

# North Haiwee Dam No. 2 Project

## Draft Environmental Impact Report/ Environmental Assessment

**SCH No. 2014101065**  
**NEPA No. DOI-BLM-CA-050-2017-0030-EA**

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# Executive Summary

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## ES.1 Introduction

In accordance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), the City of Los Angeles (City), represented by the Los Angeles Department of Water and Power (LADWP), and the U.S. Bureau of Land Management (BLM) have prepared this joint Draft Environmental Impact Report/Environmental Assessment (EIR/EA) for the North Haiwee Dam No. 2 Project (Proposed Project).<sup>1</sup> LADWP is identified as the lead agency for the Proposed Project under CEQA for its direct undertaking of governmental action (CEQA Guidelines Section 15002[b]). BLM is identified as the lead agency for the Proposed Project under NEPA for the approval to construct on federal land.

LADWP, in cooperation with BLM, proposes to improve the seismic reliability of North Haiwee Reservoir (NHR), which is located in the Owens Valley in Inyo County, California, approximately 150 miles north of Los Angeles (Figure ES-1). LADWP owns and operates North Haiwee Dam (existing Dam or NHD), an existing earthfill dam constructed in 1913. NHD and NHR are essential components of the Los Angeles Aqueduct (LAA) system, which transports water from the Owens Valley to the City. The LAA provides approximately 35 percent of the annual average water supply for the City. Should NHD fail, this portion of the City's water supply would be cut off at the Owens Valley.

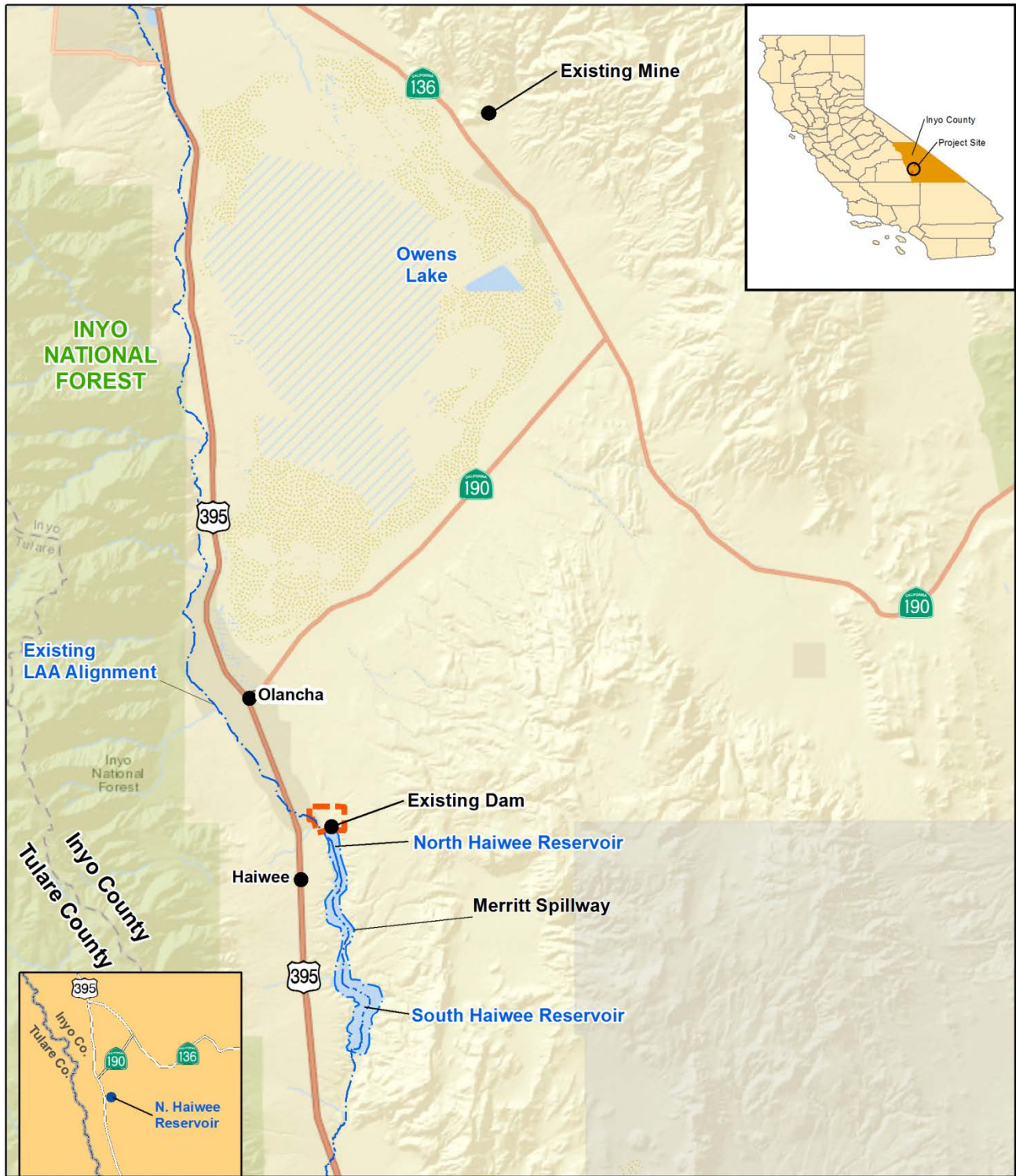
Therefore, LADWP is proposing the North Haiwee Dam No. 2 Project, which includes the construction of North Haiwee Dam No. 2 (new Dam or NHD2) to the north of the existing Dam to improve the seismic reliability of NHR in the event NHD is damaged by an earthquake event, thereby ensuring public health and safety. Construction of NHD2 would require the realignment of a portion of the existing Cactus Flats Road and the realignment of a portion of the LAA. Once NHD2 is constructed, LADWP would construct a diversion channel and a notch in NHD, along with other improvements to NHD and the area to the north of the existing Dam, in order to utilize the area between NHD2 and NHD as a basin.

## ES.2 Project Background

The LAA system, owned and operated by LADWP, is comprised of two aqueducts that span 340 miles from the Mono Basin through the Owens Valley to the City of Los Angeles. Draining from the eastern Sierra Nevada Mountains for more than 150 miles, the system transports water from the Owens River entirely by gravity, following a natural and man-made course south towards Los Angeles. Originally conceived by William Mulholland in the early 1900s, the LAA system provided a reliable water source that allowed the City to grow and prosper into the second-largest city in the country. The first aqueduct, First Los Angeles Aqueduct (First LAA), is 223 miles long and has a capacity of 485 cubic feet per second (cfs).

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<sup>1</sup> For the purposes of this joint EIR/EA, the Proposed Project under CEQA is equivalent to the Proposed Action under NEPA. For consistency, the term Proposed Project is used throughout the document.



Source: Esri Maps & Data, 2017; Prepared By: AECOM, 2017.



0 3 6 Miles

Los Angeles Aqueduct System  
Project Site

**Figure ES-1**  
**Project Vicinity**

LADWP conducted a seismic stability evaluation of NHD and concluded that the existing Dam could experience structural failure in the event of a Controlling Maximum Credible Earthquake (MCE) scenario. The MCE is the largest earthquake that could possibly occur at a fault, based on the characteristics of that particular earthquake fault. The seismic stability evaluation identified two MCE scenarios for the analysis: a 7.5 event on the Haiwee segment of the Sierra Nevada Fault Zone, located 2.8 miles (4.5 km) from NHD; and a 6.5 event on an unnamed fault 0.3 miles (0.5 km) east of NHD. During a MCE scenario, extensive liquefaction would occur in the foundation of NHD, causing the crest of the existing Dam to settle up to nine feet. This would result in an uncontrollable release of water from NHR, thereby creating a flooding and safety hazard to the residents of the Owens Valley. Subsequent to the flooding event, LADWP would be prevented from transporting water along the LAA from the Owens Valley to the City, thus severing a major water supply for the City. Therefore, LADWP recommended that remedial construction work be performed at NHD to improve its seismic reliability.

Based on this evaluation, the California Department of Water Resources (DWR), Division of Safety of Dams (DSOD), has directed LADWP to operate NHR at a restricted maximum surface water elevation of 3,757.5 feet, instead of the previous unassisted (without flashboards at Merritt Cut) maximum elevation of up to 3,760 feet, in order to prevent an uncontrolled release of water and flooding in the event of dam failure resulting from an MCE. These restrictions placed on operations of NHR provide a narrow range of elevations that meet the requirements of DSOD while still allowing the LAA system to operate effectively. In order to resume operations of NHR of up to 3,760 feet, LADWP needs to comply with DSOD requirements, and has been in coordination with DSOD regarding continuous progress on seismic improvements.

## **ES.2.1 Project Location and Setting**

The Proposed Project is located in the Owens Valley in unincorporated areas of Inyo County, California. The Owens Valley is generally a dry landscape that extends 100 miles from north to south and six to 20 miles from east to west. It is bordered by the Sierra Nevada Range on the west, Chalfant Valley on the north, Inyo Mountains on the east, Coso Range on the southeast, and Rose Valley on the south. Communities located within the Owens Valley include Bishop, Big Pine, Aberdeen, Haiwee, Independence, Lone Pine, and Olancho.

The Project Site is defined as the primary construction area that encompasses the existing infrastructure that would be modified and the new infrastructure that would be constructed as part of the Proposed Project. The Project Site does not include the existing mine in Keeler, CA (Figure ES-1), which is approximately 20 miles northeast of the Project Site and would only be used as a point of purchase for materials. The majority of the Project Site is designated as a Natural Resources (NR) land use by the Inyo County General Plan (ICGP). The NR land use designation applies to land or water areas that are essentially unimproved and which the County has determined in the general plan should remain open in character and provides for the preservation and management of natural resources and recreational uses. The Project Site is zoned by Inyo County as Open Space with a 40 acre minimum size (OS 40).

The Project Site is also located within the 1980 BLM California Desert Conservation Area (CDCA) Plan area, and the 2016 BLM Desert Renewable Energy Conservation Plan (DRECP) Land Use Plan Amendment (LUPA) area. The key objectives of the DRECP are to streamline renewable energy development and to provide for long-term conservation and management of special-status species, vegetation, and other resources within the DRECP Plan area. The DRECP LUPA applies to BLM-managed lands, including the southwestern portion of the Project Site. The Project Site contains lands designated as California Desert National Conservation Lands (CDNCLs), and is partially within the Olancho Greasewood Area of Critical Environmental Concern (ACEC) and the Olancho Dunes Special Recreation Management Area (SRMA) (BLM, 2016). Many of the Conservation and Management Actions (CMAs) specified in the DRECP apply to the Project Site, and are evaluated in detail in Appendix B of this EIR/EA.

The construction of NHD2 would require various materials to construct the new earthen embankment dam. Riprap, gravel, and sand materials would be used to construct the new Dam and would be sourced from the LAA Excavation Area and the existing mine in Keeler. The LAA Excavation Area would be excavated to construct the LAA Realignment, and the excavated materials (silty sand) would be used to construct the new Dam. The LAA Excavation Area is located adjacent to the western side of the existing LAA, and consists of land that is owned by both LADWP and BLM. Portions of the site have been previously disturbed by construction of the existing LAA and use of excavation materials for construction of NHD. Materials in the LAA Excavation Area consist of alluvial fan deposits overlying Coso Formation bedrock. The use of materials from this site for the construction of NHD2 would require approval of a Conditional Use Permit from the Inyo County Planning Department. The BLM-managed portions of the Project Site are located within the DRECP LUPA, as described above, and include the CDNCL Basin and Range Ecoregion Subarea, Olancho Greasewood ACEC, and Olancho Dunes SRMA (BLM, 2016).

The second source of materials that would be used to construct NHD2 is from an existing mine in Keeler, which is located near the northeastern shore of Owens Lake. The existing mine is an active dolomite mine site located on privately owned land and operated by F.W. Aggregate Inc. LADWP has previously purchased gravel from this existing mine. Because materials used to construct NHD2 would be sourced from this existing mine, LADWP would not conduct any new mining activities, and activity related to construction of the Proposed Project would be limited to the purchase and hauling of materials. Therefore, the existing mine in Keeler is excluded from analysis in this EIR/EA, with the exception of haul routes. Discussion of activities and current conditions at the existing mine are provided where necessary for context, but the Proposed Project does not include any new mining, reclamation, or other activities at this existing mine site.

### **ES.3 Project Purpose, Need, and Objectives**

LADWP supplied approximately 197 billion gallons (604,570 acre-feet) of water annually to the City's 676,000 residential and business services over the five-year period from 2007 to 2011 (LADWP, 2015). The dependability of the water supply has significantly contributed towards the tremendous growth and development of Los Angeles. While conservation efforts reduce water demand, the increasing population of the City has led to an increase in aggregate water demand. Southern California's growing economy, ideal location, and climate induces a constant influx of new residents, adding to the increasing demand for water. The City's population is estimated to grow to more than 4.4 million people, and water demand to increase to 711,000 acre-feet by the year 2035 (LADWP, 2011). Therefore, a new dam that provides seismic reliability and ensures the continuing function of the LAA system is pertinent to maintaining adequate water supplies to the City.

The fundamental purpose of the Proposed Project is to improve the seismic reliability of NHR through construction of a new dam, NHD2, to the north of NHD, in order to maintain the function of an essential water conveyance infrastructure component for the City, as well as to protect local populations from a hazardous flooding event. The proposed NHD2 would serve to improve the seismic reliability of NHR in the event the existing Dam is damaged or breached by an earthquake event, thereby ensuring public health and safety and securing the City's water source.

The following are the objectives of the Proposed Project:

- Preventing an uncontrolled release of water from NHR when NHD is subjected to an MCE event, thereby ensuring public safety;
- Complying with DSOD mandates for action to improve the seismic reliability of NHR;
- Maintaining a reliable water supply to the City;
- Meeting the operational needs of NHR and the LAA; and

- Providing minimal disruption to reservoir operations during construction.

## ES.4 Project Description

This EIR/EA includes the evaluation of two Build Alternatives, the Cement Deep Soil Mixing (CDSM) Alternative and the Excavate and Recompect Alternative, and the No Project Alternative. The CDSM Alternative is the Preferred Alternative under CEQA. Both of the Build Alternatives consist of the following four components:

1. Construction of NHD2 components, including construction of NHD2 and east and west berms, grading the area between NHD and NHD2 for the basin, and purchase of materials (riprap, gravel, sand) from the existing mine in Keeler;
2. Realignment of Cactus Flats Road;
3. Realignment of the LAA, which includes excavation of various materials (gravel and sand) in the LAA Excavation Area for the construction of NHD2, and construction of the diversion structure and temporary bridge; and
4. Construction of the diversion channel and NHD modifications.

The differentiating component between the two Build Alternatives is the method of construction of the foundation of NHD2, which affects the timeline and construction efforts of the NHD2 components. Figure ES-2 shows the Proposed Project components.

### ES.4.1 Cactus Flats Road Realignment

Construction of NHD2 would intersect the existing Cactus Flats Road. Cactus Flats Road is not a primary roadway, but it is used mainly by mining vehicles traveling to and from local mining sites, as well as by LADWP personnel and other motorists. As shown in Figure ES 2-1, the existing Cactus Flats Road would need to be realigned to accommodate the new Dam; therefore, the realignment of Cactus Flats Road would be required in order to maintain access for this public road (Cactus Flats Road Realignment). The Cactus Flats Road Realignment would occur on LADWP-owned land only.

The Cactus Flats Road Realignment would have an approximate length of 4,413 feet and width of 28 feet, a grade of up to ten percent, and would incorporate compacted base material along the roadway and drainage system. The new road profile would range from several inches above ground level to a maximum height of 18 feet above ground level. Approximately 2,700 feet of the Cactus Flats Road Realignment where the road traverses a slope would be paved with asphalt. A 710-foot long portion of existing access road which travels north-south on the Project Site would also be realigned to intersect with the Cactus Flats Road Realignment. The realigned access road would remain a dirt road, as under existing conditions. For drainage purposes, a four-foot wide ditch, approximately 2,500 feet long, would be constructed just north of the Cactus Flats Road Realignment. In addition, two two-foot by four-foot concrete culverts would be constructed within the Cactus Flats Road Realignment embankment. The existing Cactus Flats Road would not be demolished, except where the new Dam and basin would be located. The remaining portions of the existing road would be retained by LADWP to provide access to the dam structures.

### ES.4.2 Los Angeles Aqueduct Realignment

The existing LAA is an open flow channel with continuous water flows. The westerly abutment of NHD2 would encroach upon a portion of the existing LAA. The realignment of the LAA is required for the construction of NHD2 since the footprint of the new Dam would be physically in the same location as a segment of the existing LAA. In order to construct NHD2 and maintain operations of the LAA system, the Proposed Project includes realignment of approximately 1,900 feet of the existing LAA (LAA Realignment). The materials excavated in the LAA Excavation Area is proposed as a source of silty sand materials for the new Dam, and is located within and around the area where excavation for and

construction of the LAA Realignment would occur. The quantity of materials required from the LAA Excavation Area and the associated number of haul trucks would vary by Build Alternative, as described in Sections 2.4.3 and 2.4.4. The existing LAA and LAA Realignment are located on LADWP property and BLM-managed land. A BLM ROW grant would be required for the LAA Realignment.

The cross section of the LAA Realignment would closely match the existing LAA's cross section, and would consist of a trapezoidal concrete channel, with an approximate width of 32 to 35 feet and approximate depth of 12 to 15 feet. The concrete liner would be approximately six to 10 inches thick with steel reinforcement. Along both sides of the LAA Realignment, 20-foot wide unpaved access roads would be constructed. These roads would be connected to the existing access road across BLM-managed land which connects the LAA to US-395. This road would be widened by up to five feet, and would be extended by up to 200 feet to connect with the new LAA Realignment access roads. Where possible, side casting would be avoided for construction of these access roads. In total, the US-395 access road for the LAA Realignment would be approximately 3,800 feet long, including the existing roadway and proposed extension. A BLM ROW grant would be required for the construction and operation of access roads on BLM-managed lands.

Once the LAA Realignment is constructed, the flow of water through the existing LAA would be halted temporarily to connect the newly built segment to the existing LAA. Construction of the LAA Realignment would include installation of a diversion structure. A bridge would be constructed adjacent to the diversion structure, and would provide access across the diversion channel (discussed below). After the LAA is reconnected, the obsolete existing LAA segment would be demolished and backfilled. Soil from the LAA Realignment would be used as building material for NHD2.

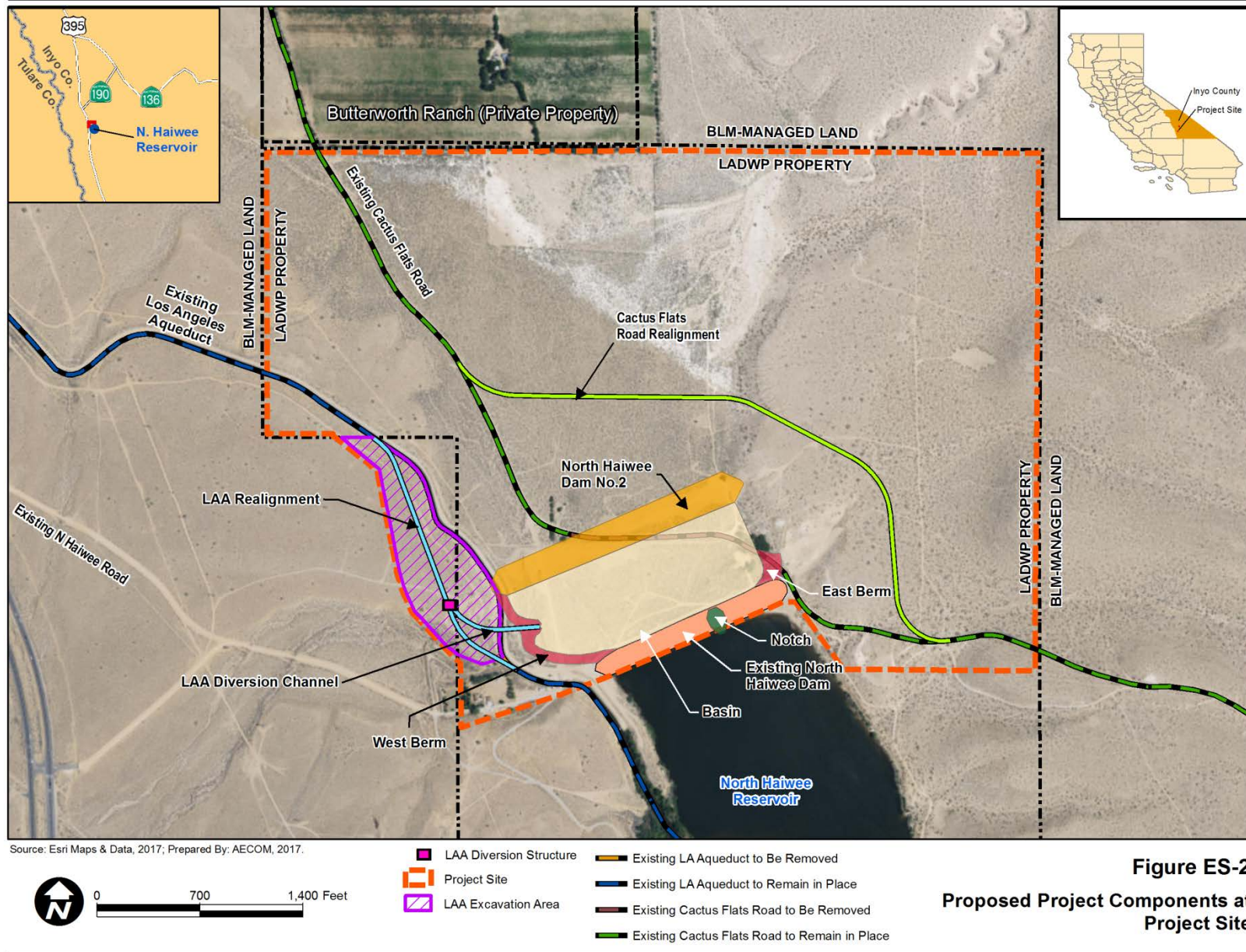
### **ES.4.3 North Haiwee Dam No. 2**

The two Build Alternatives (CDSM Alternative and Excavate and Recompect Alternative) would construct NHD2, but would use different methods to construct a seismically sound foundation for the new Dam. These construction methods are described in detail in Section 2.4.1. The following description of NHD2 is pertinent to both Build Alternatives.

NHD2 would be constructed on LADWP property north of NHD. NHD2's axis would be located approximately 800 feet north and roughly parallel to the existing Dam's axis. Figure ES-2 shows the new Dam's location relative to the location of the existing Dam. NHD2 would be a zoned earthen embankment dam (comprised of shell, core, filter and drain materials) based on design specifications and the type of fill material available. Seepage control would be provided by the core, filter and drain zones. The proposed location of NHD2 provides a basin and a new accessible length of aqueduct channel between NHD and NHD2, which may be utilized for water quality and sediment management purposes. NHD2 would be constructed to comply with DSOD's mandate and to meet the operational requirements of NHR, and it would be designed to retain water contained in NHR in the event of failure of NHD.

The bottom of the basin would be graded during earthwork for NHD2 to create a level bottom at an approximate elevation of 3,745 feet (25 feet below the crest of NHD2). The east and west berms would be constructed at the same time. The east and west berms would be constructed to contain water within the basin. The berms would ensure that water from NHR would be retained within the basin area once NHD2 is completed, as the berms would prevent water from flowing out of the basin to the west and east. In addition, once all construction and approvals are completed for all Proposed Project components (including the DSOD Certificate of Approval for filling the basin), the berms would contain water within the basin area during regular operations of the basin. The existing mine in Keeler would be utilized during the construction of NHD2, and as described above, the existing mine is developed and operational, and Proposed Project activities would be limited to the purchase and hauling of riprap and gravel.





**Figure ES-2**  
**Proposed Project Components at Project Site**

## **ES.4.4 Diversion Channel and NHD Modifications**

The diversion channel would convey water from the newly aligned LAA through the diversion structure into the basin. The diversion channel would be approximately 675 feet long. A notch would be cut into the existing NHD to connect the basin and NHR, allowing water to flow from the basin into NHR. LADWP proposes to temporarily lower the water elevation in NHR to below 3,750 feet above sea level (asl) in order to construct the notch in NHD. The lowering of NHR would require the implementation of a temporary operations plan for NHR and South Haiwee Reservoir, as well as the LAA system, during construction. However, NHR and the LAA system would remain in service as flow rates in and out of NHR could be adjusted to maintain the lower water elevation. Should water need to be pumped out of NHR (rather than gravity fed, due to lower water levels), the existing pump at Merritt Spillway could be utilized. The notch would be constructed through mechanical excavation and then reinforced with concrete.

Slope protection for NHD would be implemented, including the removal of one to two feet of soil on the downstream face of NHD followed by installation of measures to protect the slope. In addition, a geomembrane would be installed on the bottom of the basin to minimize erosion and water quality issues once the basin is filled.

Upon completion of NHD2, the diversion channel and notch would match the design parameters for the LAA Realignment, allowing the basin to handle the LAA system's maximum flow rate of 900 cfs. The basin would not be filled with water until all of the construction activities described above is completed. Upon completion of construction, water would be diverted into the basin in order to test the performance of NHD2, and upon completion of testing, the basin would operate as a permanent part of NHR.

## **ES.5 Alternatives to the Proposed Project**

As described above, the No Project Alternative and two Build Alternatives are evaluated in this EIR/EA for the Proposed Project. The different Build Alternatives provide two alternative methods for construction of a seismically sound foundation for NHD2.

### **ES.5.1 No Project Alternative**

The CEQA Guidelines Section 15126.6(e) requires that an EIR describe and analyze current environmental conditions as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans. The No Project Alternative is also required to be analyzed under NEPA (40 CFR 1502.14(d)).

Under the No Project Alternative, the Proposed Project would not be implemented in any manner. NHD2 would not be constructed. The existing Dam would remain as-is, and NHR would operate at the levels required by DSOD. No berms would be constructed and no grading would occur in the basin area, and the area north of NHD would remain dry as under existing conditions. No modifications would be made to the existing Dam. However, as it is known that there could be a catastrophic failure of the existing Dam during an MCE, it is possible that DSOD could place further restrictions on the use of NHR.

Under the No Project Alternative, the LAA would not need realignment and Cactus Flats Road would similarly remain as-is since NHD2 would not be constructed. Furthermore, no diversion structure or channel would be constructed. Operation of the LAA and Cactus Flats Road would continue as they do today, along with minor repairs and typical maintenance that would progress regardless of Proposed Project implementation.

Under the No Project Alternative, NHD2 would not be constructed, so no materials from the existing mine in Keeler would be needed. The existing mine is an operational mine, and mining operations would continue as they do today under the No Project Alternative.

## **ES.5.2 No Action Alternative**

In accordance with NEPA regulations, EAs shall include brief discussion of alternatives as required by FLPMA. Section 102(2)(E) of the NEPA regulations provides that agencies shall develop and describe appropriate alternatives to recommended courses of action concerning alternative uses of available resources. Although the regulation makes no specific mention of the No Action alternative with respect to EAs, the Council on Environmental Quality (CEQ) has interpreted the regulations generally to require some consideration of a No Action alternative in an EA. The No Action alternative is evaluated as the No Project Alternative (see above) throughout this Draft EIR/EA.

## **ES.6 Project Construction**

Construction of the Proposed Project would commence in February 2018. The CDSM Alternative is expected to last approximately five and a half years, ending in August 2023, and the Excavate and Recompact Alternative is expected to last approximately six and a half years, ending in February 2024. Construction of the Proposed Project would occur in four phases.

## **ES.7 Project Operations and Maintenance**

Once NHD2 is constructed, a Certificate of Approval would be obtained from DSOD for operation of NHR of up to 3,760 feet. Historically, LADWP has not operated NHR over 3,759 feet, and LADWP does not propose to do so as part of the Proposed Project. The Certificate of Approval would permit operation of NHD2 and expansion of NHR to include the basin.

During operation, NHD2 would require similar maintenance as NHD currently requires. LADWP's NHR reservoir keeper, whose residence is adjacent to NHD, will remain on-site and will be the primary person responsible for monitoring the new Dam, LAA Realignment, and basin, along with the existing NHD, LAA, and NHR. The LAA Realignment and Cactus Flats Road Realignment would operate similarly to their existing counterparts, and would require similar infrequent maintenance. LADWP would continue to maintain and operate the LAA Realignment as part of its overall LAA system, and Inyo County would operate and maintain the Cactus Flats Road Realignment in the same manner as the existing road is operated and maintained.

At the unassisted operating level of up to 3,760 feet, the basin would contain approximately 600 acre-feet of water. Generally, operations of the basin would require minimal maintenance, and would be similar in scale to operation of NHR. Water that flows into the basin from the LAA would settle in the basin prior to flowing into NHR; as such, sediments may accumulate in the basin over time, and it is anticipated that dredging would be required every 10 to 15 years in order to remove these sediments. Sediments that may be dredged or removed as part of operation and maintenance would be handled and transported in compliance with all applicable regulations, and if disposal would be required, sediments would be hauled to a landfill permitted to accept such wastes.

## **ES.8 Areas of Known Controversy**

Air Quality, Biological Resources, Cultural Resources, Noise and Vibration, Tribal Cultural Resources, and Water Resources and Quality are areas of known controversy in the Project vicinity. The Draft EIR/EA includes a thorough analysis of these resources in Chapter 3, Affected Environment, with supporting technical analyses provided in Volume II: Appendices.

## **ES.9 Summary of Environmental Impacts**

An analysis of environmental impacts potentially caused by the Proposed Project has been conducted and is contained in this Draft EIR/EA. Nineteen environmental issue areas are analyzed in detail in Chapter 3.0. Table ES-1 provides a summary of the environmental impacts that would result during

construction and operation of the Proposed Project, mitigation measures that would lessen significant environmental impacts, and the level of significance of the environmental impacts after implementation of mitigation measures under CEQA. For those impacts determined to be less than significant or no impact, and therefore requiring no mitigation measures, a “Not Applicable” determination is stated under the “CEQA Significance after Mitigation” column within Table ES-1.

The Proposed Project would create short-term significant impacts to air quality, biological resources, cultural resources, hydrology and water quality, noise, tribal cultural resources, and transportation and traffic requiring mitigation measures. Specific mitigation measures have been identified which would reduce impacts to biological resources, hydrology and water quality, tribal cultural resources, and transportation and traffic to a less than significant level. With incorporation of mitigation measures, temporary construction impacts under CEQA related to air quality, cultural resources, and noise would be reduced to the greatest extent feasible, but would result in a significant unavoidable adverse impact. The Proposed Project would not lead to any long-term significant operational impacts. Therefore, the impacts summarized in Table ES-1 below reflect construction of the Proposed Project.

**TABLE ES-1  
SUMMARY OF CONSTRUCTION-RELATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Environmental Impacts	CEQA Significance Determination		Mitigation Measures Applicable to Build Alternatives	CEQA Significance After Mitigation	
	CDSM Alternative	Excavate and Recompact Alternative		CDSM Alternative	Excavate and Recompact Alternative
<b>AESTHETICS</b>					
<b>AES-1:</b> Would the project have substantial adverse effect on a scenic vista?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable
<b>AES-2:</b> Would the project substantially degrade the existing visual character or quality of the site and its surroundings?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable
<b>AES-3:</b> The Proposed Project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. No impact would occur.	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable
<b>AGRICULTURE AND FORESTRY RESOURCES</b>					
<b>AFR-1:</b> Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact	No Impact	No mitigation measures are required.	Not applicable	Not applicable
<b>AIR QUALITY</b>					
<b>AQ-1:</b> Would the project conflict with or obstruct implementation of the applicable air quality plan?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable
<b>AQ-2:</b> Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?	Significant	Significant	<b>AQ-A:</b> Use of Tier 4 Equipment <b>AQ-B:</b> Activity management to prevent overlap of construction <b>AQ-C:</b> Minimization of equipment idling time to no more than 5 minutes <b>AQ-D:</b> Maintenance of construction equipment in proper working condition	Significant and Unavoidable	Significant and Unavoidable

**TABLE ES-1  
SUMMARY OF CONSTRUCTION-RELATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Environmental Impacts	CEQA Significance Determination		Mitigation Measures Applicable to Build Alternatives	CEQA Significance After Mitigation	
	CDSM Alternative	Excavate and Recompact Alternative		CDSM Alternative	Excavate and Recompact Alternative
<b>AQ-3:</b> Would the project result in cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	Significant	Significant	<b>AQ-A:</b> Use of Tier 4 Equipment <b>AQ-B:</b> Activity management to prevent overlap of construction <b>AQ-C:</b> Minimization of equipment idling time to no more than 5 minutes <b>AQ-D:</b> Maintenance of construction equipment in proper working condition	Significant and Unavoidable	Significant and Unavoidable
<b>AQ-4:</b> Would the project expose sensitive receptors to substantial pollutant concentrations? <i>-Exposure to pollutant concentrations</i>	Significant	Significant	<b>AQ-A:</b> Use of Tier 4 Equipment <b>AQ-B:</b> Activity management to prevent overlap of construction <b>AQ-C:</b> Minimization of equipment idling time to no more than 5 minutes <b>AQ-D:</b> Maintenance of construction equipment in proper working condition	Significant and Unavoidable	Significant and Unavoidable
<b>AQ-4:</b> Would the project expose sensitive receptors to substantial pollutant concentrations? <i>-Health Risk Assessment</i>	Significant	Significant	<b>AQ-A:</b> Use of Tier 4 Equipment <b>AQ-B:</b> Activity management to prevent overlap of construction <b>AQ-C:</b> Minimization of equipment idling time to no more than 5 minutes <b>AQ-D:</b> Maintenance of construction equipment in proper working condition	Less than Significant	Less than Significant
<b>AQ-5:</b> Would the project create objectionable odors affecting a substantial number of people?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable

**TABLE ES-1  
SUMMARY OF CONSTRUCTION-RELATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Environmental Impacts	CEQA Significance Determination		Mitigation Measures Applicable to Build Alternatives	CEQA Significance After Mitigation	
	CDSM Alternative	Excavate and Recompact Alternative		CDSM Alternative	Excavate and Recompact Alternative
<b>BIOLOGICAL RESOURCES</b>					
<b>BIO-1:</b> Would the project have a substantial adverse effect, either directly or indirectly or through habitat modification, on any species identified as endangered or threatened in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Significant	Significant	<b>BIO-A</b> Biological Monitor <b>BIO-B</b> Worker Education Training <b>BIO-C</b> Special-Status Wildlife Surveys <b>BIO-D</b> Preconstruction Nesting Surveys <b>BIO-H</b> Topsoil Salvage and Revegetation Plan <b>BIO-I</b> Timing of Ground-clearing Activities <b>BIO-J</b> Avoid Wildlife Entrapment <b>BIO-K</b> Minimize Construction-Related Impacts <b>BIO-L</b> Personnel Guidelines and Traffic <b>BIO-M</b> Integrated Weed Management Plan <b>BIO-N</b> Night Lighting Control <b>BIO-O</b> Joshua Tree, Cactus, and Nolina Salvage Plan	Less than Significant	Less than Significant
<b>BIO-2:</b> Would the project have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by California Department of Fish and Game or U.S. Fish and Wildlife Service?	Significant	Significant	<b>BIO-A</b> Biological Monitor <b>BIO-B</b> Worker Education Training <b>BIO-C</b> Special-Status Wildlife Surveys <b>BIO-D</b> Preconstruction Nesting Surveys <b>BIO-E</b> Roosting Bat Surveys <b>BIO-F</b> American Badger and Desert Kit Fox Exclusion Plan <b>BIO-G</b> Special-Status Plant Species Surveys <b>BIO-H</b> Topsoil Salvage and Revegetation Plan <b>BIO-I</b> Timing of Ground-clearing Activities <b>BIO-J</b> Avoid Wildlife Entrapment <b>BIO-K</b> Minimize Construction-Related Impacts <b>BIO-L</b> Personnel Guidelines and Traffic <b>BIO-M</b> Integrated Weed Management Plan <b>BIO-N</b> Night Lighting Control	Less than Significant	Less than Significant

**TABLE ES-1  
SUMMARY OF CONSTRUCTION-RELATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Environmental Impacts	CEQA Significance Determination		Mitigation Measures Applicable to Build Alternatives	CEQA Significance After Mitigation	
	CDSM Alternative	Excavate and Recompact Alternative		CDSM Alternative	Excavate and Recompact Alternative
<b>BIO-3:</b> Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulation or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Significant	Significant	<b>BIO-D</b> Preconstruction Nesting Surveys <b>BIO-K</b> Minimize Construction-Related Impacts	Less than Significant	Less than Significant
<b>BIO-4:</b> Would the project have a substantial adverse effect on federally protected wetlands, as defined by Clean Water Act Section 404 (including but not limited to marsh, vernal pool, and coastal wetlands) through direct removal, filling, hydrological interruption, or other means?	Significant	Significant	<b>BIO-A</b> Biological Monitor <b>BIO-B</b> Worker Education Training <b>BIO-H</b> Topsoil Salvage and Revegetation Plan <b>BIO-K</b> Minimize Construction-Related Impacts	Less than Significant	Less than Significant
<b>BIO-5:</b> Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or substantially impede the use of native wildlife nursery sites?	Significant	Significant	<b>BIO-B</b> Worker Education Training <b>BIO-I</b> Timing of Ground-clearing Activities <b>BIO-L</b> Personnel Guidelines and Traffic <b>BIO-N</b> Night Lighting Control	Less than Significant	Less than Significant
<b>BIO-6:</b> Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Significant	Significant	<b>BIO-H</b> Topsoil Salvage and Revegetation Plan <b>BIO-M</b> Integrated Weed Management Plan <b>BIO-O</b> Joshua Tree, Cactus, and Nolina Salvage Plan	Less than Significant	Less than Significant



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SUMMARY OF CONSTRUCTION-RELATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Environmental Impacts	CEQA Significance Determination		Mitigation Measures Applicable to Build Alternatives	CEQA Significance After Mitigation	
	CDSM Alternative	Excavate and Recompact Alternative		CDSM Alternative	Excavate and Recompact Alternative
<b>BIO-7:</b> Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state conservation plans?	No Impact	No Impact	No mitigation measures are required.	Not applicable	Not applicable
<b>CULTURAL RESOURCES</b>					
<b>CR-1:</b> Would the project cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5, or would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	Significant	Significant	<b>AR-A</b> Conduct Archaeological Training <b>AR-B</b> Flagging of Avoidance Areas <b>AR-C</b> Conduct Archaeological Monitoring in Areas of Sensitivity <b>AR-D</b> Inadvertent Discovery <b>AR-E</b> Comply with State and Federal Law for Human Remains <b>AR-F</b> Phase III Data Recovery to Reduce Adverse Effects <b>HR-A</b> Historical Resources Recordation	Significant and Unavoidable	Significant and Unavoidable
<b>CR-2:</b> Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Significant	Significant	<b>PR-A</b> Retention of Principal Paleontologist and Paleontological Resources Survey <b>PR-B</b> Conduct Paleontological Training <b>PR-C</b> Flagging of Avoidance Areas <b>PR-D</b> Conduct Paleontological Monitoring in Areas of Sensitivity, Halt Work in the Event of a Discovery <b>PR-E</b> Recover Resources and Place in Repository	Less than Significant	Less than Significant
<b>CR-3:</b> Would the project disturb any human remains, including those interred outside of formal cemeteries?	Significant	Significant	<b>AR-E</b> Comply with State and Federal Law for Human Remains	Less than Significant	Less than Significant

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Potential Environmental Impacts	CEQA Significance Determination		Mitigation Measures Applicable to Build Alternatives	CEQA Significance After Mitigation	
	CDSM Alternative	Excavate and Recompact Alternative		CDSM Alternative	Excavate and Recompact Alternative
<b>ENVIRONMENTAL JUSTICE</b>					
<b>EJ-1:</b> Would the project result in environmental impacts that are disproportionately high and adverse on minority and low income populations?	EJ is not a topic analyzed under CEQA. Refer to Section 3.6 for more details.		No mitigation measures are required.	Not applicable	Not applicable
<b>GEOLOGY AND SOILS</b>					
<b>GEO-1:</b> Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable
<b>GEO-2:</b> Would the project result in substantial soil erosion or the loss of topsoil?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable
<b>GEO-3:</b> Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable

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SUMMARY OF CONSTRUCTION-RELATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Environmental Impacts	CEQA Significance Determination		Mitigation Measures Applicable to Build Alternatives	CEQA Significance After Mitigation	
	CDSM Alternative	Excavate and Recompact Alternative		CDSM Alternative	Excavate and Recompact Alternative
<b>GEO-4:</b> Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable
<b>GREENHOUSE GAS EMISSIONS</b>					
<b>GHG-1:</b> Would the project generate GHG emissions, either directly or indirectly, that may have a significant cumulative impact on the environment?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable
<b>GHG-2:</b> Would the project conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs?	No Impact	No Impact	No mitigation measures are required.	Not applicable	Not applicable
<b>HAZARDS AND HAZARDOUS MATERIALS</b>					
<b>HAZ-1:</b> Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable
<b>HAZ-2:</b> Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable

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SUMMARY OF CONSTRUCTION-RELATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Environmental Impacts	CEQA Significance Determination		Mitigation Measures Applicable to Build Alternatives	CEQA Significance After Mitigation	
	CDSM Alternative	Excavate and Recompact Alternative		CDSM Alternative	Excavate and Recompact Alternative
<b>HAZ-3:</b> Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable
<b>HAZ-4:</b> Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable
<b>HYDROLOGY, WATER QUALITY, AND GROUNDWATER</b>					
<b>HWQ-1:</b> Would the project violate any water quality standards or waste discharge requirements?  Would the project otherwise substantially degrade water quality?	Significant	Significant	<b>HWQ-A</b> Sediment Management Plan	Less than Significant	Less than Significant
<b>HWQ-2:</b> Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable

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SUMMARY OF CONSTRUCTION-RELATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Environmental Impacts	CEQA Significance Determination		Mitigation Measures Applicable to Build Alternatives	CEQA Significance After Mitigation	
	CDSM Alternative	Excavate and Recompact Alternative		CDSM Alternative	Excavate and Recompact Alternative
<b>HWQ-3:</b> Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable
<b>HWQ-4:</b> Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable
<b>HWQ-5:</b> Would the project create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable
<b>HWQ-6:</b> Would the project expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable

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SUMMARY OF CONSTRUCTION-RELATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Environmental Impacts	CEQA Significance Determination		Mitigation Measures Applicable to Build Alternatives	CEQA Significance After Mitigation	
	CDSM Alternative	Excavate and Recompact Alternative		CDSM Alternative	Excavate and Recompact Alternative
<b>HWQ-7:</b> Would the project expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable
<b>LAND USE AND PLANNING</b>					
<b>LUP-1:</b> Would the project physically divide an established community?	No Impact	No Impact	No mitigation measures are required.	Not applicable	Not applicable
<b>LUP-2:</b> Would the project conflict with any applicable land use plan, policy, or regulation 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?	Significant	Significant	<b>BIO-H</b> Topsoil Salvage and Revegetation Plan	Less than Significant	Less than Significant
<b>LUP-3:</b> Would the project conflict with any applicable habitat conservation plan or natural community conservation plan	No Impact	No Impact	No mitigation measures are required.	Not applicable	Not applicable
<b>MINERAL RESOURCES</b>					
<b>MIN-1:</b> Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable

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Potential Environmental Impacts	CEQA Significance Determination		Mitigation Measures Applicable to Build Alternatives	CEQA Significance After Mitigation	
	CDSM Alternative	Excavate and Recompact Alternative		CDSM Alternative	Excavate and Recompact Alternative
<b>MIN-2:</b> Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	No Impact	No Impact	No mitigation measures are required.	Not applicable	Not applicable
<b>NOISE AND VIBRATION</b>					
<b>NV-1:</b> Would the project result in 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, or would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	Significant	Significant	<b>NV-A:</b> Construction equipment maintenance and mufflers <b>NV-B:</b> Use of rubber-tired equipment on flat terrain <b>NV-C:</b> Minimization of equipment idling time to no more than 5 minutes <b>NV-D:</b> Locate construction staging areas away from sensitive uses <b>NV-E:</b> Public Liaison <b>NV-F:</b> Ear protection to sensitive receptors	Significant and Unavoidable	Significant and Unavoidable
<b>NV-2:</b> Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable
<b>NV-3:</b> Would the project result in substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable

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Potential Environmental Impacts	CEQA Significance Determination		Mitigation Measures Applicable to Build Alternatives	CEQA Significance After Mitigation	
	CDSM Alternative	Excavate and Recompact Alternative		CDSM Alternative	Excavate and Recompact Alternative
<b>POPULATION AND HOUSING</b>					
<b>POP-1:</b> Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable
<b>PUBLIC SERVICES AND RECREATION</b>					
<b>PSR-1:</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 government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools, day care centers, libraries, and senior centers?	No Impact	No Impact	No mitigation measures are required.	Not applicable	Not applicable



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Potential Environmental Impacts	CEQA Significance Determination		Mitigation Measures Applicable to Build Alternatives	CEQA Significance After Mitigation	
	CDSM Alternative	Excavate and Recompact Alternative		CDSM Alternative	Excavate and Recompact Alternative
<p><b>PSR-2:</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 government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks?</p> <p>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?</p> <p>Would the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?</p>	No Impact	No Impact	No mitigation measures are required.	Not applicable	Not applicable

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Potential Environmental Impacts	CEQA Significance Determination		Mitigation Measures Applicable to Build Alternatives	CEQA Significance After Mitigation	
	CDSM Alternative	Excavate and Recompact Alternative		CDSM Alternative	Excavate and Recompact Alternative
<b>SAFETY AND SECURITY</b>					
<b>SS-1:</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 government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable
<b>SS-2:</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 government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable

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Potential Environmental Impacts	CEQA Significance Determination		Mitigation Measures Applicable to Build Alternatives	CEQA Significance After Mitigation	
	CDSM Alternative	Excavate and Recompact Alternative		CDSM Alternative	Excavate and Recompact Alternative
<b>TRANSPORTATION AND TRAFFIC</b>					
<b>TT-1:</b> Would the project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable
<b>TT-2:</b> Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Significant	Significant	<b>TT-A:</b> Place a flagman at the intersection of US-395 and Cactus Flats Road for nine months during hauling of materials from the existing mine in Keeler	Less than Significant	Less than Significant
<b>TT-3:</b> Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable

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	CDSM Alternative	Excavate and Recompact Alternative		CDSM Alternative	Excavate and Recompact Alternative
<b>TRIBAL CULTURAL RESOURCES</b>					
<p><b>TCR-1:</b> Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?</p>	Significant	Significant	<p><b>TCR-A:</b> Flagging of Avoidance Areas  <b>TCR B:</b> Conduct Tribal Monitoring in Areas of Sensitivity; Halt Work in the Event of a Discovery  <b>TCR-C:</b> Inadvertent Discovery  <b>TCR-D:</b> Phase III Data Recovery to Reduce Adverse Effects</p>	Less than Significant	Less than Significant

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Potential Environmental Impacts	CEQA Significance Determination		Mitigation Measures Applicable to Build Alternatives	CEQA Significance After Mitigation	
	CDSM Alternative	Excavate and Recompact Alternative		CDSM Alternative	Excavate and Recompact Alternative
<p><b>TCR-2:</b> Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?</p>	Significant	Significant	<p><b>TCR-A:</b> Flagging of Avoidance Areas  <b>TCR B:</b> Conduct Tribal Monitoring in Areas of Sensitivity; Halt Work in the Event of a Discovery  <b>TCR-C:</b> Inadvertent Discovery  <b>TCR-D:</b> Phase III Data Recovery to Reduce Adverse Effects</p>	Less than Significant	Less than Significant

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	CDSM Alternative	Excavate and Recompact Alternative		CDSM Alternative	Excavate and Recompact Alternative
<b>UTILITIES, SERVICE SYSTEMS, AND ENERGY</b>					
<p><b>UT-1:</b> Would the project require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</p> <p>Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?</p>	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable
<p><b>UT-2:</b> Would the project require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</p> <p>Would the project 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?</p>	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable

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Potential Environmental Impacts	CEQA Significance Determination		Mitigation Measures Applicable to Build Alternatives	CEQA Significance After Mitigation	
	CDSM Alternative	Excavate and Recompact Alternative		CDSM Alternative	Excavate and Recompact Alternative
<b>UT-3:</b> Would the project 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?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable
<b>UT-4:</b> Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable
<b>UT-5:</b> Would the project result in wasteful, inefficient, and unnecessary consumption of energy during construction and operation of the Project?	Less than Significant	Less than Significant	No mitigation measures are required.	Not applicable	Not applicable

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