afternoon from late spring to early fall. This transport pattern creates both unhealthful air quality as well as compromising the scenic vistas of the mountains surrounding the Victor Valley. Refer to Appendix 1 for a more detailed discussion of the climate in the Victor Valley.

The wind distribution is an important atmospheric parameter because it controls both the initial rate of pollutant dispersal near the source as well as the ultimate regional trajectory of air pollution. These prevailing winds provide a vehicle for visible smog to be transported from the South Coast Air Basin through the mountain passes to the Mojave Desert Air Basin (MDAB). The rapid daytime heating of the lower air leads to convective activity. This exchange of upper air tends to accelerate surface winds during the warm part of the day when convection is at a maximum. During the winter, the rapid cooling of the surface layers at night retards this exchange of momentum, which often results in calm winds.

In addition to winds, which govern the horizontal dispersion of locally generated emissions, vertical temperature structure controls the depth through which pollutants can be mixed. The strong surface heating by day in the Mojave Desert usually creates a vertical temperature distribution that decreases rapidly with height (unstable). At night, especially in winter, cool air settles in low-lying areas and forms shallow radiation-induced temperature inversions (stable) that may temporarily restrict the dispersion of low-level pollutant emissions. Such inversions "burn off" rapidly after sunrise. The elevated subsidence/marine inversions that create major air quality problems in coastal environments are rarely observed in the desert. When they do form, their bases are from 6 - 8,000 feet mean sea level and thus do not impede vertical dispersion. The low-level radiation inversions, however, play an important role in limiting the dispersive capacity of the local airshed from late evening to the next morning. Because they burn off rapidly in the morning, their importance to the dispersion of air contaminants is limited to localized effects.

#### Ambient Air Quality Standards

In order to gauge the significance of the air quality impacts of the proposed project, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, called "sensitive receptors." Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. Recent research has shown, however, that chronic exposure to ozone (the primary ingredient in photochemical smog) may lead to adverse respiratory health even at concentrations close to the ambient standard.

National AAQS were established in 1971 for six pollution species with states retaining the option to add other pollutants, require more stringent compliance, or to include different exposure periods. The initial attainment deadline of 1977 was extended several times in air quality problem areas like Southern California. In 2003, the Environmental Protection Agency (EPA) adopted a rule, which extended and established a new attainment deadline for ozone for the year 2021. Because the State of California had established AAQS several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in California are shown in Table III-1. Sources and health effects of various pollutants are shown in Table III-2.

**Table III-1  
AMBIENT AIR QUALITY STANDARDS**

Pollutant	Average Time	California Standards <sup>1</sup>		National Standards <sup>2</sup>		
		Concentration <sup>3</sup>	Method <sup>4</sup>	Primary <sup>3,5</sup>	Secondary <sup>3,6</sup>	Method <sup>7</sup>
Ozone (O3)	1 Hour	0.09 ppm (180 µg/m3)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m3)		0.075 ppm (147 µg/m3)		
Respirable Particulate Matter (PM10)	24 Hour	50 µg/m3	Gravimetric or Beta Attenuation	150 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m3		–		
Fine Particulate Matter (PM2.5)	24 Hour	–	–	35 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m3	Gravimetric or Beta Attenuation	15 µg/m3		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m3)	–	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9 ppm (10 mg/m3)		9 ppm (10 mg/m3)	–	
	8 Hour (Lake Tahoe)	6 ppm (7 g/m3)		–	–	
Nitrogen Dioxide (NO2) <sup>8</sup>	1 Hour	0.18 ppm (339 µg/m3)	Gas Phase Chemiluminescence	100 ppb (118 µg/m3)	–	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m3)		0.053 ppm (100 µg/m3)	Same as Primary Standard	
Sulfur Dioxide (SO2) <sup>9</sup>	1 Hour	0.25 ppm (655 µg/m3)	Ultraviolet Fluorescence	75 ppb (196 µg/m3)	–	Ultraviolet Fluorescence; Spectrophotometry (Paraosaniline Method)
	3 Hour	–		–	0.5 ppm (1300 µg/m3)	
	24 Hour	0.04 ppm (105 µg/m3)		0.14 ppm (for certain areas) <sup>9</sup>	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas) <sup>9</sup>	–	
Lead <sup>8,10,11</sup>	30-Day Average	1.5 µg/m3	Atomic Absorption	–	–	–
	Calendar Quarter	–		1.5 µg/m3 (for certain areas) <sup>11</sup>	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Avg	–		0.15 µg/m3)		
Visibility Reducing Particles <sup>12</sup>	8 Hour	See footnote 12	Beta Attenuation and Transmittance through Filter Tape	<b>No Federal Standards</b>		
Sulfates	24 Hour	25 µg/m3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m3)	Ultraviolet Fluorescence			
Vinyl Chloride <sup>10</sup>	24 Hour	0.01 ppm (26 µg/m3)	Gas Chromatography			

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM<sub>10</sub>, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than one. For PM<sub>2.5</sub>, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM<sub>2.5</sub> primary standard was lowered from 15 µg/m<sup>3</sup> to 12.0 µg/m<sup>3</sup>. The existing national 24-hour PM<sub>2.5</sub> standards (primary and secondary) were retained at 35 µg/m<sup>3</sup>, as was the annual secondary standard of 15 µg/m<sup>3</sup>. The existing 24-hour PM<sub>10</sub> standards (primary and secondary) of 150 µg/m<sup>3</sup> also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO<sub>2</sub> standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO<sub>2</sub> national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.  
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m<sup>3</sup> as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (10/1/15)

**Table III-2  
HEALTH EFFECTS OF MAJOR CRITERIA POLLUTANTS**

<b>Pollutants</b>	<b>Sources</b>	<b>Primary Effects</b>
Carbon Monoxide (CO)	<ul style="list-style-type: none"> <li>• Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust.</li> <li>• Natural events, such as decomposition of organic matter.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced tolerance for exercise.</li> <li>• Impairment of mental function.</li> <li>• Impairment of fetal development.</li> <li>• Death at high levels of exposure.</li> <li>• Aggravation of some heart diseases (angina).</li> </ul>
Nitrogen Dioxide (NO <sub>2</sub> )	<ul style="list-style-type: none"> <li>• Motor vehicle exhaust.</li> <li>• High temperature stationary combustion.</li> <li>• Atmospheric reactions.</li> </ul>	<ul style="list-style-type: none"> <li>• Aggravation of respiratory illness.</li> <li>• Reduced visibility.</li> <li>• Reduced plant growth.</li> <li>• Formation of acid rain.</li> </ul>
Ozone (O <sub>3</sub> )	<ul style="list-style-type: none"> <li>• Atmospheric reaction of organic gases with nitrogen oxides in sunlight.</li> </ul>	<ul style="list-style-type: none"> <li>• Aggravation of respiratory and cardiovascular diseases.</li> <li>• Irritation of eyes.</li> <li>• Impairment of cardiopulmonary function.</li> <li>• Plant leaf injury.</li> </ul>
Lead (Pb)	<ul style="list-style-type: none"> <li>• Contaminated soil.</li> </ul>	<ul style="list-style-type: none"> <li>• Impairment of blood function and nerve construction.</li> <li>• Behavioral and hearing problems in children.</li> </ul>
Fine Particulate Matter (PM-10)	<ul style="list-style-type: none"> <li>• Stationary combustion of solid fuels.</li> <li>• Construction activities.</li> <li>• Industrial processes.</li> <li>• Atmospheric chemical reactions.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced lung function.</li> <li>• Aggravation of the effects of gaseous pollutants.</li> <li>• Aggravation of respiratory and cardio respiratory diseases.</li> <li>• Increased cough and chest discomfort.</li> <li>• Soiling.</li> <li>• Reduced visibility.</li> </ul>
Fine Particulate Matter (PM-2.5)	<ul style="list-style-type: none"> <li>• Fuel combustion in motor vehicles, equipment, and industrial sources.</li> <li>• Residential and agricultural burning.</li> <li>• Industrial processes.</li> <li>• Also, formed from photochemical reactions of other pollutants, including NO<sub>x</sub>, sulfur oxides, and organics.</li> </ul>	<ul style="list-style-type: none"> <li>• Increases respiratory disease.</li> <li>• Lung damage.</li> <li>• Cancer and premature death.</li> <li>• Reduces visibility and results in surface soiling.</li> </ul>
Sulfur Dioxide (SO <sub>2</sub> )	<ul style="list-style-type: none"> <li>• Combustion of sulfur-containing fossil fuels.</li> <li>• Smelting of sulfur-bearing metal ores.</li> <li>• Industrial processes.</li> </ul>	<ul style="list-style-type: none"> <li>• Aggravation of respiratory diseases (asthma, emphysema).</li> <li>• Reduced lung function.</li> <li>• Irritation of eyes.</li> <li>• Reduced visibility.</li> <li>• Plant injury.</li> <li>• Deterioration of metals, textiles, leather, finishes, coatings, etc.</li> </ul>

Source: California Air Resources Board, 2002.

The Federal Clean Air Act Amendments (CAAA) of 1990 required that the U.S. Environmental Protection Agency (EPA) review all national AAQS in light of currently known health effects. EPA was charged with modifying existing standards or promulgating new ones where appropriate. EPA subsequently developed standards for chronic ozone exposure (8+ hours per day) and for very small diameter particulate matter (called "PM-2.5"). New national AAQS were adopted in 1997 for these pollutants.

Planning and enforcement of the federal standards for PM-2.5 and for ozone (8-hour) were challenged by trucking and manufacturing organizations. In a unanimous decision, the U.S. Supreme Court ruled that EPA did not require specific congressional authorization to adopt national clean air standards. The Court also ruled that health-based standards did not require preparation of a cost-benefit analysis. The Court did find, however, that there was some inconsistency between existing and "new" standards in their required attainment schedules. Such attainment-planning schedule inconsistencies centered mainly on the 8-hour ozone standard. EPA subsequently agreed to downgrade the attainment designation for a large number of communities to "non-attainment" for the 8-hour ozone standard.

Evaluation of the most current data on the health effects of inhalation of fine particulate matter prompted the California Air Resources Board (ARB) to recommend adoption of the statewide PM-2.5 standard that is more stringent than the federal standard. This standard was adopted in 2002. The State PM-2.5 standard is more of a goal in that it does not have specific attainment planning requirements like a federal clean air standard, but only requires continued progress towards attainment.

Similarly, the ARB extensively evaluated health effects of ozone exposure. A new state standard for an 8-hour ozone exposure was adopted in 2005, which aligned with the exposure period for the federal 8-hour standard. The California 8-hour ozone standard of 0.07 ppm is more stringent than the federal 8-hour standard of 0.075 ppm. The state standard, however, does not have a specific attainment deadline. California air quality jurisdictions are required to make steady progress towards attaining state standards, but there are no hard deadlines or any consequences of non-attainment. During the same re-evaluation process, the ARB adopted an annual state standard for nitrogen dioxide (NO<sub>2</sub>) that is more stringent than the corresponding federal standard, and strengthened the state one-hour NO<sub>2</sub> standard.

As part of EPA's 2002 consent decree on clean air standards, a further review of airborne particulate matter (PM) and human health was initiated. A substantial modification of federal clean air standards for PM was promulgated in 2006. Standards for PM-2.5 were strengthened, a new class of PM in the 2.5 to 10 micron size was created, some PM-10 standards were revoked, and a distinction between rural and urban air quality was adopted. In December, 2012, the federal annual standard for PM-2.5 was reduced from 15 µg/m<sup>3</sup> to 12 µg/m<sup>3</sup> which matches the California AAQS. The severity of the basin's non-attainment status for PM-2.5 may be increased by this action and thus require accelerated planning for future PM-2.5 attainment.

In response to continuing evidence that ozone exposure at levels just meeting federal clean air standards is demonstrably unhealthful, EPA had proposed a further strengthening of the 8-hour standard. A new 8-hour ozone standard was adopted in 2015 after extensive analysis and public input. The adopted national 8-hour ozone standard is 0.07 ppm, which matches the current California standard. It will require three years of ambient data collection, then 2 years of non-attainment findings and planning protocol adoption, then several years of plan development and approval. Final air quality plans for the new standard are likely to be adopted around 2022. Ultimate attainment of the new standard in ozone problem areas such as Southern California might be after 2025.

Of the standards shown in Table III-1, those for ozone (O<sub>3</sub>), and particulate matter (PM-10) are exceeded at times in the MDAB. They are called "non-attainment pollutants." Because of the variations in both the regional meteorology and in area-wide differences in levels of air pollution emissions, patterns of non-attainment have strong spatial and temporal differences.

The federal standard for sulfur dioxide (SO<sub>2</sub>) was also recently revised. However, with minimal combustion of coal and mandatory use of low sulfur fuels in California, SO<sub>2</sub> is typically not a problem pollutant.

#### Baseline Air Quality

Monitoring of air quality in the MDAB is the responsibility of the Mojave Desert Air Quality Management District (MDAQMD) headquartered in Victorville, California. The closest monitoring station to the project site is in Phelan. That station, however, only monitors ozone. The nearest station that monitors the full spectrum of air pollutants is the Victorville Station at 14306 Park Avenue. Table III-3 summarizes the last five years of monitoring data from the available data at the Phelan and Victorville monitoring stations. Findings are summarized below:

1. Photochemical smog (ozone) levels frequently exceed standards. The 1-hour state standard was violated an average of five times a year in the last five years at the monitoring station closest to the project site and the 8-hour state standard was violated an average of 41 times per year. The Mojave Desert Air Basin does not generate enough ozone precursor emissions to substantially affect ozone levels. Attainment of ozone standards is most strongly linked to air quality improvements in upwind communities.
2. PM-10 levels have exceeded the state 24-hour standard on three measurement days within the last five years near Victorville. The three times less stringent federal 24-hour standard has not been exceeded during this period. No significant trend can be seen in regards to maximum 24-hour PM-10 concentrations over the most recent years.
3. PM-10, however, is affected by construction, by unpaved road travel, by open fires and/or by agricultural practices. These emissions can be controlled to some extent, and are, therefore, components in a respirable range (10-micron diameter) particulate matter (PM-10) attainment plan developed by the Mojave Desert AQMD. An attainment plan for PM-10 was adopted in July 1995, for designated federal PM-10 non-attainment areas in the MDAB. Any project-related PM-10 generation activities require an enhanced level of controls consistent with the control measures that are part of that plan.
4. A fraction of PM-10 is comprised of ultra-small diameter particulates capable of being inhaled into deep lung tissue (PM-2.5). Year 2012 showed the lowest maximum 24-hour concentration in the past five years. The 24-hour federal standard has not been exceeded in the recent past.
5. More localized pollutants such as carbon monoxide and nitrogen oxides, etc. are generally very low near the project site because background levels in the Mojave Desert area never exceed allowable levels except perhaps during rare wildfire events such as in 2010. There is substantial excess dispersive capacity to accommodate localized vehicular air pollutants such as NO<sub>x</sub> or CO without any threat of violating applicable AAQS.

#### Significance Thresholds Used in This Document

The project proposes to install a variety of improvements to reduce the level of hexavalent chromium within the Phelan Piñon Hills Community Services District service area. The project proposes the installation of several miles of new water conveyance pipeline, several new reservoirs, new booster pump stations and the addition of vertical turbine pumps in several existing wells. Potential air quality impacts to the immediate project vicinity would derive almost exclusively during construction of the proposed improvements.

**Table III-3  
PROJECT AREA AIR QUALITY MONITORING SUMMARY 2010-2014  
(Days Standards Were Exceeded and Maximum Observed Levels)**

Pollutant/Standard	2010	2011	2012	2013	2014
<b>Ozone</b>					
1-Hour > 0.09 ppm (S)	28	29	23	11	18
8-Hour > 0.07 ppm (S)	57	69	87	58	62
8- Hour > 0.075 ppm (F)	48	48	47	31	36
Max. 1-Hour Conc. (ppm)	0.137	0.124	0.119	0.113	0.137
Max. 8-Hour Conc. (ppm)	0.114	0.101	0.108	0.097	0.100
<b>Carbon Monoxide</b>					
1-Hour > 20. ppm (S)	0	0	0	0	0
1-Hour > 9. ppm (S, F)	0	0	0	0	0
Max 1-Hour Conc. (ppm)**	15.9*	1.9	xx	xx	xx
Max 8-Hour Conc. (ppm)	5.2*	1.5	1.8	xx	xx
<b>Nitrogen Dioxide</b>					
1-Hour > 0.18 ppm (S)	0	0	0	0	0
Max 1-Hour Conc. (ppm)	0.137	0.075	0.056	0.065	0.067
<b>Inhalable Particulates (PM-10)</b>					
24-Hour > 50 µg/m <sup>3</sup> (S)	0/60	0/60	0/xx	2/xx	1/xx
24-Hour > 150 µg/m <sup>3</sup> (F)	0/60	0/60	0/xx	0/xx	0/xx
Max. 24-Hr. Conc. (µg/m <sup>3</sup> )	40.	34.	40.	71.	xx
<b>Ultra-Fine Particulates (PM-2.5)</b>					
24-Hour > 35 µg/m <sup>3</sup> (F)*	0/62	0/48	0/xx	0/xx	0/xx
Max. 24-Hr. Conc. (µg/m <sup>3</sup> )	20.	16.	12.	13.	24.

xx data not available

\*high wind/wildfire event

\*\* 1-Hour CO was discontinued in 2013

Source: Source: Phelan (ozone only) and Victorville Air Monitoring Station Data [www.arb.ca.gov/adam/](http://www.arb.ca.gov/adam/)

The Mojave Desert AQMD has adopted numerical emissions thresholds as indicators of potential significant impact even if the actual air quality increment cannot be directly quantified. The MDAQMD thresholds are as follows:

Carbon Monoxide (CO)	548 pounds/day 100 tons/year
Nitrogen Oxides (NOx)	137 pounds/day 25 tons/year
Sulfur Oxides (SOx)	137 pounds/day 25 tons/year
Reactive Organic Gases (ROG)	137 pounds/day 25 tons/year
Particulate Matter (PM-10)	82 pounds/day 15 tons/year
Particulate Matter (PM-2.5)	82 pounds/day 15 tons/year

### *SIP/NEPA Conformity*

The U.S. Environmental Protection Agency published “Determining Conformity of General Federal Actions to State or Federal Implementation Plans; Final Rule,” in the November 30, 1995, Federal Register (40 CFR Parts 6, 51, and 93). The 40 CFR Part 1 51.850(a) states that no department, agency, or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license to permit, or approve any activity which does not conform to an applicable state implementation plan (SIP). It is the responsibility of the Federal agency to determine whether a Federal action conforms to the applicable implementation plan, before the action is taken. If the proposed project includes any federal funding, federal participation is not allowed unless a conformity determination has been made.

Federal actions may be exempt from conformity determinations if they do not exceed designated *de minimis* emission levels. The 40 CFR Part 51.853(b) establishes these *de minimis* levels for criteria pollutants. The Mojave Desert area is a designated severe non-attainment area for the federal 8-hour standard for ozone and serious non-attainment for PM-10. These designations establish the *de minimis* annual air pollution emissions levels for any proposed action.

If the project-related annual emissions are less than specified “*de minimis*” levels, no further SIP consistency demonstration is required. As discussed, ozone (O<sub>3</sub>), and particulate matter (PM-10) are considered “non-attainment pollutants” for the MDAB. Based upon these designations, the following emissions levels are presumed evidence of SIP conformity:

VOC/ROG	5 tons/year
NO <sub>x</sub>	25 tons/year
PM-2.5	100 tons/year
PM-10	70 tons/year

### *Additional Indicators*

In its CEQA Handbook (2007), the MDAQMD also states that additional indicators should be used as screening criteria to determine the need for further analysis with respect to air quality. The additional indicators relevant to this project are as follows:

- Generates total emissions (direct and indirect) in excess of the MDAQMD thresholds.
- Generate a violation of any ambient air quality standard when added to the local background
- Creates odors that could be considered a nuisance by any substantial number of people.
- Does not conform to applicable attainment or maintenance plans.
- Emits hazardous or toxic emissions that create an excess cancer risk of more than 10 in a million or a non-cancerous health index (HI) or more than 1.0.

Except in special circumstances, the CEQA Handbook notes that meeting the daily or annual emissions thresholds is normally sufficient to demonstrate a less-than-significant impact.

### Construction Activity Impacts

Annualized construction activity emissions for the proposed project were calculated using the South Coast Air Quality Management District (SCAQMD) CalEEMod computer model for the indicated equipment fleet and time frame. The CalEEMod was developed by the SCAQMD and provides a model to calculate construction emissions. It calculates both the daily maximum and annual emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions. The construction scenario modeled for the various activities that are planned for the proposed project are listed below.



**Table III-4  
RESERVOIR CONSTRUCTION (3 TOTAL)**

Phase Name and Duration	Equipment
Excavate/ Grading (20 days, 20 workers)	1 Dozer
	1 Loader/Backhoe
	1 Grader
	1 Excavator
Construction (60 days, 20 workers)	1 Generator Set
	1 Crane
	1 Forklift
	1 Backhoe
	1 Loader

**BOOSTER STATION (2 TOTAL)**

Phase Name and Duration	Equipment
Excavate/ Grading (10 days, 10 workers)	1 Dozer
	1 Loader/Backhoe
Construction (40 days, 15 workers)	1 Crane
	1 Forklift
	1 Loader/Backhoe

**INSTALL WELL PUMPS (3 TOTAL)**

Phase Name and Duration	Equipment
Construction (10 days, 10 workers)	1 Crane
	1 Loader/Backhoe
	1 Generator

**PIPELINE INSTALLATION (2 AREAS, 62,000 LINEAR FEET TOTAL)**

Phase Name and Duration	Equipment
Trench and Excavate (80 days, 20 workers)	3 Trenchers
	3 Loader/Backhoe
	1 Generator Set
Construction (60 days, 20 workers)	1 Crane
	2 Forklifts
	3 Welders
	3 Loader/Backhoes
	1 Compactor
	1 Roller

Emissions for a single project component were calculated and then multiplied to reflect the number of units needed for project completion (e.g. 3 reservoirs, 2 booster stations, 3 well pump installs and 11.7 miles of pipeline). As a worst case scenario, it was assumed that construction of all project components would occur simultaneously. Therefore, the total reflects all project components occurring in the same year (2017) as a worst case condition. Table III-5 provides maximum daily emissions as compared to the MDAQMD thresholds. Maximum annual project-related air pollution emissions relative to MDAQMD thresholds as well as federal standard attainment designations and appropriate *de minimis* thresholds are shown in Table III-6.

Table III-5  
DAILY EMISSIONS (lbs/day)

Maximal Construction Emissions	ROG	NOx	CO	SO <sub>2</sub>	PM-10	PM-2.5
2017						
Single Reservoir	3.1	19.5	17.2	<0.1	4.3	2.6
<b>3 Reservoirs</b>	<b>9.3</b>	<b>58.5</b>	<b>51.6</b>	<b>&lt;0.1</b>	<b>12.9</b>	<b>7.8</b>
Single Booster Station	0.9	8.9	6.4	<0.1	1.2	0.7
<b>2 Booster Stations</b>	<b>1.8</b>	<b>17.8</b>	<b>12.8</b>	<b>&lt;0.1</b>	<b>2.4</b>	<b>1.4</b>
Single Well Pump Install	0.9	5.9	5.2	<0.1	0.5	0.4
<b>3 Well Pumps</b>	<b>2.7</b>	<b>17.7</b>	<b>15.6</b>	<b>&lt;0.1</b>	<b>1.5</b>	<b>1.2</b>
Pipeline	<b>3.7</b>	<b>33.4</b>	<b>26.0</b>	<b>&lt;0.1</b>	<b>8.7</b>	<b>5.6</b>
<b>Total</b>	<b>17.5</b>	<b>127.4</b>	<b>106.0</b>	<b>&lt;0.1</b>	<b>25.5</b>	<b>16.0</b>
MDAQMD Thresholds	137	137	548	137	82	82
<i>Exceeds Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Table III-6  
ANNUAL EMISSIONS (tons/year)

Maximal Construction Emissions	ROG	NOx	CO	SO <sub>2</sub>	PM-10	PM-2.5
2017						
Single Reservoir	0.111	0.750	0.645	0.001	0.090	0.064
<b>3 Reservoirs</b>	<b>0.333</b>	<b>2.250</b>	<b>1.935</b>	<b>0.003</b>	<b>0.270</b>	<b>0.192</b>
Single Booster Station	0.021	0.198	0.147	<0.001	0.020	0.015
<b>2 Booster Stations</b>	<b>0.042</b>	<b>0.396</b>	<b>0.294</b>	<b>&lt;0.001</b>	<b>0.040</b>	<b>0.030</b>
Single Well Pump Install	0.003	0.029	0.025	<0.001	0.003	0.002
<b>3 Well Pumps</b>	<b>0.009</b>	<b>0.087</b>	<b>0.075</b>	<b>&lt;0.001</b>	<b>0.009</b>	<b>0.006</b>
Pipeline	<b>0.296</b>	<b>2.362</b>	<b>0.186</b>	<b>0.003</b>	<b>0.431</b>	<b>0.290</b>
<b>Total</b>	<b>0.680</b>	<b>5.095</b>	<b>2.490</b>	<b>0.003</b>	<b>0.750</b>	<b>0.518</b>
MDAQMD Thresholds	25	25	100	25	15	15
<i>Exceeds Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
NEPA Thresholds	25	25	100	25	100	70
<i>Exceeds Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Maximum project-related air pollution emissions were compared to daily and annual MDAQMD thresholds as well as federal standard attainment designations and appropriate *de minimis* thresholds. Even if all activities occurred in a single calendar year and overlapped, maximum daily emissions are less than their daily CEQA thresholds and much less than their associated annual and *de minimis* thresholds. A formal SIP consistency analysis is not required because all project emissions will be below their respective *de minimis* thresholds.

Construction activities are not anticipated to cause dust emissions to exceed SCAQMD CEQA thresholds. Nevertheless, mitigation through enhanced dust control measures is recommended for implementation because of the non-attainment status of the air basin. The following mitigation measures shall be implemented as Best Available Control Measures (BACMs) under SCAQMD Rule 403:

### **III-1 Fugitive Dust Control**

*The following measures shall be incorporated into Project plans and specifications for implementation:*

- *All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions.*
- *The contractor shall ensure that all disturbed areas within the Project are watered with complete coverage of disturbed areas at least two times a day, preferably in the mid-morning, afternoon, and after work is done for the day. Additional watering can be applied if fugitive dust is observed leaving the project site.*
- *The contractor shall ensure that traffic speeds on the Project site are reduced to 10 miles per hour or less.*
- *Plans, specifications and contract documents shall direct that a sign must be posted on-site stating that construction workers shall not idle diesel engines in excess of five minutes.*
- *During grading activity, all construction equipment greater than 150 horsepower shall be California Air Resources Board (CARB) Tier 3 Certified.*
- *Only “Zero-Volatile Organic Compounds” paints (no more than 150 gram/liter of VOC) and/or High Pressure Low Volume (HPLV) applications consistent with South Coast Air Quality Management District Rule 1113 shall be used when reservoirs are painted, if painted onsite.*
- *Install and maintain track out control devices in effective condition at all access points where paved and unpaved access or travel routes intersect (e.g., Install wheel shakers, wheel washers, and limit site access.)*
- *All roadways, driveways, sidewalks, etc., shall be completed as soon as possible. In addition, reservoir pads shall be installed as soon as possible after grading, unless seeding or soil binders are used in travel areas.*
- *When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.*
- *All streets shall be swept at least once a day using SCAQMD Rule 1186 certified street sweepers if visible soil materials are carried to adjacent streets.*
- *The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite.*
- *Post a publicly visible sign with the telephone number and person to contact regarding dust complaints. This person shall respond and take corrective action within 24 hours.*
- *Any on-site stockpiles of debris, dirt or other dusty material shall be covered or watered three times daily.*
- *Use electric construction equipment where technically feasible, i.e., a competent electronic version of the equipment is commercially available.*

Similarly, ozone precursor emissions (ROG and NO<sub>x</sub>) are calculated to be below SCAQMD CEQA thresholds during construction. However, because of the non-attainment for photochemical smog, the use of reasonably available control measures for diesel exhaust is recommended. The following mitigation measures shall be implemented:

### **III-2 Exhaust Emissions Control**

- **Utilize well-tuned off-road construction equipment.**
- **Establish a preference for contractors using Tier 3-rated or better heavy equipment.**
- **Enforce 5-minute idling limits for both on-road trucks and off-road equipment.**

With the implementation of these mitigation measures, any Project-related construction impacts will remain less than significant.

#### Operational Impacts

Operational air pollution emissions will be minimal. Electrical generation of power will be used for pumping. Electrical consumption has no single uniquely related air pollution emissions source because power is supplied to and drawn from a regional grid. Electrical power is generated regionally by a combination of non-combustion (nuclear, hydroelectric, solar, wind, geothermal, etc.) and fossil fuel combustion sources. There is no direct nexus between consumption and the type of power source or the air basin where the source is located. Operational air pollution emissions from electricity consumption and electrical generation are therefore not attributable on a project-specific basis.

#### Odor Impacts

Project operations (pumping, treatment and storage) are an essentially closed system with negligible odor potential. The reservoirs will be designed with adequate freeboard (head space between the top of the water and the roof) to contain any surges without forcing the emergency vents to open. Odors will be briefly detectable during application of the interior epoxy coating and outdoor paint application on the reservoir shell. Good painting practice (low wind speeds and high efficiency sprayers) will minimize odor or overspray and paint transport.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
<b>IV. BIOLOGICAL RESOURCES:</b> 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 federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		X		
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

**SUBSTANTIATION:** The “Biological Resources Evaluations Phelan Piñon Hills Community Services District Chromium 6 (Cr+6) Blending Plan Project” (Appendix 2a) and “Jurisdictional Waters Evaluations Phelan Piñon Hills Community Services District Chromium 6 (Cr+6) Blending Plan Project,” (Appendix 2b) prepared by Jericho Systems Inc. dated August 1, 2016 was utilized for the following analysis. The following information is abstracted from Appendix 2a and 2b.

The purpose of this report is to assess the biological resources and potential for impact to sensitive species that could result from the construction of the various facilities necessary to implement the District’s Chromium 6 Blending Plan with multiple project sites and approximately 62,000 LF of pipeline to be placed within existing rights-of-way. According to the California Natural Diversity Database (CNDDB) and the Field Survey conducted by Jericho Systems, 19 sensitive species and no sensitive or critical habitats have been documented to occur in the vicinity of the APE. Of these 19 species, the proposed

project has the potential to affect the following 6 species: Le Conte's thrasher (*Toxostoma lecontei*), Pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*), Short-joint beavertail (*Opuntia basilaris* var. *brachyclada*), White pygmy-poppy (*Canbya candida*), Mohave ground squirrel (*Xerospermophilus mohavensis*), and Coast horned lizard (*Phrynosoma blainvillii*). The Project APE is located within the San Bernardino County Biotic Resources Countywide Overlay, in which the Mohave Ground Squirrel and Desert Tortoise—sparse population—are identified as species of concern. However, no burrows of appropriate size, aspect, or shape for desert tortoise were found upon survey of the area of potential effect (APE). The vegetation is largely dominated by creosote bush scrub (*Larrea tridentata*) plant communities, which includes other low-growing plant species as follows: burrobrush (*Ambrosia dumosa*), Mormon tea (*Ephedra nevadensis*), Joshua tree, Mojave yucca (*Yucca schidigera*), rabbitbush (*Ericameria* sp.), and desert trumpet (*Eriogonum inflatum*). Of the species identified in Appendix 2 as "rare or protected plant species" by the California Native Plant Society Database (CNPS), the Short-joint beavertail and the White pygmy-poppy were recommended to be surveyed in the pre-construction phase of the project, and avoided during construction. The Project action area consists of three types of habitat: creosote bush scrub, disturbed, and/or developed areas. The disturbed and developed areas within the Project footprint no longer support native vegetation or comprise native plant communities.

- a. *Less Than Significant With Mitigation Incorporated* – Implementation of the Project has a potential for a significant adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) (formerly *Department of Fish and Game*) or U.S. Fish and Wildlife Service (USFWS). The project area is not within the designated critical habitat of any species. Further, there are limited primary constituent elements for critical habitat located within the project area. Based on the field survey findings, desert tortoises do not inhabit the pipeline alignments or facility sites. Therefore no adverse impact to desert tortoise is forecast to occur from project implementation. However, the tortoise is a mobile species and to ensure there is no take of this species during construction, the following mitigation measure will be implemented.

**IV-1 Although no desert tortoise were detected during the site surveys, habitat along the pipeline alignments is considered marginally suitable for this species. Therefore, a qualified biologist shall conduct one pre-construction clearance survey within 30 days prior to initiating construction. Following the pre-construction survey, the biologist will make a determination regarding tortoise mitigation: (1) if a biological monitor should be present at the site during all clearing and grubbing activities above grade; (2) if desert tortoise fencing needs to be installed around the perimeter of the construction work zone; or (3) if no further action is required. The biologist/monitor should remain on-call during construction activities to respond to a circumstance where a desert tortoise wanders into the construction area.**

Regarding the Mohave ground squirrel (MGS), the biologist concluded that most of the pipeline alignment is located outside of potential habitat in existing disturbed roadway alignments. Potentially suitable habitat occurs within the creosote bush scrub areas in the northern and eastern portions of the pipeline alignments. A review of the MGS habitat maps indicates that the pipelines are located generally south and east of the area identified as being occupied by MGS. However, an individual MGS was trapped south of El Mirage Road and east of Meridian in the vicinity of the northern-most portion of the pipeline. Thus, for purposes of this analysis, it is assumed that temporary ground disturbance within the creosote bush scrub in the vicinity of Meridian Road, the western-most portion of Palmdale Road, and the western-most portion of the Alternative 2 at Soledad Road may adversely impact MGS, a State listed Threatened species. A preliminary estimate is that as much as 30 feet of habitat may be temporarily disturbed adjacent to these existing roadway alignments at the Meridian portion of the alignment, the western-most portion of the alignment at Palmdale Road and the western-most portion of the Alternative 2 at Soledad Road (shown Page 17 and 18 in Appendix 2). This amounts to about seven acres of temporary disturbance. To mitigate these impacts the following measures shall be implemented.

**IV-2** *Where possible, the District shall limit pipeline construction to existing disturbed roadway alignments and avoid both Mohave ground squirrel (MGS) and MGS habitat. Contract specification shall restrict the contractor from disturbing the adjacent creosote bush scrub habitat along the pipeline alignments in Meridian Road, the western-most portion of Palmdale Road, and the western-most portion of the Alternative 2 at Soledad Road.*

**IV-3** *Where avoidance of the adjacent habitat is not feasible, the following actions shall be implemented. For the temporary loss of the presumed occupied MGS habitat, the District shall provide compensation for temporary loss of habitat and individual MGS in the following manner: 1) the District shall obtain a 2081 Incidental Take Permit (ITP) from the CDFW; the District shall offset the loss of the temporarily disturbed habitat by purchase of acceptable MGS habitat at a 1:1 ratio, or approximately 7.3 acres estimated at this time; and any conserved habitat shall be provided with an appropriate endowment to ensure permanent protection and the conserved habitat shall be managed by an agency or party considered acceptable to the CDFW. No ground disturbance shall occur until an ITP is obtained by the District. Note that the final compensation package contained in the permit may differ from the above compensation package, but the District finds that this compensation package shall at a minimum meet the requirements of this measure.*

*Alternatively, the District may perform a protocol MGS presence/absence survey prior to initiating construction and should it be determined that the adjacent habitat is not occupied by MGS, the above mitigation measure need not be implemented.*

As indicated in above, two of the species identified in Appendix 2 as “rare or protected plant species” by the California Native Plant Society Database (CNPS), the Short-joint beavertail and the White pygmy-poppy, were recommended to be surveyed in the pre-construction phase of the project, and avoided during construction. The following mitigation measure shall be implemented to avoid these two species, should they be located within habitat that will be disturbed adjacent to Meridian and Palmdale Road.

**IV-4** *Prior to construction, the District shall conduct a plant survey for the Short-joint beavertail and the White pygmy-poppy. This survey shall be conducted by a qualified professional biologist familiar with these two species. If these plants are identified within the temporary project area of impact, the botanists shall be relocated these plants to adjacent comparable habitat that will not be disturbed.*

Regarding the Le Conte’s thrasher, mitigation measure IV-6 protects these birds during the nesting season and for the thrasher, the San Diego pocket mouse and Coast horned lizard the temporary loss of about 7.3 acres of creosote bush scrub habitat is not considered to be a significant adverse impact to these species or the habitat itself. This conclusion is based on the substantial amount of this habitat within the project area and the existing edge effects adjacent to Meridian, Palmdale Roads, Soledad Road, and South Road. Thus, with implementation of the above mitigation, the impacts that would result from implementing the proposed project would be considered less than significant.

- b. *Less Than Significant With Mitigation Incorporated* – Implementation of the proposed project will not have an adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS. Though the project APE contains suitable habitat for several sensitive species, it does not contain any known riparian habitat or any other sensitive natural community identified by any agency.

Based on the field review and according to Appendix 2, the biologist did identify what may be waters of the State of California. The proposed project will primarily be installed along existing paved or dirt access road, but will also extend through undeveloped creosote bush plant communities. The Project action area consists of creosote bush scrub and disturbed and/or developed areas. The project site is located on the alluvial fan of Sheep Creek that extends north out of the northern foothills of the San Gabriel Mountains. The local hydrology is such that small drainage channels flow across the desert floor and are tributary to Sheep Creek.

The delineation identified 10 drainage features on site; Features A-K (Figure IV-1, pg 10 of Appendix 2b). The channel bottoms of these features are very shallow containing fine silts and have equal OHWM and bank-full widths ranging from three feet to seven to over 2,000 feet across. None of the hydrogeomorphic features on site support jurisdictional waters subject to the Clean Water Act (CWA) under the jurisdictions of USACE or RWQCB because Sheep Creek is not traditionally navigable water; it has no significant nexus to one and is not a Water of the U.S. All hydrogeomorphic features on site, however, do meet the criteria of streambed waters as per Section 1600 of the Fish and Game Code administered by the CDFW. A summary of acreages of Jurisdictional Waters that occur within the Property are shown in Table 2. The acreage for each feature was calculated using the bank-full width and a maximum work length of 60 feet along the feature length. As noted in the preceding discussion, there is no riparian or wetland habitat within this roadway, but the channels may fall within CDFW jurisdiction. Therefore, the following mitigation measure will be implemented.

**IV-5 The District shall prepare and submit a Streambed Alteration Agreement (SAA) to the California Department of Fish and Wildlife (CDFW) if CDFW finds that the channel in the roadway is jurisdictional, the District shall process and obtain the SAA. No ground disturbance shall occur until the District obtains an SAA. Note that the final compensation package contained in the permit shall be implemented by the District.**

- c. *No Impact* – Implementation of the Project will not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. The project is located on the alluvial fan of Sheep Creek that extends north from the northern foothills of the San Gabriel Mountains. Residential development and installation of the California Aqueduct has altered the hydrology of the area channelizing flows that historically flowed across the desert floor; however, the hydrology within the APE does not include any federally protected wetlands. Thus, the Project would not have an impact on any federally protected wetlands as defined by Section 404 of the Clean Water Act. Based on this information, no further analysis is needed. No impacts are anticipated.
- d. *Less Than Significant With Mitigation Incorporated* – Based on the field survey of the overall project area, the Project will not substantially interfere with the movement of any native resident or migratory species or with established native or migratory wildlife corridors, or impede the use of native nursery sites. However, the State does protect all migratory and nesting native birds. Though no impacts to nesting or migratory birds have been identified in Appendix 2, the project area may include locations that function as nesting locations for native birds. To prevent interfering with native bird nesting, the following mitigation measure shall be implemented.

**IV-6 The State of California prohibits the “take” of active bird nests. To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal should be conducted outside of the the State identified nesting season (Raptor nesting season is February 15 through July 31; and migratory bird nesting season is March 15 through September 1). Alternatively, the site shall be evaluated by a qualified biologist prior to the initiation of ground disturbance to determine the presence or absence of nesting birds. Active bird nests MUST be avoided**



***during the nesting season. If an active nest is located in the project construction area it will be flagged and a 300-foot avoidance buffer placed around it. No activity shall occur within the 300-foot buffer until the young have fledged the nest.***

Thus, with implementation of the above measure, any effects on wildlife movement or the use of wildlife nursery sites can be reduced to a less than significant impact.

- e. *Less Than Significant With Mitigation Incorporated* – The project APE does contain Joshua trees and cactus plants. The proposed project is required to comply with the San Bernardino County Development Code Desert Native Plant Protection Ordinance per the mitigation measures identified below. The following mitigation measures shall be implemented to address any potential project impacts to Joshua trees or cactus species. The project proponent will be required to comply with the Desert Native Plant Protection Act and the County Code for the various yucca and cactus species. These requirements are as follows:

***IV-7 A qualified desert native plant specialist shall identify all protected plants onsite prior to disturbing the project site to install any facilities.***

***IV-8 Protected plants will not be removed unless preservation onsite is not possible due to final project design.***

***IV-9 Protected plants requiring removal will be transplanted onsite were possible. The guidelines for the transplantation effort are discussed in the San Bernardino County Government Code and California Food and Agricultural Code (Codes).***

***IV-10 Any additional plants that cannot be preserved or used to revegetate the site will be offered for transplantation offsite to local residents.***

***IV-11 All onsite transplantation shall be conducted by qualified native plant landscapers according to established transplantation techniques for the affected species.***

With implementation of the above measures, any affects on local, federal, or state protected species can be reduced to a less than significant impact.

- f. *No Impact* – Implementation of the Project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. There are no applicable Habitat Conservation Plans or Natural Community Conservation Plans in effect within the unincorporated communities of Phelan/Piñon Hills within the County of San Bernardino. Based on this information, no further analysis is needed. No impacts are anticipated. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
<b>V. CULTURAL RESOURCES:</b> Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?		<b>X</b>		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?		<b>X</b>		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		<b>X</b>		
d) Disturb any human remains, including those interred outside of formal cemeteries?			<b>X</b>	

**SUBSTANTIATION:** A cultural resources report has been prepared to evaluate the potential for cultural resources to occur within the project area of potential effect. This report—attached as Appendix 3 to this Initial Study—is dated August 15, 2016, and is titled “Identification and Evaluation of Historic Properties Phelan Piñon Hills Community Services District Water Blending Project.” The following summary information has been abstracted from Appendix 3. It provides an overview and findings regarding the cultural resources found within the project area.

Between January and August 2016 CRM TECH performed a Phase I cultural resources survey on the Area of Potential Effects (APE) for the proposed Phelan Piñon Hills Community Service District (PPHCSD) Water Blending Project near the unincorporated communities of Phelan and Piñon Hills, San Bernardino County, California. The undertaking entails various improvements to the existing water delivery system in support of the PPHCSD’s Chromium 6 Blending Plan for its service area, including the construction of new pipelines, new reservoirs, and a new booster pump station for the purpose of blending water from different wells to achieve a balanced and acceptable Chromium 6 content.

The APE for this undertaking is delineated to encompass the maximum extent of ground disturbance required by the proposed construction activities. It consists mainly of 24.7 linear miles of pipeline rights-of-way, including two alternative alignments for a 16-inch-diameter water transmission pipeline extending from George’s Well on Meridian Road near the intersection of El Mirage Road to Well No. 14 on 263rd Street East near the California Aqueduct, and a 10.1-acre blending tank site at and near the site of Well Nos. 10-12 at the intersection of Palmdale Road (State Route 18) and the extension of 263rd Street East. The pipeline alignments mostly follow the courses of various existing roads, both paved and unpaved. The pipeline rights-of-way cover a maximum width of 25 feet on either side of the centerline of each road, and the depth of ground disturbances in the APE will not exceed six feet. The entire APE lies within Sections 1-3 and 10-30 of T5N R7W, Sections 23, 25-26, and 35-36 of T6N R7W, and Section 25 of T5N R8W, San Bernardino Baseline and Meridian.

The study is a part of the environmental review process for the undertaking. The PPHCSD, as the lead agency for the undertaking, required the study in compliance with the California Environmental Quality Act (CEQA). As the undertaking may involve federal funding administered by the State Water Resources Control Board (SWRCB), the study is also intended to comply with Section 106 of the National Historic Preservation Act. The purpose of the study is to provide the PPHCSD and the SWRCB with the necessary information and analysis to determine whether the proposed undertaking would have an effect

on any “historic properties,” as defined by 36 CFR 800.16(l), or “historical resources,” as defined by Title 14 CCR §15064.5(a)(1)-(3), that may exist within the APE.

In order to accomplish this objective, CRM TECH conducted a cultural resources records search, historical and geoarchaeological background research, Native American consultation, and an intensive-level field survey of the entire APE. The results of records search indicate that three historic-period sites, designated 19-192304/36-012189 (State Route 18/138), 36-023988 (old State Route 18 and 263rd Street East), and 36-021619 (Southern California Edison Lugo Vincent #1 transmission line), were previously recorded as lying within or partially within the APE. During the field survey, it was observed that Site 36-021619 lies outside the vertical extent of the APE, and thus it requires no further consideration. Sites 19-192304/36-012189 and 36-023988 do not meet any of the criteria for listing in the National Register of Historic Places or the California Register of Historical Resources, and thus do not qualify as “historic properties” or “historical resources.”

No other potential “historic properties”/“historical resources” were encountered within the APE, and the subsurface component of the APE appears to be low in sensitivity for potentially significant archaeological remains in buried deposits. Based on these findings, and pursuant to 36 CFR 800.4(d)(1) and Calif. PRC §21084.1, CRM TECH recommends to the PPHCSD and the SWRCB a conclusion that *no “historic properties” or “historical resources” will be affected by the proposed undertaking.* No further cultural resources investigation is recommended for the undertaking unless project plans undergo such changes as to include areas not covered by this study. However, if buried cultural materials are encountered during earth-moving operations associated with the undertaking, all work in that area should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

a-c. *Less Than Significant With Mitigation Incorporated –*

The proposed Project has been evaluated and determined to have no adverse impact on cultural resources. However, if buried cultural materials are discovered during any earth-moving operations associated with the Project, the following mitigation measure shall be implemented:

**V-1 *Should any cultural resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified archaeologist. Responsibility for making this determination shall be with the District onsite inspector. The archaeological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.***

With the above contingency mitigation incorporation, potential for impact to cultural resources will be reduced to a less than significant level. No additional mitigation is required.

Additionally, the potential for discovering paleontological resources during development of the Project is considered highly unlikely. No unique geologic features are known or suspected to occur on or beneath the sites. These resources are located beneath the surface and can only be discovered as a result of ground disturbance activities; therefore, the following measure shall be implemented:

**V-2 *Should any paleontologic resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection should be performed immediately by a qualified paleontologist. Responsibility for making this determination shall be with the District onsite inspector. The paleontological professional shall assess the find, determine its significance, and make***

***recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.***

With incorporation of this contingency mitigation, the potential for impact to paleontological resources will be reduced to a less than significant level. No additional mitigation is required. The District consulted with the San Manuel Band of Luiseño Indians under AB 52 requirements, and there was no request for further participation in the implementation of the proposed Project.

- d. *Less Than Significant Impact* – As noted in the discussion above, No available information suggests that human remains may occur within the APE and the potential for such an occurrence is considered very low. State and local laws (Section 7050.5 of the Health and Safety Code) require that local law enforcement agencies be notified local Police Department, County Sheriff and Coroner's Office if human remains are encountered. Compliance with these laws is considered adequate mitigation for potential impacts and no further mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
<b>VI. GEOLOGY AND SOILS:</b> Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
§ Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				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 onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?				X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X

SUBSTANTIATION

a. Ground Rupture

*No Impact* – According to the Regulatory Map obtained from the California Department of Conservation showing Alquist-Priolo Earthquake Fault Zones and other seismic hazards (Figure VI-1), the project footprint and general area do not have any known faults, active or inactive. Therefore, no potential exists for the proposed project to experience any fault rupture along a delineated active fault.

### Strong Seismic Ground Shaking

*Less Than Significant With Mitigation Incorporated* – The proposed project site, as with most of southern California, is in a seismically active area and will most likely be subject to substantial groundshaking during the life of the project. Due to the proximity of the active San Andreas Fault, about ten miles to the south, and the active Helendale Fault, about eighteen miles to the northeast, the project site and area can be exposed to significant ground shaking during major earthquakes on either of these regional faults. Wells and underground pipelines are not typically susceptible to severe damage from ground shaking. Many such facilities exist within areas susceptible to strong ground shaking effects. The reservoir and booster pump station facilities do not contain structures or presence of human occupied structures that will be occupied by or attract humans to the site other than for operations and maintenance on a “drop-in” basis, and therefore would not expose people to potentially substantial adverse impacts. However, as a contingency measure to protect future above ground structures from severe damage due to ground shaking, the following mitigation measure will be implemented by the District for construction of the reservoir to prevent a catastrophic failure of this facility during a future regional seismic event.

**VI-1 PPHCSD shall retain a qualified engineering geologist to investigate sites proposed for water storage reservoirs. The recommendations of the engineering geologist relative to mitigating the potential for seismically induced ground rupture, strong ground shaking and expansive soils shall be incorporated in the design and construction of these facilities. Design of such facilities shall follow the following design performance criteria. Comprehensive geotechnical investigation shall be required prior to engineering and design development or structural and/or substantial rehabilitation of structures identified under Risk Class I & II, e.g., public facilities, as identified below:**

***Risk Class I & II, Structures Critically Needed after Disaster: Structures which are critically needed after a disaster include important utility centers, fire stations, police stations, emergency communication facilities, hospitals, and critical infrastructure elements such as bridges and overpasses, water storage reservoirs, and smaller dams.***

***Acceptable Damage: Minor non-structural; facility should remain operational and safe, or be suitable for quick restoration of service.***

***Risk Class III: High occupancy structures; uses are required after disasters, i.e., places of assembly such as schools and churches.***

***Acceptable Damage: Some impairment of function acceptable; structure needs to remain operational.***

***Risk Class IV, Ordinary Risk Tolerance: The vast majority of structures in urban areas; most commercial and industrial buildings, small hotels and apartment buildings, and single family residences.***

***Acceptable Damage: An "ordinary" degree of risk should be acceptable. The criteria envisioned by the Structural Engineers Association of California provide the best definition of the "ordinary" level of acceptable risk. These criteria require that structures be able to:***

- a. Resist minor earthquakes without damage;***
- b. Resist moderate earthquakes without structural damage, but with some non-structural damage; or***

- c. ***Resist major earthquakes, of the intensity or severity of the strongest experienced in California, without collapse, but with some structural, as well as non-structural damage.***

***Risk Class V, moderate to High Tolerance: Open space uses, such as farms, ranches and parks without high occupancy structures; warehouses with low intensity employment; and the storing of non-hazardous materials.***

***Acceptable Damage: Not applicable.***

Seismic-related Ground Failure Including Liquefaction

*Less Than Significant With Mitigation Incorporated* – The project footprint is located on a consolidated alluvial fan in the rural flatlands of north Phelan. According to the San Bernardino County General Plan, General Land Use Plan with Geologic Overlays (Figure VI-2), the project footprint does not contain land with any liquefaction susceptibility.

Pipelines and wells are not generally susceptible to seismic-related ground failure. Proper trench bedding and soil preparation at the reservoir site and within the pipeline alignments are considered adequate measures to reduce the remote potential for ground failure at the proposed facilities to a less than significant level. The storage reservoir will be constructed to meet the current seismic safety standards of the Uniform Building Code.

As with other ground failure potential, wells and pipelines are not susceptible to significant adverse effects associated with liquefaction. Damage to pipelines and reservoirs can occur, but they can be repaired and placed back into operation with no loss of human life. Potential impacts associated with seismic-related ground failure would be considered less than significant with implementation of mitigation measure VI-1. No other mitigation is required.

Landslides

*No Impact* – The Project area is relatively flat, sloping slightly from north to south. No hills or other significant topographic features exist on or near the project sites. No potential events can be identified that would result in adverse affects from landslides or that would cause landslides that could expose people or structures to such an event as a result of project implementation. No impacts are anticipated and no mitigation is required.

- b. *Less Than Significant With Mitigation Incorporated* – During construction, the project sites have potential for soil erosion. Due to the area of disturbance associated with site clearing and grading, as well as trenching the pipeline alignment within both dirt and paved roadways, there is a potential for substantial soil erosion. However, because the project sites are already developed or will occur within existing rights-of-way—with the exception of a small segment along the Alternative 2 alignment that traverses through undisturbed vegetation—on very shallow slopes. Because the mitigation measures identified below will be implemented, the potential for substantial soil erosion or loss can be controlled to a less than significant impact level. Based on the mitigation listed below, best management practices (BMPs) will be employed during construction to minimize the potential for soil erosion impacts.

**VI-2 *Stored backfill material shall be covered with water resistant material during periods of heavy precipitation to reduce the potential for rainfall erosion of the material. If covering is not feasible, then measures such as the use of straw bales or sand bags shall be used to capture and hold eroded material on the project site for future cleanup.***

- VI-3** *Excavated areas shall be properly backfilled and compacted. Paved areas disturbed by this project will be repaved in such a manner that roadways and other disturbed areas are returned to as near the pre-project condition as is feasible.*
- VI-4** *All exposed, disturbed soil (trenches, stored backfill, etc.) will be sprayed with water or soil binders twice a day or more frequently if fugitive dust is observed migrating from the site within which the water facilities are being installed.*
- VI-5** *The length of trench which can be left open at any given time will be limited to that needed to reasonably perform construction activities. This will serve to reduce the amount of backfill stored onsite at any given time.*

The following mitigation measure will be implemented to ensure the discharge of surface runoff from the sites does not result in significant soil erosion or loss of topsoil.

- VI-6** *The District shall identify any additional BMPs to ensure that the discharge of surface water does not cause erosion downstream of the discharge point. This shall be accomplished by reducing the energy of any site discharge through an artificial energy dissipater or equivalent device. If any substantial erosion or sedimentation occurs, any erosion or sedimentation damage shall be restored to pre-discharge conditions.*

Implementation of the above measures in conjunction with mitigation measures identified in the Hydrology/Water Quality Section will adequately mitigate potential impacts associated with the water-related erosion of soil.

- c. *No Impact* – The coarse alluvial soils located at the project sites exhibit stability. Based on a review of the “Soil Survey of San Bernardino County California, Mojave River Area,” the project sites are underlain by either Cajon coarse to fine sandy-loamy or Manet sandy loam, 2-5% slopes. Regarding any potential to induce landslides, lateral spreading, subsidence, liquefaction or collapse, the existing environmental setting does not contribute to any of these geological hazards (refer to Figure VI-1). The only required mitigation consists of measures to control wind erosion and water erosion. BMPs have been identified to in the preceding discussion to manage the wind and water erosion issues. Otherwise, the proposed project does not pose any new unstable geological hazards. No additional mitigation measures are required.
- d. *No Impact* – The project sites are underlain by Cajon coarse to fine sandy-loamy soils and Manet sandy loam that have no potential to expand as defined in Table 18-1 B of the Uniform Building code. Additionally, based on a review of the “Soil Survey of San Bernardino County California, Mojave River Area,” the soils underlying the project area have a low shrink-swell potential. Therefore, development of the various stages of the project have no potential to be exposed to substantial risks to life or property due to presence of expansive soils. No mitigation is required.
- e. *Less Than Significant Impact* – The Project does not propose any septic tanks or alternative wastewater disposal systems. Therefore, determining if the project site soils are incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater does not apply. No impacts are anticipated. No mitigation is required.



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

**SUBSTANTIATION:** The information provided in the following text is abstracted from an air quality and greenhouse gas technical study titled: “Air Quality and GHG Impact Analyses: Phelan Piñon Hills Community Service District Chromium 6 (CR+6) Blending Plan Project.” This study was prepared by Giroux & Associates and dated February 28, 2016. This study is provided as Appendix 1 of this document. Please refer to the AQ Analysis in Appendix 1 for a detailed discussion of the background and physical setting as well as the regulatory setting for federal and California Greenhouse Gases (GHG).

a&b. *Less Than Significant Impact* – “Greenhouse gases” (so called because of their role in trapping heat near the surface of the earth) 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 GHG. 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:

- Require 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, to be achieved by 2020.
- 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. Additionally, through the California Climate Action Registry (CCAR now called the Climate Action Reserve), general and industry-specific protocols for assessing and reporting GHG emissions have been developed. GHG sources are categorized into direct sources (i.e. company owned) and indirect sources (i.e. not company owned). Direct sources include combustion emissions from on-and off-road mobile sources, and fugitive emissions. Indirect sources include off-site electricity generation and non-company owned mobile sources.

#### Greenhouse Gas Emissions Significance Thresholds

In response to the requirements of SB97, the state Resources Agency developed guidelines for the treatment of GHG emissions under CEQA. These new guidelines became state laws as part of Title 14 of the California Code of Regulations in March, 2010.

Section 15064.4 of the Code specifies how significance of GHG emissions is to be evaluated. The process is broken down into quantification of project-related GHG emissions, making a determination of significance, and specification of any appropriate mitigation if impacts are found to be potentially significant. At each of these steps, the new GHG guidelines afford the lead agency with substantial flexibility.

Emissions identification may be quantitative, qualitative or based on performance standards. CEQA guidelines allow the lead agency to “select the model or methodology it considers most appropriate”. The most common practice for infrastructure/combustion GHG emissions quantification is to use a computer model such as CalEEMod.

The significance of those emissions then must be evaluated; the selection of a threshold of significance must take into consideration what level of GHG emissions would be cumulatively considerable. The guidelines are clear that they do not support a zero net emissions threshold. If the lead agency does not have sufficient expertise in evaluating GHG impacts, it may rely on thresholds adopted by an agency with greater expertise.

The California Air Resources Board (ARB) has developed an interim significance guideline for industrial projects or 7,000 metric tons of CO<sub>2</sub>-equivalent annual emissions. Water management and treatment is not strictly an “industrial” process. However, in the absence of any adopted significance thresholds, this screening level will be used in the following analysis.

#### GHG Impact Analysis

GHG emissions would be potentially significant if the project would:

- Generate greenhouse gas emissions either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Construction Activity GHG Emissions

During project construction, the CalEEMod2013.2.2 computer model predicts that the indicated activities could generate the following annual emissions shown in Table VII-1.

**Table VII-1  
ANNUAL EMISSIONS**

<b>Maximal Annual Construction Emissions</b>	<b>MT CO2e</b>
2017	
Single Reservoir	80.5
<b>3 Reservoirs</b>	<b>241.5</b>
Single Booster Station	19.4
<b>2 Booster Stations</b>	<b>38.8</b>
Single Well Pump Install	3.6
<b>3 Well Pumps</b>	<b>10.8</b>
Pipeline	<b>220.2</b>
<b>Total</b>	<b>511.3</b>

Equipment exhaust also contains small amounts of methane and nitric oxides, which are also GHGs. Non-CO<sub>2</sub> GHG emissions represent approximately a one percent increase in CO<sub>2</sub>-equivalent emissions from diesel equipment exhaust. For screening purposes, the temporary construction activity GHG emissions were compared to the chronic operational emissions in the ARB's interim thresholds. The screening level operational threshold is 7,000 metric tons (MT) of CO<sub>2</sub>-equivalent (CO<sub>2</sub>(e)) per year. Worst year construction activities generating a total of 511 MT are well below this threshold.

Project Operational GHG Emissions

Except for minor system maintenance, the only operational source of GHG emissions would be associated with pumping operations. Electricity is generated from a variety of resources at various locations in the western United States. The California Climate Action Registry Protocol (2009) states that each megawatt-hour (MW-HR) of electricity consumption in California results in the release of 0.331 MT of CO<sub>2</sub>(e).

The new pumping operations for this project are expected to consume 600 KW per hour. Assuming a 50% load factor, this would translate to an annual average of 2,628 MW per year in increased project electrical consumption. Electricity use will result in GHG emissions from the fossil fueled fraction of Southern California's electrical resource calculated as follows:

$$2,628 \text{ MWH/year} \times 0.331 \text{ MT/MWH} = 869.9 \text{ MT/year}$$

The screening threshold of 7,000 MT of CO<sub>2</sub>(e) GHG emissions will not be exceeded. Both the construction and operations GHG emissions are far below the 7,000 MT CO<sub>2</sub>(e) advisory threshold for impact significance.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
<b>VIII. HAZARDS AND HAZARDOUS MATERIALS:</b> 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 for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?			X	
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?		X		
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

**SUBSTANTIATION**

a&b. *Less Than Significant With Mitigation Incorporated* – The Project should not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; but it may create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment during construction. During construction there is a potential for accidental release of petroleum products in sufficient quantity to pose a significant hazard to people and the

environment. The following mitigation measure will be incorporated into the SWPPP prepared for the Project and it can reduce such a hazard to a less than significant level.

**VIII-1 All spills or leakage of petroleum products during construction activities will be remediated in compliance with applicable state and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste will be collected and disposed of at an appropriately licensed disposal or treatment facility. This measure will be incorporated into the SWPPP prepared for the Project development.**

The Project will consist of constructing a blending reservoir, water storage reservoir, two booster pump stations, outfitting the three new wells with vertical turbine pumps, and subsequent pipeline to connect the wells to the rest of the District's system. The activities associated with the District's blending plan will not involve significant potential for routine transport or use of substantial volumes of hazardous materials or routine generation of hazardous wastes. Any impacts are considered less than significant. No mitigation is required.

- c. *No Impact* – The Project will not emit hazardous emissions or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. The nearest school is approximately 5 miles away from any point within the project footprint; thus, no existing or proposed schools are located within one-quarter mile of the Project. No Impacts are anticipated and no mitigation is required.
- d. *Less Than Significant With Mitigation Incorporated* – According to the California State Water Board's GEOTRACKER site, which provides information regarding Leaking Underground Storage Tanks (LUST), there are locations within a 1 mile radius of George's well—which will be outfitted with a vertical turbine pump to extract water from the well as part of the proposed project's implementation—that are identified as LUST Cleanup sites, as well as two open cases of Cleanup Program Sites, and one open case Land Disposal Site (Figure VIII-1). Based on the available data and historical land use, these wells are not located at a location where they are likely to intercept the contaminated plume from these Cleanup Program Sites, particularly from the two Cleanup Program Sites (Figure VIII-2 and VIII-3), as the George Well, Corner Well, and Center Well have been tested for and do not contain the main contaminant these Cleanup Program Sites contain. The purpose of the proposed Project is to blend the non-contaminated water from the 3 wells with the other District Wells that are contaminated with hexavalent chromium. Though no contamination is anticipated, the proximity of the contaminated plume to George's well could become a concern as water from George's well is extracted for use. In order to mitigate the possibility of introducing contaminated water from George's well—in the event that contamination does occur from the aforementioned contamination site—the following mitigation measure will be implemented:

**VIII-2 The District shall sample the water from George's well at least (once a month) for excessive CR+6, PCE, and TCE levels. Levels must not exceed applicable thresholds (Safe Drinking Water Act, etc.) for safe drinking water in order for water from George's well to be drawn and blended into the District's water supply.**

- e. *No Impact* – According to a review of Google Maps (January 13, 2016), the closest public airport to the project site is the Southern California Logistics Airport, which is located 10 miles to the east/northeast of the Project sites. Based on this information, implementation of the Project will not result in a safety hazard for people residing or working in the project area. No impacts are anticipated and no mitigation is required.
- f. *Less Than Significant Impact* – According to a review of Google Maps (January 13, 2016), the El Mirage Airport, Krey Field, and Brian Ranch Airport are all located between 1.5 and 5 miles from the project sites. Due to the distance from these private airports (between 1.5 and 5 miles) and the

lack of any habitable structures on the project sites, implementation of the Project will not result in an exposure to a safety hazard for the people working in the project area.

- g. *Less Than Significant With Mitigation Incorporated* – The Project will be located within or adjacent to existing access roads. A limited potential to interfere with an emergency response or evacuation plan will occur during construction. Control of access during construction will ensure emergency access to the sites and project areas during construction. No known emergency response or evacuation plans or routes are known to exist in the vicinity of the Project and no such plans will be affected by this Project. Refer to the Transportation/Traffic Section of this document, Section XV. Mitigation to address any potential traffic disruption and emergency access issues are included in this section. Impacts are reduced to a less than significant level with mitigation incorporated. No additional mitigation is required.
- h. *No Impact* – The proposed project is located in a wildland fire hazard area, but according to Section 8 – Safety of the Phelan/Piñon Hills Community Plan (p.54), fire hazard severity is very high only in limited areas, south of Highway 138. The fire threat throughout most of the community plan area is considered moderate. The proposed blending reservoir, water storage reservoir, two booster pump stations, vertical turbine pumps, and pipeline alignments would not expose people or structures to a significant risk of loss, injury or death involving wildland fires as they are not located in the vicinity of the high wildland fire hazard area. The various project sites are listed in areas without sufficient fuel load to pose a wildland fire hazard. No impacts are anticipated and no mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
<b>IX. HYDROLOGY AND WATER QUALITY:</b> Would the project:				
a) Violate any water quality standards or waste discharge requirements?		<b>X</b>		
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?		<b>X</b>		
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation onsite or offsite?		<b>X</b>		
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?		<b>X</b>		
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?		<b>X</b>		
f) Otherwise substantially degrade water quality?		<b>X</b>		
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				<b>X</b>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				<b>X</b>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				<b>X</b>
j) Inundation by seiche, tsunami, or mudflow?				<b>X</b>

SUBSTANTIATION

a, b,

&f. *Less Than Significant With Mitigation Incorporated* – The project proposes to outfit three new wells with vertical turbine pumps to introduce water that has not been contaminated with hexavalent chromium into the District’s water system. The project will install two booster pump stations, a water reservoir, a blending reservoir, and pipeline to connect each of these facilities to the District’s existing water system. These facilities will not involve the treatment of water, but rather, the water reservoirs will contain water introduced from the new wells, while the blending reservoir will mix water from the existing wells to bring the hexavalent chromium levels within the District to an acceptable level. Thus, the project should not violate any water quality standards in the long term when the facilities are in operation. However, as noted in the Hazards and Hazardous Materials section above, one of the wells from which water will be drawn is located near a contamination plume that has a minute possibility of contaminating water from George’s well. Additionally, according to a US Department of the Interior Geological Survey document titled “Chromium Concentrations, Chromium Isotopes, and Nitrate in the Unsaturated Zone and at the Water-Table Interface, El Mirage, California,” CR+6 levels near George’s well are mainly from high-chromium concentrations from naturally occurring chromium mobilized as a result of irrigation with dairy wastewater. However, any potential water contamination of CR+6 will be mitigated through the implementation of mitigation measure VIII-2, which will ensure that no violations of water quality standards could arise from blending water from George’s well with the District’s current water supply.

In the short term, construction activities will have some potential to affect the quality of stormwater discharged from the project sites. Land disturbance activities could result in erosion and sedimentation immediately adjacent to the project sites. Spills or leaks of petroleum products used by construction equipment could also potentially affect the quality of surface water. The area of land disturbance from the construction of the two booster pump stations, water reservoirs, blending reservoirs, and well vertical turbine pumps will encompass sections of land already owned or operated by the District. The area of disturbance from the construction of the pipeline will occur within existing rights-of-way; however the Alternative 2 alignment would traverse through some vegetation where the road curves or in the small section of in which the road ends and the alignment will traverse through vegetation. The District must file a Notice of Intent (NOI) with the State Water Resources Control Board and obtain a general construction National Pollutant Discharge Elimination System (NPDES) stormwater discharge permit prior to the start of construction. Obtaining coverage under the General Construction NPDES permit requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which specifies Best Management Practices (BMPs) that must be implemented during construction. Compliance with the terms and conditions of the NPDES and the SWPPP is mandatory and is judged adequate mitigation by the regulatory agencies for potential impacts to stormwater during construction activities. Implementation of the following mitigation measure is also considered adequate to reduce potential impacts to stormwater runoff to a less than significant level.

***IX-1 The District shall require that the construction contractor prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving offsite into receiving waters. The SWPPP shall include a Spill Prevention and Cleanup Plan that identifies the methods of containing, cleanup, transport and proper disposal of hazardous chemicals or materials released during construction activities that are compatible with applicable laws and regulations. BMPs to be implemented in the SWPPP may include but not be limited to:***

- *The use of silt fences;*



- ***The use of temporary stormwater desilting or retention basins;***
- ***The use of water bars to reduce the velocity of stormwater runoff;***
- ***The use of wheel washers on construction equipment leaving the site;***
- ***The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads;***
- ***The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and***
- ***Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.***

c-e. *Less Than Significant With Mitigation Incorporated* – Water discharge within the project footprint generally flows south to north; however most of the sites have been graded and are generally flat. The proposed sites for the two booster pump stations, water storage reservoir, and blending reservoir are already highly disturbed as they are on existing sites maintained and operated by the District. Based on a field review, it appears that any rainfall remains on the project sites, or if it flows offsite, sheet flow is discharged to the adjacent roadway shoulders. Each of these sites contain existing facilities (wells, booster pumps, and/or reservoirs), but further development of these sites would add limited amounts of impermeable surfaces due to the construction of the two booster pump stations, the water storage reservoir, and the blending reservoir. None of the above facilities will be located within an active flow line of any channel or watercourse. Once constructed, the sites will continue to discharge surface water in a manner similar to what presently occurs, i.e. the discharge remains on the project sites, or if it flows offsite, sheet flow is discharged to the adjacent roadway shoulders. However, mitigation is available to control surface runoff during construction and future operation (see mitigation measure IX-1 above). Also, several mitigation measures to minimize onsite and downstream erosion during construction have been identified in the Geology and Soil section of this report (Measures VI-1 through VI-5).

According to Appendix 2a, the proposed pipeline alignment under any of the three alignments has a potential to impact drainage channels within the project APE. The delineation identified 10 drainage features on the site for a total of 3.585 acres that meet the criteria of streambed waters per Section 1600 of the Fish and Game Code administered by California Department of Fish and Wildlife. However, none of the hydrogeomorphic features on site support jurisdictional waters subject to the Clean Water Act (CWA) under the jurisdictions of USACE or RWQCB because Sheep Creek is not traditionally navigable water; it has no significant nexus to one and is not a Water of the U.S. Construction of the proposed pipeline alignment, therefore, would be considered less than significant with implementation of the following mitigation measure:

***IX-2 The project would be unable to comply with this requirement, so prior to discharge of fill or streambed alteration of any channel along the project's alternative alignment, the District shall obtain a mandatory regulatory permit from the California Department of Fish and Wildlife, and may be requested to obtain waste discharge requirements from the California Regional Water Quality Control Board Lahontan Region. Mitigation can be provided by purchasing into any authorized mitigation bank; by selecting a site of comparable acreage near the site and enhancing it with a native riparian habitat or invasive species removal in accordance with a habitat mitigation plan approved by regulatory agency requirements. Typically, regulatory agencies require mitigation for jurisdictional waters without any riparian or wetland habitat to be mitigated at a 1:1 ratio. The channels identified in Appendix 2b do not contain riparian or wetland habitat, thus, if the District selects this alternative the ratio will be 1:1. The roadway will be returned to a functional condition after the pipeline is installed in the roadways identified in***

***Appendix 2b. The agencies can impose greater mitigation requirements in their permits, but the District will require the utilization of the ratio outlined above as the minimum required to offset or compensate for impacts to jurisdictional waters.***

The construction of the proposed east-west pipeline will impact 10 drainage channels that cross perpendicular to Dos Palmas Road and Palmdale Road as shown in Figure IX-1. These drainage channels continue north and are present along the Alternative 2 alignment on the east-west alignment of South Road. Based upon a discussion with the project engineers, all channel crossings will be carried out within existing disturbed road rights-of-way. By staying within the road rights-of-way where the channels have already been disturbed and filled there will be no new disturbance of these channels. Under the Alternative 2 alignment, the pipeline alignment would traverse through some areas of vegetation through which the drainage cross and these areas will be disturbed, but impacts will be mitigated with the mitigation measure provided below. It is not anticipated that any waters of the State or the United States will be impacted by installing the new pipelines. Based on these findings, the District does not anticipate having to acquire any regulatory permits. The following mitigation measure shall be implemented to ensure that construction of the proposed pipeline will not result in worse conditions within existing roadways upon completion of the project:

***IX-3 When the pipeline constructed over an existing channel is completed, the roadways or areas of vegetation must be returned to their original condition, or better than currently exists.***

Based on the locations of the proposed pipeline and water facilities, it is concluded that through implementation of mitigation measures that this project will not substantially alter the existing drainage pattern of the site or area; will not substantially alter the course of a stream or river in such a manner that will result in substantial erosion or siltation either on or off the Project sites; or contribute runoff water that could exceed the capacity of the existing drainage facilities. Impacts are less than significant with mitigation incorporation. No additional mitigation is required.

- g. *No Impact* – The Project is not located within a 100-year floodplain and does not propose any new housing or occupiable structures. Implementation of the Project will not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. No impacts are identified. No mitigation is required.
- h. *No Impact* – The project sites are not located within a 100-year flood hazard area and any structures onsite will not alter or redirect any future flood flows on the project site. No impact can occur and no mitigation is required.
- i. *No Impact* – There are no upstream sources of flooding from any source that could expose people or structures on any project site to significant risk of loss, injury, or death. No impact can occur, and no mitigation is required.
- j. *No Impact* – There is no source of upstream surface runoff or flows that could inundate the sites, including seiche, tsunami or mudflow. No hills exist around or near the site that could result in the generation of substantial mudflow. No impact from such hazards can be identified and no mitigation is required.

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

**SUBSTANTIATION**

- a. *No Impact* – According to the San Bernardino County General Plan Land Use Services Zoning Look Up interactive website (accessed January 14, 2016), the Land Use designations within and surrounding the project footprint range from Rural Living (RL and RL-5), Single Residential (RS-1), Community Industrial (IC), and General Commercial (CG). The proposed facilities are located within existing properties that the District owns and from which the District operates their existing water system, and the pipeline will be installed within existing roadways with no divisive impact to the surrounding community. Since the proposed project occurs within and supports existing land use designations, no potential exists for the proposed project to physically divide an existing community. No impact will result and no mitigation is required.
- b. *Less Than Significant Impact* – Please reference discussion X.a. above. Implementation will not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. There is no specific plan or local coastal program that would apply to the Project site. Any impacts are considered less than significant. No mitigation is required.
- c. *No Impact* – Please reference the discussion in IV, Biological Resources, above. There are no habitat or natural community conservation plans that apply to the project area. Therefore, no potential exist for the proposed Project to conflict with such plans.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
<b>XI. MINERAL RESOURCES:</b> 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?			<b>X</b>	
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?			<b>X</b>	

**SUBSTANTIATION**

- a. *Less Than Significant Impact* -- Implementation of the Project will not result in the loss of availability of any known mineral resources that would be of value to the region and the residents of the state. According to the Geologic Map of the San Bernardino Quadrangle from the California Department of Conservation (<http://www.quake.ca.gov/gmaps/RGM/sanbernardino/sanbernardino.html>), the Project sites are located on alluvial soils. Alluvial soils are not a unique soil classification in the Project vicinity, as well as in southern California. In addition, neither the Project sites nor surrounding vicinity have been mined in the past. If mineral resources were present on the Project sites, then there would have been historic operations on the Project sites to commercially extract these resources. Based on this information, any impacts to mineral resources from implementing the Project will be considered less than significant. No mitigation is required.
  
- b. *Less Than Significant Impact* – Please reference response XI.a. above. While the General Plan does contain Goals and Policies that related to mineral resources (Goal CO7, Policies CO7.1 through CO7.8, pp. V-32 and V-33 of the San Bernardino County General Plan): <http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGPtext20130718.pdf>, the Project site has not been historically mined for important mineral resources. No specific plan or other land use plan is in place that would delineate important mineral resources on the Project sites. Any impacts are considered less than significant and no mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
<b>XII. NOISE:</b> Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		<b>X</b>		
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?		<b>X</b>		
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			<b>X</b>	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		<b>X</b>		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				<b>X</b>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				<b>X</b>

**SUBSTANTIATION**

Background

Noise is generally described as unwanted sound. The proposed pipeline alignment, the dairy well site where the three dairy wells will be outfitted with vertical turbine pumps and the first booster pump station will be installed; the Well No. 2 site where a water storage reservoir and second booster pump station will be installed; and the Well 12 site where a blending reservoir will be installed, are bounded by rural living (RL and RL-5) and residential (RS-1) land uses, in which residences are generally sparse throughout the project area.

The unit of sound pressure ratio to the faintest sound detectable to a person with normal hearing is called a decibel (dB). Sound or noise can vary in intensity by over one million times within the range of human hearing. A logarithmic loudness scale, similar to the Richter scale for earthquake magnitude, is therefore used to keep sound intensity numbers at a convenient and manageable level. The human ear is not equally sensitive to all sound frequencies within the entire spectrum. Noise levels at maximum human sensitivity from around 500 to 2,000 cycles per second are factored more heavily into sound descriptions in a process called “A-weighting,” written as “dBA.”

Leq is a time-averaged sound level; a single-number value that expresses the time-varying sound level for the specified period as though it were a constant sound level with the same total sound energy as the time-varying level. Its unit is the decibel (dB). The most common averaging period for Leq is hourly.

Because community receptors are more sensitive to unwanted noise intrusion during more sensitive evening and nighttime hours, state law requires that an artificial dBA increment be added to quiet time noise levels. The State of California has established guidelines for acceptable community noise levels that are based on the Community Noise Equivalent Level (CNEL) rating scale (a 24-hour integrated noise measurement scale). The guidelines rank noise land use compatibility in terms of "normally acceptable," "conditionally acceptable," and "clearly unacceptable" noise levels for various land use types. The State Guidelines, Land Use Compatibility for Community Noise Exposure, single-family homes are "normally acceptable" in exterior noise environments up to 60 dB CNEL and "conditionally acceptable" up to 70 dB CNEL based on this scale. Multiple family residential uses are "normally acceptable" up to 65 dB CNEL and "conditionally acceptable" up to 70 CNEL. Schools, libraries and churches are "normally acceptable" up to 70 dB CNEL, as are office buildings and business, commercial and professional uses with some structural noise attenuation.

- a. *Less Than Significant With Mitigation Incorporated* – The project sites are located in relatively low background noise environments. Local sources of noise include modest traffic along Sheep Creek Road, Palmdale Road, and minimal traffic along Dos Palmas Road; Alternative alignment roads—Beekley Road, South Road, and Soledad Road—are in extremely rural, minimal traffic zones. Should the District choose the proposed alternative pipeline alignment, which utilizes different north-south roadways, minimal traffic noise sources will come from traffic along several dirt roads that serve less traffic than Sheep Creek Road serves: Beekley Road, Meridian Road, and South Road. Based on the limited traffic, background noise is estimated at about 45-50 dBA over a 24-hour period using the Community Noise Equivalent Level (CNEL), though this estimate would be less under the proposed alternative pipeline alignment.

The proposed project will introduce new short-term noise generating activities into the project area, but minimal long-term noise activities will occur in support of the proposed pipelines, reservoir, and blending reservoir facilities. First, construction activities will require the installation of vertical turbine pumps to the new wells that will be introduced into the District's system; installation of two booster pump stations; installation of a holding reservoir; installation of a blending reservoir; and finally pipelines to connect the new facilities to the District's existing water distribution system. Above ground wells and pump stations have potential to generate substantial noise to nearby sensitive receptors. There are no sensitive receptors near the dairy well site, however, there are nearby sensitive receptors to the District's Well No. 2 site. Occasional visits for maintenance are another noise source of consideration that the project facilities will generate. These changes in noise levels during construction and operation have the potential to pose an adverse noise impact on the sensitive receptors near the project facilities, though there are not many sensitive receptors in close proximity to the construction sites as the population density within this part, and most of Phelan is low. The construction noise impacts and potential mitigation measures are discussed in the following sections.

- b. *Less Than Significant With Mitigation Incorporated* – Vibration is the periodic oscillation of a medium or object. The rumbling sound caused by vibration of room surfaces is called structure borne noises. Sources of groundborne vibrations include natural phenomena (e.g. earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g. explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous or transient. Vibration is often described in units of velocity (inches per second), and discussed in decibel (dB) units in order to compress the range of numbers required to describe vibration. Vibration impacts related to human development are generally associated with activities such as train operations, construction, and heavy truck movements.

The background vibration-velocity level in residential areas is generally 50 VdB; levels would generally be considered even less in rural areas such as the area surrounding the project footprint. Groundborne vibration is normally perceptible to humans at approximately 65 VdB, while 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible. Construction activity can result in varying degrees of groundborne vibration, but is generally associated with pile driving and rock blasting. Other construction equipment, such as air compressors, light trucks, hydraulic loaders, etc. generates little or no ground vibration. While no enforceable regulations for vibration exist within the County of San Bernardino, the Federal Transit Association (FTA) guidelines identify a level of 80 VdB for sensitive land uses. This threshold provides a basis for determining the relative significance of potential Project related vibration impacts.

In the short term, pipeline alignment and blending facility construction activities have the some potential to create some vibration to the nearest sensitive receptors at some sites within the project footprint. However, any short-term impacts to the nearest sensitive receptors would be considered less than significant through implementing the following mitigation measure:

***XII-1 During future construction activities with heavy equipment within 300 feet of occupied residences, vibration field tests should be conducted at the nearest occupied residences. To the extent feasible, if vibrations exceed 72 VdB, the construction activities shall be revised to reduce vibration below this threshold.***

- c. *Less Than Significant With Mitigation Incorporated* -- This Project includes two new booster pump stations. The District proposes to install two booster pump stations, one will operate at 400 horsepower, and another will operate at 200 horsepower. Based on this information, the proposed booster pump station can result in a new source of significant long term noise. The noise generated by operation this facility would not result in noise levels that exceed the standards deemed acceptable by the County of San Bernardino. However, the following mitigation will be implemented as a contingency:

***XII-2 The well and booster pump station shall have noise levels attenuated to 50 dBA CNEL at the nearest sensitive noise receptor location.***

- d. *Less Than Significant With Mitigation Incorporated* – The proposed project will involve construction operations that have the potential to cause short-term significant noise impacts. In the short term, pipeline construction and reservoir/pump station construction activities will result in noise generated by excavators, dozers, pavers, air compressors, welders, generators, trenchers, and other noise making equipment required to complete construction. Construction equipment generates noise that ranges between approximately 75 and 90 dBA at a distance of 50 feet. Refer to Table XII-1, which shows construction equipment noise levels at 25, 50 and 100 feet from the noise source. However, noise generation from construction activities is exempt from County performance standards if construction does not occur from 7 p.m. through 7 a.m. This mitigation is incorporated below, along with several other measures that can control construction noise activities to a less than significant impact level.

The noise generated by the proposed pipeline alignment construction within roadways in residential or rural areas with sensitive receptors nearby would normally be considered a significant noise impact. However, contingency mitigation is provided below to reduce noise levels at residences and/or minimize or address complaints from local sensitive noise receptors.

The short term noise impacts associated with Project construction activities are forecast to be less than significant through implementing the following measures. As construction activities may be a nuisance to nearby residents, the following mitigation is recommended:

- XII-3** *The District shall use noise reducing barriers and other devices to reduce exterior noise levels at the nearest sensitive receptor to 60 CNEL or less during the night-time construction hours (in the event that any emergency night-time construction hours become necessary) and 65 CNEL or less during the daytime construction hours.*
- XII-4** *No construction activities shall occur during the hours of 6 pm through 7 am, Monday through Saturday and at no time shall construction activities occur on Sundays or holidays, unless a declared emergency exists.*
- XII-5** *The District shall establish a noise complaint response program and shall respond to any noise complaints received for this Project by measuring noise levels at the affected receptor site. If the noise level exceeds an Ldn of 60 dBA exterior or an Ldn of 45 dBA interior at the receptor, the applicant will implement adequate measures (which may include portable sound attenuation walls, use of quieter equipment, shift of construction schedule to avoid the presence of sensitive receptors, etc.) to reduce noise levels to the greatest extent feasible.*
- XII-6** *The District will require that all construction equipment be operated with mandated noise control equipment (mufflers or silencers). Enforcement will be accomplished by random field inspections by applicant personnel during construction activities.*
- XII-7** *Equipment not in use for five minutes shall be shut off.*
- XII-8** *Equipment shall be maintained and operated such that loads are secured from rattling or banging.*
- XII-9** *Where available, electric-powered equipment shall be used rather than diesel equipment and hydraulic-powered equipment shall be used instead of pneumatic power.*
- XII-10** *Construction employees shall be trained in the proper operation and use of equipment consistent with these mitigation measures, including no unnecessary revving of equipment.*
- XII-11** *No radios or other sound equipment shall be used at this site unless required for emergency response by the contractor.*
- XII-12** *Public notice shall be given prior to initiating construction. This notice shall be provided to all property owners/residents within 300 feet of the project site and shall be provided to property owners/residents at least one week prior to initiating construction. The notice shall identify the dates of construction and the name and phone number of a construction supervisor (contact person) in case of complaints. One contact person shall be assigned to the project. The public notice shall encourage the adjacent residents to contact the supervisor in the case of a complaint. Resident's would be informed if there is a change in the construction schedule. The supervisor shall be available 24/7 throughout construction by mobile phone. If a complaint is received, the contact person shall take all feasible steps to remove the sound source causing the complaint.*



**Table XII-1  
NOISE LEVELS OF CONSTRUCTION EQUIPMENT AT  
25, 50 AND 100 FEET (in dBA LEQ) FROM THE SOURCE**

Equipment	Noise Levels at 25 feet	Noise Levels at 50 feet	Noise Levels at 100 feet
<b>Earthmoving</b>			
Front Loader	85	79	73
Backhoes	86	80	74
Dozers	86	80	74
Tractors	86	80	74
Scrapers	91	85	79
Trucks	91	85	79
<b>Material Handling</b>			
Concrete Mixer	91	85	79
Concrete Pump	88	82	76
Crane	89	83	77
Derrick	94	88	82
<b>Stationary Sources</b>			
Pumps	82	79	70
Generator	84	78	72
Compressors	87	81	75
Other			
Saws	84	78	72
Vibrators	82	76	70

Source: U.S. Environmental Protection Agency “Noise”

- e. *No Impact* – The proposed project facilities are not 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. According to a review of Google Maps (January 13, 2016), the closest public airport to the project site is the Southern California Logistics Airport, which is located 10 miles to the east/northeast of the Project sites. Based on this information, the Project will have no potential to expose people residing or working in the project area to excessive noise levels generated by nearby aircraft or airport operations. No impacts are anticipated and no mitigation is required.
- f. *Less Than Significant Impact* – According to a review of Google Maps (January 13, 2016), the El Mirage Airport, Krey Field, and Brian Ranch Airport are all located between 1.5 and 5 miles from the project sites. Krey Field and El Mirage Airport are both within 2 miles of the project footprint, at 1.5 miles and 1.9 miles from the closest project site respectively. There is a potential for overflights because of the project’s general vicinity to private airfields; however, the proposed water facilities will not contain any habitable structures, and thus are not considered sensitive to such noise. Therefore, any impacts are considered less than significant. No mitigation is required.

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

SUBSTANTIATION

- a. *No Impact* – Implementation of the Project will not induce substantial population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). This project proposes to improve the water quality in the District by blending water from three new wells with the District’s existing water supply; this will bring the amount of hexavalent chromium in the water supply to a safe level. Due to the type of facilities proposed by this project, the type of direct or indirect impacts listed above will not be associated with the Project. No impacts are anticipated and no mitigation is required.
- b. *No Impact* – Implementation of the Project will not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere. There is no housing located within the project footprint. Therefore, there will be no need to construct replacement housing. No impacts are anticipated and no mitigation is required.
- c. *No Impact* – Please reference Response XIII.b. above. There is no existing housing located within the project footprint. Therefore, no people will be displaced that would result in a need to construct replacement housing. No impacts are anticipated and no mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
<b>XIV. PUBLIC SERVICES:</b> 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:				
a) Fire protection?			X	
b) Police protection?			X	
c) Schools?				X
d) Recreation/Parks?				X
e) Other public facilities?				X

SUBSTANTIATION

- a. *Less Than Significant Impact* – The nearest fire stations serving the project are between 5 and 10 miles away from any site/point within the project footprint; San Bernardino County Fire Station #13 is located at 10433 Mountain Road, Piñon Hills, CA 92371; and San Bernardino County Fire Station #10 is located at 9625 Beekley Road, Phelan, CA 92371. The San Bernardino County Fire Department (SBCFD) provides fire protection and emergency medical services for the cities of Piñon Hills and Phelan. The project will not include the use or storage of highly flammable materials. The project facilitates a water blending plan to create safer drinking water within the District. The proposed structures—two booster pump stations, a water storage reservoir, a blending reservoir, vertical turbine pumps, and pipelines—do not present a fire hazard. They are made of block, steel, and concrete, which are considered fire-resistant. Thus, with no greater potential for fire risk, no new or altered fire protection facilities will be required to serve this Project. Any impact to the existing fire protection system is considered random and less than significant. No additional mitigation is required.
- b. *Less Than Significant Impact* – The communities of Phelan and Piñon Hills receive police services through the San Bernardino County Sheriff Department. The Department enforces local, state, and federal laws; performs investigations and makes arrests; administers emergency medical treatment; and responds to City emergencies. The sheriff station is located at 4050 Phelan Road, Phelan, CA 92371. The proposed project will not include the kind of use that would likely attract criminal activity, except for random trespass and theft; however, any random trespass is unlikely given the 8-foot chain link fences that enclose each of the District owned properties. The proposed facilities would not be readily accessible to the public as the project sites are fenced, or in the case of the pipeline below ground, so a less than significant potential exists for demand for police protection or expansion of police infrastructure. Due to the project’s location within existing well and water distribution facility sites or existing road rights-of-way, implementation of the proposed project would not substantially increase the demand for law enforcement services beyond that already existing at the project sites.

c-e. *No Impact* – The Project will not generate significant numbers of new long-term jobs, nor attract new residents to the area. As a result, the implementation of the Project will not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities; need for new or physically altered governmental facilities; the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times or other performance objectives for public services to include: schools, parks, or other recreational activities. No impacts to schools, parks, or other public facilities are anticipated. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
<b>XV. RECREATION:</b>				
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?				<b>X</b>
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?				<b>X</b>

**SUBSTANTIATION**

- a. *No Impact* – As previously discussed in Section XII, Population and Housing and Section XIII, Public Services, this Project will not contribute to an increase in the population beyond that already allowed or planned for by local and regional planning documents. The proposed project will not increase the use of recreational facilities, nor will it result in the physical deterioration of other surrounding facilities. No impact is forecast and no mitigation is required.
- b. *No Impact* – The proposed Project will construct facilities intended to facilitate a water blending program to mitigate the high levels of hexavalent chromium in the District’s water supply. These facilities will be installed and operated by the District. There will be no adverse recreational effects on the environment from implementing this project. Therefore, no unavoidable impacts will result from project implementation. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
<b>XVI. TRANSPORTATION / TRAFFIC:</b> Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?		X		
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?		X		
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?		X		
e) Result in inadequate emergency access?		X		
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?		X		

SUBSTANTIATION

a&b. *Less Than Significant With Mitigation Incorporated* – The project sites are located throughout the Phelan/Piñon Hills community, west of Interstate 15 and north of Highway 138, with sites just south and north of State Highway 18 (Palmdale Road). The pipeline alignment will be constructed within existing rights-of-way along Sheep Creek Road, Palmdale Road, and Dos Palmas Road. Should the District choose either of the proposed alternative pipeline alignment, which utilize different north-south and east-west roadways, the pipeline will be constructed within existing rights-of-way along Beekley Road, Meridian Road, and South Road (Alternative 1) or Meridian Road, Beekley Road, South Road, and Soledad Road instead of along Sheep Creek Road and Dos Palmas Road. Sheep Creek Road and Palmdale Road are paved in the immediate project areas and operate with two lanes that are maintained by the San Bernardino County Public Works Department. Dos Palmas, and all of the proposed alternative roads are graded, narrow two-lane roads. Two lane rural roads can handle average daily traffic (ADT) of about 6,000 vehicles per day and maintain a level of service (LOS) “C” or better. However, State Highway 18 has an annual average daily traffic

amount of 9,000 vehicles. The Dairy Well sites can be accessed from a variety of roads, namely Meridian Road, Parkdale Road, Sheep Creek Road, and an unnamed access road one block north of Parkdale Road bounding the Dairy Well sites. The Well No. 2 site where the water storage reservoir and 200 horsepower booster pump station will be installed can be accessed on Sheep Creek Road. The Well 12 site where the two 2 mg or one 5 mg blending reservoir will be installed can be accessed from Palmdale Road. No new roads are required to construct or operated the proposed facilities; however, construction within existing roadways is necessary to complete construction of the pipeline alignment. This will require the implementation of a traffic management plan in order to mitigate the congestion caused by constructing the pipeline within public rights-of-way or shoulders on various surrounding roadways (refer to Figures 5 and 6).

An estimated 50 road trips per day are anticipated to the sites during construction and one or less trips per day to any of the project sites per day will be required during future operations of the proposed facilities, mostly on a maintenance schedule. The project may construct each facility and the pipeline alignment concurrently. Implementation of the Project has the potential to conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian bicycle paths, and mass transit. However, with implementation of the following mitigation measure requiring a construction traffic management plan, the impacts of implementing the Project would be considered less than significant. Similarly, the Project could conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways; however with the implementation of the following mitigation measure requiring a construction traffic management plan, the impacts of implementing the project would be considered less than significant. No additional mitigation is required.

***XVI-1 The construction contractor will provide adequate traffic management resources, as determined by the County of San Bernardino. The District shall require a construction traffic management plan for work in public roads that complies with the Work Area Traffic Control Handbook, or other applicable standard, to provide adequate traffic control and safety during excavation activities. The traffic management plan shall be prepared and approved by the County prior to initiation of excavation or pipeline construction. At a minimum this plan shall include how to minimize the amount of time spent on construction activities; how to minimize disruption of vehicle and alternative modes of transport traffic at all times, but particularly during periods of high traffic volumes; how to maintain safe traffic flow on local streets affected by construction at all times, including through the use of adequate signage, protective devices, flag persons or police assistance to ensure that traffic can flow adequately during construction; the identification of alternative routes that can meet the traffic flow requirements of a specific area, including communication (signs, webpages, etc.) with drivers and neighborhoods where construction activities will occur; and at the end of each construction day roadways shall be prepared for continued utilization without any significant roadway hazards remaining.***

***XVI-2 The District shall require that all disturbances to public roadways be repaired in a manner that complies with the Standard Specifications for Public Works Construction (green book) or other applicable County of San Bernardino standard design requirements.***

- c. *No Impact* – The Project water blending facilities will not generate any increase in air traffic volumes or affect air traffic patterns. The nearest airports are private airfields, El Mirage Airport and Krey

Field, and they are approximately 1.9 and 1.5 miles from the closest point within the project footprint. The proposed structures will be approximately 24 feet in height and will pose no threat of interference to air traffic, particularly because the project sites already contain structures of similar height to those being proposed. Mitigation for light and glare is included above in the Aesthetics Section of this Initial Study. This, along with compliance with the County of San Bernardino Municipal Code, will ensure that implementation of the Project will not create light and glare impacts that could affect air traffic. Therefore, the implementation of this Project will not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. No impacts are anticipated. No mitigation is required.

- d. *Less Than Significant With Mitigation Incorporated* – The Project will temporarily alter existing roadways during construction of the proposed pipeline. However, this alteration will not create any hazards due to design features of incompatible uses. The proposed project will install approximately 62,000 lineal feet (LF) of pipeline within existing rights-of-way, but with implementation of the mitigation measures XVI-1 and XVI-2 above, which require implementation of a construction traffic management plan, any potential increase in hazards due to design features or incompatible use will be considered less than significant in the short term. In the long term, no impacts to any hazards or incompatible uses in existing roadways are anticipated because once the pipeline is constructed, the roadway will be returned to its original condition, or better. Thus, any impacts are considered less than significant with implementation of mitigation. No additional mitigation is required.
- e. *Less Than Significant With Mitigation Incorporated* – The Project sites each include direct access to public roadways, which is considered adequate for emergency purposes. According to the San Bernardino County General Plan, no known emergency access plans or routes or emergency response or evacuation plans will be affected by this Project in the long term. During construction, a potential exists for short-term hazards and constraints on both normal and emergency access within the affected area, especially due to the construction of the proposed pipeline alignment, as it will require partial lane closure within existing right-of-ways solely on 2 lane roadways. However, implementation of mitigation measures XVI-1 and XVI-2 will cause impacts to be reduced to a less than significant level. No additional mitigation is required.
- f. *Less Than Significant With Mitigation Incorporated* – The operation of the proposed water blending facilities has no potential to impact alternative transportation plans, policies or programs. The Project operations in the long term will not generate significant additional traffic and no new public roads or alterations to any existing public roads will result. Construction of the proposed pipeline alignment has the potential to impact public transit, bicycle, or pedestrian facilities, and could otherwise decrease the performance or safety of such facilities in the short term. However, with the implementation of the construction traffic management plan required by the above mitigation measures XVI-1 and XVI-2, the impacts to public transit, bicycle or pedestrian facilities would be reduced to less than significant. No additional mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
<b>XVII. UTILITIES AND SERVICE SYSTEMS –</b> Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?		X		
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?		X		
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?		X		
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?		X		
e) Result in a determination by the wastewater treatment provider 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
f) Be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	

SUBSTANTIATION

a-d. *Less Than Significant With Mitigation Incorporated* – The Project proposes the following: outfit three wells with vertical turbine pumps; construct two booster pump stations, a water storage reservoir, and a blending reservoir; and install approximately 62,000 LF of pipeline. This project will not generate wastewater. The project will not result in exceeding any waste discharge requirements or requiring expansion of any wastewater treatment facilities. No impact to such facilities can be identified and no mitigation is required.

The Project will not substantially increase surface water runoff from the site, or substantially alter drainage patterns within proposed sites containing the two booster pump stations, water storage reservoir, and blending reservoir. These sites have already been disturbed, developed and are generally graded to be flat. As previously stated, surface water at the above sites generally flows south, and any rainfall remains on the project sites, or if it flows offsite, sheet flow is discharged to the adjacent roadway shoulders. The construction of the proposed east-west pipeline will impact approximately 12 drainage channels that cross perpendicular to Dos Palmas Road and Palmdale



Road. These drainage channels continue north and are present along the Alternative 2 alignment on the east-west alignment of South Road. By staying within the road rights-of-way where the channels have already been disturbed and filled there will be no new disturbance of these channels. However, under the Alternative 2 alignment, the pipeline alignment would traverse through some areas of vegetation through which the drainage cross and these areas will be disturbed, but impacts will be mitigated with the mitigation measure IX-3. Upon completion of construction all roadways will be returned to their original condition and the runoff patterns within the roadways containing the constructed pipeline will not change (reference mitigation measure IX-2 and XVI-2). Therefore, no new or substantially altered or expanded stormwater drainage facilities will be required for this Project.

Implementation of the Project will not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board; require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Any impacts are considered less than significant. No mitigation is required.

- e. *No Impact* – The project area does not presently have a wastewater treatment collection system or treatment provider and the project will not require any wastewater treatment capacity. No potential exists to adversely impact a wastewater treatment provider. No mitigation is required.
  
- f&g. *Less Than Significant Impact* – Other than a small amount of construction wastes (concrete, wood, etc.) and a small amount of waste associated with operating the facilities, the Project will not generate a substantial amount of solid wastes and will not adversely affect the existing solid waste disposal system. Construction and demolition (C & D) waste will be recycled to the maximum extent feasible and any residual materials will be delivered to one of several C & D disposal sites in the area surrounding the project site. The Project will not conflict with any state, federal, or local regulations regarding solid waste. Solid waste will be disposed of in accordance with existing regulations at an existing licensed landfill—such as the Victorville Sanitary Landfill—with adequate capacity to handle the waste. According to the CalRecycle and San Bernardino County Solid Waste Management, which serves the communities of Phelan and Piñon Hills, the maximum permitted capacity of Victorville Sanitary Landfill is 83,200,000 Cubic Yards (CY), while it's remaining capacity is 81,510,000 CY. Thus, there is adequate solid waste disposal capacity for solid waste generated as a result of implementation of the proposed Project both in the short term and long term. These impacts are considered less than significant. No additional mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
<b>XVIII. MANDATORY FINDINGS OF SIGNIFICANCE:</b>				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		<b>X</b>		
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)?		<b>X</b>		
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		<b>X</b>		

SUBSTANTIATION

- a. *Less Than Significant With Mitigation Incorporated* – A site biology study determined that there is potentially significant biological resource values located within the Project Area of Potential Effect (APE). Mitigation is required to ensure that the proposed Project will not substantially degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause wildlife populations to drop below self-sustaining levels, threaten to eliminate a plant or animal community or reduce the number or restrict the range of a rare or endangered plant or animal. The cultural resources evaluation concluded that the Project site does not contain any known important cultural resources, but to ensure that any accidentally exposed subsurface cultural resources are properly handled, contingency mitigation measures will be implemented. With incorporation of Project mitigation measure all biology and cultural resource impacts will be reduced to a less than significant level.
- b. *Less Than Significant With Mitigation Incorporated* – The Project has five (6) potential impacts which are individually limited, but may be cumulatively considerable. These are: air quality, biological resources, cultural resources, greenhouse gas/climate change, hazards and hazardous materials, hydrology and water quality, and noise. The Project is not considered growth-inducing, as defined by *State CEQA Guidelines* (<http://ceres.ca.gov/ceqa/guidelines/>). As discussed in Section VII Greenhouse Gas Emissions, the Project will result in emissions of the GHG CO<sub>2</sub> as a byproduct of combustion of gasoline and diesel fuel in construction equipment, construction worker commute trips, in addition to a minimal increase of CO<sub>2</sub> emissions associated with the production of electricity to serve the Project. Furthermore, the Project’s operational emissions of criteria pollutants will be less than the MDAQMD regional operational thresholds, and the Project is consistent with the measures identified by MDAQMD. Mitigation is identified to address cumulative

emission effects within the MDAB, which is non-attainment for ozone and particulates. The Project's contribution to global climate change is not considered cumulatively considerable. The Project will implement best management practices to control degradation of hazards, water quality and noise. Mitigation measures to ensure construction noise levels do not exceed acceptable levels within the Project area are provided. Lastly, the Project is consistent with the applicable Community Plan and roadways will operate at an acceptable level of service at full buildout; thus, the Project will not contribute to cumulatively considerable impacts with respect to circulation. With implementation of identified mitigation measures, potential cumulative impacts of the proposed Project will be controlled to a less than cumulatively considerable level.

- c. *Less Than Significant With Mitigation Incorporated* – The Project will achieve long-term community goals by reducing the District's demand for electricity. The short-term impacts associated with the Project, which are mainly construction-related impacts, are less than significant with mitigation, and the proposed Project is compatible with long-term environmental protection. The potentially significant adverse effects on humans include: aesthetics, air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, noise and circulation. Mitigation measures have been identified to prevent these potential impacts from having a significant impact on humans.

### Conclusion

This document evaluated all CEQA issues contained in the latest Initial Study Checklist form. The evaluation determined that either no impact or less than significant impacts would be associated with the issues of agriculture and forestry resources, greenhouse gases, land use and planning, mineral resources, population and housing, public services, recreation and utilities and services. The issues of air quality, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise and transportation and circulation require the implementation of mitigation measures to reduce Project specific and cumulative impacts to a less than significant level. The required mitigation has been proposed in this Initial Study to reduce impacts for these issues to a less than significant impact level.

Based on the findings in this Initial Study, the Phelan Piñon Hills Community Services District proposes to adopt a Mitigated Negative Declaration (MND) for the Chromium 6 Blending Plan Project. A Notice of Intent to Adopt a Mitigation Negative Declaration (NOI) will be issued for this Project by the District. The Initial Study and NOI will be circulated for 30 days of public comment because there are potential adverse impacts to biological resources. At the end of the 30-day review period, a final MND package will be prepared and it will be reviewed by the District for possible adoption at a future Board meeting, the date for which has yet to be determined. If you or your agency comments on the MND/NOI for this Project, you will be notified about the meeting date in accordance with the requirements in Section 21092.5 of CEQA (statute).

## SUMMARY OF MITIGATION MEASURES

### Aesthetics

- I-1 A facilities lighting plan shall be prepared and shall demonstrate that glare from operating and safety night lights that may create light and glare affecting adjacent occupied property are sufficiently shielded to prevent light and glare from spilling into occupied structures. This plan shall specifically indicate that the lighting doesn't exceed 1.0 lumen at the nearest residence to any lighting site within the project footprint. This plan shall be implemented by the District to minimize light or glare intrusion onto adjacent properties.

### Air Quality

#### III-1 Fugitive Dust Control

The following measures shall be incorporated into Project plans and specifications for implementation:

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions.
- The contractor shall ensure that all disturbed areas within the Project are watered with complete coverage of disturbed areas at least two times a day, preferably in the mid-morning, afternoon, and after work is done for the day. Additional watering can be applied if fugitive dust is observed leaving the project site.
- The contractor shall ensure that traffic speeds on the Project site are reduced to 10 miles per hour or less.
- Plans, specifications and contract documents shall direct that a sign must be posted on-site stating that construction workers shall not idle diesel engines in excess of five minutes.
- During grading activity, all construction equipment greater than 150 horsepower shall be California Air Resources Board (CARB) Tier 3 Certified.
- Only "Zero-Volatile Organic Compounds" paints (no more than 150 gram/liter of VOC) and/or High Pressure Low Volume (HPLV) applications consistent with South Coast Air Quality Management District Rule 1113 shall be used when reservoirs are painted, if painted onsite.
- Install and maintain track out control devices in effective condition at all access points where paved and unpaved access or travel routes intersect (e.g., Install wheel shakers, wheel washers, and limit site access.)
- All roadways, driveways, sidewalks, etc., shall be completed as soon as possible. In addition, reservoir pads shall be installed as soon as possible after grading, unless seeding or soil binders are used in travel areas.
- When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.
- All streets shall be swept at least once a day using SCAQMD Rule 1186 certified street sweepers if visible soil materials are carried to adjacent streets.
- The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite.
- Post a publicly visible sign with the telephone number and person to contact regarding dust complaints. This person shall respond and take corrective action within 24 hours.
- Any on-site stockpiles of debris, dirt or other dusty material shall be covered or watered three times daily.
- Use electric construction equipment where technically feasible, i.e., a competent electronic version of the equipment is commercially available.

III-2 Exhaust Emissions Control

- Utilize well-tuned off-road construction equipment.
- Establish a preference for contractors using Tier 3-rated or better heavy equipment.
- Enforce 5-minute idling limits for both on-road trucks and off-road equipment.

**Biological Resources**

IV-1 Although no desert tortoise were detected during the site surveys, habitat along the pipeline alignments is considered marginally suitable for this species. Therefore, a qualified biologist shall conduct one pre-construction clearance survey within 30 days prior to initiating construction. Following the pre-construction survey, the biologist will make a determination regarding tortoise mitigation: (1) if a biological monitor should be present at the site during all clearing and grubbing activities above grade; (2) if desert tortoise fencing needs to be installed around the perimeter of the construction work zone; or (3) if no further action is required. The biologist/monitor should remain on-call during construction activities to respond to a circumstance where a desert tortoise wanders into the construction area.

IV-2 Where possible, the District shall limit pipeline construction to existing disturbed roadway alignments and avoid both Mohave ground squirrel (MGS) and MGS habitat. Contract specification shall restrict the contractor from disturbing the adjacent creosote bush scrub habitat along the pipeline alignments in Meridian Road, the western-most portion of Palmdale Road, and the western-most portion of the Alternative 2 at Soledad Road.

IV-3 Where avoidance of the adjacent habitat is not feasible, the following actions shall be implemented. For the temporary loss of the presumed occupied MGS habitat, the District shall provide compensation for temporary loss of habitat and individual MGS in the following manner: 1) the District shall obtain a 2081 Incidental Take Permit (ITP) from the CDFW; the District shall offset the loss of the temporarily disturbed habitat by purchase of acceptable MGS habitat at a 1:1 ratio, or approximately 7.3 acres estimated at this time; and any conserved habitat shall be provided with an appropriate endowment to ensure permanent protection and the conserved habitat shall be managed by an agency or party considered acceptable to the CDFW. No ground disturbance shall occur until an ITP is obtained by the District. Note that the final compensation package contained in the permit may differ from the above compensation package, but the District finds that this compensation package shall at a minimum meet the requirements of this measure.

Alternatively, the District may perform a protocol MGS presence/absence survey prior to initiating construction and should it be determined that the adjacent habitat is not occupied by MGS, the above mitigation measure need not be implemented.

IV-4 Prior to construction, the District shall conduct a plant survey for the Short-joint beavertail and the White pygmy-poppy. This survey shall be conducted by a qualified professional biologist familiar with these two species. If these plants are identified within the temporary project area of impact, the botanists shall be relocated these plants to adjacent comparable habitat that will not be disturbed.

IV-5 The District shall prepare and submit a Streambed Alteration Agreement (SAA) to the California Department of Fish and Wildlife (CDFW) if CDFW finds that the channel in the roadway is jurisdictional, the District shall process and obtain the SAA. No ground disturbance shall occur until the District obtains an SAA. Note that the final compensation package contained in the permit shall be implemented by the District.

- IV-6 The State of California prohibits the “take” of active bird nests. To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal should be conducted outside of the the State identified nesting season (Raptor nesting season is February 15 through July 31; and migratory bird nesting season is March 15 through September 1). Alternatively, the site shall be evaluated by a qualified biologist prior to the initiation of ground disturbance to determine the presence or absence of nesting birds. Active bird nests MUST be avoided during the nesting season. If an active nest is located in the project construction area it will be flagged and a 300-foot avoidance buffer placed around it. No activity shall occur within the 300-foot buffer until the young have fledged the nest.
- IV-7 A qualified desert native plant specialist shall identify all protected plants onsite prior to disturbing the project site to install any facilities.
- IV-8 Protected plants will not be removed unless preservation onsite is not possible due to final project design.
- IV-9 Protected plants requiring removal will be transplanted onsite were possible. The guidelines for the transplantation effort are discussed in the San Bernardino County Government Code and California Food and Agricultural Code (Codes).
- IV-10 Any additional plants that cannot be preserved or used to revegetate the site will be offered for transplantation offsite to local residents.
- IV-11 All onsite transplantation shall be conducted by qualified native plant landscapers according to established transplantation techniques for the affected species.

**Cultural Resources**

- V-1 Should any cultural resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified archaeologist. Responsibility for making this determination shall be with the District onsite inspector. The archaeological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.
- V-2 Should any paleontologic resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection should be performed immediately by a qualified paleontologist. Responsibility for making this determination shall be with the District onsite inspector. The paleontological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.

**Geology and Soils**

- VI-1 PPHCSD shall retain a qualified engineering geologist to investigate sites proposed for water storage reservoirs. The recommendations of the engineering geologist relative to mitigating the potential for seismically induced ground rupture, strong ground shaking and expansive soils shall be incorporated in the design and construction of these facilities. Design of such facilities shall follow the following design performance criteria. Comprehensive geotechnical investigation shall be required prior to engineering and design development or structural and/or substantial rehabilitation of structures identified under Risk Class I & II, e.g., public facilities, as identified below:

Risk Class I & II, Structures Critically Needed after Disaster: Structures which are critically needed after a disaster include important utility centers, fire stations, police stations, emergency

communication facilities, hospitals, and critical infrastructure elements such as bridges and overpasses, water storage reservoirs, and smaller dams.

Acceptable Damage: Minor non-structural; facility should remain operational and safe, or be suitable for quick restoration of service.

Risk Class III: High occupancy structures; uses are required after disasters, i.e., places of assembly such as schools and churches.

Acceptable Damage: Some impairment of function acceptable; structure needs to remain operational.

Risk Class IV, Ordinary Risk Tolerance: The vast majority of structures in urban areas; most commercial and industrial buildings, small hotels and apartment buildings, and single family residences.

Acceptable Damage: An "ordinary" degree of risk should be acceptable. The criteria envisioned by the Structural Engineers Association of California provide the best definition of the "ordinary" level of acceptable risk. These criteria require that structures be able to:

- a. Resist minor earthquakes without damage;
- b. Resist moderate earthquakes without structural damage, but with some non-structural damage; or
- c. Resist major earthquakes, of the intensity or severity of the strongest experienced in California, without collapse, but with some structural, as well as non-structural damage.

Risk Class V, moderate to High Tolerance: Open space uses, such as farms, ranches and parks without high occupancy structures; warehouses with low intensity employment; and the storing of non-hazardous materials.

Acceptable Damage: Not applicable.

- VI-2 Stored backfill material shall be covered with water resistant material during periods of heavy precipitation to reduce the potential for rainfall erosion of the material. If covering is not feasible, then measures such as the use of straw bales or sand bags shall be used to capture and hold eroded material on the project site for future cleanup.
- VI-3 Excavated areas shall be properly backfilled and compacted. Paved areas disturbed by this project will be repaved in such a manner that roadways and other disturbed areas are returned to as near the pre-project condition as is feasible.
- VI-4 All exposed, disturbed soil (trenches, stored backfill, etc.) will be sprayed with water or soil binders twice a day or more frequently if fugitive dust is observed migrating from the site within which the water facilities are being installed.
- VI-5 The length of trench which can be left open at any given time will be limited to that needed to reasonably perform construction activities. This will serve to reduce the amount of backfill stored onsite at any given time.
- VI-6 The District shall identify any additional BMPs to ensure that the discharge of surface water does not cause erosion downstream of the discharge point. This shall be accomplished by reducing the energy of any site discharge through an artificial energy dissipater or equivalent device. If any substantial erosion or sedimentation occurs, any erosion or sedimentation damage shall be restored to pre-discharge conditions.

### **Hazards and Hazardous Materials**

- VIII-1 All spills or leakage of petroleum products during construction activities will be remediated in compliance with applicable state and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste will be collected and disposed of at an appropriately licensed disposal or treatment facility. This measure will be incorporated into the SWPPP prepared for the Project development.
- VIII-2 The District shall sample the water from George's well at least (once a month) for excessive CR+6, PCE, and TCE levels. Levels must not exceed applicable thresholds (Safe Drinking Water Act, etc.) for safe drinking water in order for water from George's well to be drawn and blended into the District's water supply.

### **Hydrology and Water Quality**

- IX-1 The District shall require that the construction contractor prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving offsite into receiving waters. The SWPPP shall include a Spill Prevention and Cleanup Plan that identifies the methods of containing, cleanup, transport and proper disposal of hazardous chemicals or materials released during construction activities that are compatible with applicable laws and regulations. BMPs to be implemented in the SWPPP may include but not be limited to:
- The use of silt fences;
  - The use of temporary stormwater desilting or retention basins;
  - The use of water bars to reduce the velocity of stormwater runoff;
  - The use of wheel washers on construction equipment leaving the site;
  - The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads;
  - The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and
  - Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.
- IX-2 The project would be unable to comply with this requirement, so prior to discharge of fill or streambed alteration of any channel along the project's alternative alignment, the District shall obtain a mandatory regulatory permit from the California Department of Fish and Wildlife, and may be requested to obtain waste discharge requirements from the California Regional Water Quality Control Board Lahontan Region. Mitigation can be provided by purchasing into any authorized mitigation bank; by selecting a site of comparable acreage near the site and enhancing it with a native riparian habitat or invasive species removal in accordance with a habitat mitigation plan approved by regulatory agency requirements. Typically, regulatory agencies require mitigation for jurisdictional waters without any riparian or wetland habitat to be mitigated at a 1:1 ratio. The channels identified in Appendix 2b do not contain riparian or wetland habitat, thus, if the District selects this alternative the ratio will be 1:1. The roadway will be returned to a functional condition after the pipeline is installed in the roadways identified in Appendix 2b. The agencies can impose greater mitigation requirements in their permits, but the District will require the utilization of the ratio outlined above as the minimum required to offset or compensate for impacts to jurisdictional waters.
- IX-3 When the pipeline constructed over an existing channel is completed, the roadways or areas of vegetation must be returned to their original condition, or better than currently exists.



**Noise**

- XII-1 During future construction activities with heavy equipment within 300 feet of occupied residences, vibration field tests should be conducted at the nearest occupied residences. To the extent feasible, if vibrations exceed 72 VdB, the construction activities shall be revised to reduce vibration below this threshold.
- XII-2 The well and booster pump station shall have noise levels attenuated to 50 dBA CNEL at the nearest sensitive noise receptor location.
- XII-3 The District shall use noise reducing barriers and other devices to reduce exterior noise levels at the nearest sensitive receptor to 60 CNEL or less during the night-time construction hours (in the event that any emergency night-time construction hours become necessary) and 65 CNEL or less during the daytime construction hours.
- XII-4 No construction activities shall occur during the hours of 6 pm through 7 am, Monday through Saturday and at no time shall construction activities occur on Sundays or holidays, unless a declared emergency exists.
- XII-5 The District shall establish a noise complaint response program and shall respond to any noise complaints received for this Project by measuring noise levels at the affected receptor site. If the noise level exceeds an Ldn of 60 dBA exterior or an Ldn of 45 dBA interior at the receptor, the applicant will implement adequate measures (which may include portable sound attenuation walls, use of quieter equipment, shift of construction schedule to avoid the presence of sensitive receptors, etc.) to reduce noise levels to the greatest extent feasible.
- XII-6 The District will require that all construction equipment be operated with mandated noise control equipment (mufflers or silencers). Enforcement will be accomplished by random field inspections by applicant personnel during construction activities.
- XII-7 Equipment not in use for five minutes shall be shut off.
- XII-8 Equipment shall be maintained and operated such that loads are secured from rattling or banging.
- XII-9 Where available, electric-powered equipment shall be used rather than diesel equipment and hydraulic-powered equipment shall be used instead of pneumatic power.
- XII-10 Construction employees shall be trained in the proper operation and use of equipment consistent with these mitigation measures, including no unnecessary revving of equipment.
- XII-11 No radios or other sound equipment shall be used at this site unless required for emergency response by the contractor.
- XII-12 Public notice shall be given prior to initiating construction. This notice shall be provided to all property owners/residents within 300 feet of the project site and shall be provided to property owners/residents at least one week prior to initiating construction. The notice shall identify the dates of construction and the name and phone number of a construction supervisor (contact person) in case of complaints. One contact person shall be assigned to the project. The public notice shall encourage the adjacent residents to contact the supervisor in the case of a complaint. Resident's would be informed if there is a change in the construction schedule. The supervisor shall be available 24/7 throughout construction by mobile phone. If a complaint is received, the contact person shall take all feasible steps to remove the sound source causing the complaint.

**Transportation / Traffic**

- XVI-1 The construction contractor will provide adequate traffic management resources, as determined by the County of San Bernardino. The District shall require a construction traffic management plan for work in public roads that complies with the Work Area Traffic Control Handbook, or other applicable standard, to provide adequate traffic control and safety during excavation activities. The traffic management plan shall be prepared and approved by the County prior to initiation of excavation or pipeline construction. At a minimum this plan shall include how to minimize the amount of time spent on construction activities; how to minimize disruption of vehicle and alternative modes of transport traffic at all times, but particularly during periods of high traffic volumes; how to maintain safe traffic flow on local streets affected by construction at all times, including through the use of adequate signage, protective devices, flag persons or police assistance to ensure that traffic can flow adequately during construction; the identification of alternative routes that can meet the traffic flow requirements of a specific area, including communication (signs, webpages, etc.) with drivers and neighborhoods where construction activities will occur; and at the end of each construction day roadways shall be prepared for continued utilization without any significant roadway hazards remaining.
- XVI-2 The District shall require that all disturbances to public roadways be repaired in a manner that complies with the Standard Specifications for Public Works Construction (green book) or other applicable County of San Bernardino standard design requirements.

## **REFERENCES**

CRM TECH, "Identification and Evaluation of Historic Properties Phelan Piñon Hills Community Services District Water Blending Project" dated August 15, 2016

Giroux & Associates, "Air Quality and GHG Impact Analyses: Phelan Piñon Hills Community Service District Chromium 6 (CR+6) Blending Plan Project" dated February 28, 2016

Jericho Systems, Inc., "Biological Resources Evaluations Phelan Piñon Hills Community Services District Chromium 6 (Cr+6) Blending Plan Project" dated August 1, 2016

Jericho Systems, Inc., "Jurisdictional Waters Evaluations Phelan Piñon Hills Community Services District Chromium 6 (Cr+6) Blending Plan Project" dated August 1, 2016

Williamson Act Maps references:

California Department of Conservation, "San Bernardino County Williamson Act 2014/2015 Sheet 1 of 2" N.p., n.d. Web. 13 Jan 2016

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<http://www.quake.ca.gov/gmaps/RGM/sanbernardino/sanbernardino.html>

**FIGURES**

**APPENDIX 1**

**APPENDIX 2a**

**APPENDIX 2b**

**APPENDIX 3**