

FINAL MITIGATED NEGATIVE DECLARATION

Edgehill (E) Reservoir Replacement and Pump Station Project

Prepared for:

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AUGUST 2020

Printed on 30% post-consumer recycled material.

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AB	Assembly Bill
Action Plan	Integrated Natural and Working Lands Climate Change Action Plan
ANFO	ammonium nitrate/fuel oil
BMP	best management practice
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CH ₄	methane
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO ₂	carbon dioxide
dB	decibel
dBA	A-weighted decibel
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
FTA	Federal Transit Administration
GHG	greenhouse gas
GWP	global warming potential
I-	Interstate
ips	inches per second
L _{eq}	equivalent continuous sound level
L _{max}	maximum sound level during the measurement interval
MG	million gallons
MSCP	Multiple Species Conservation Program
MT	metric ton
NAAQS	National Ambient Air Quality Standards
N ₂ O	nitrous oxide
NO _x	oxides of nitrogen
NO ₂	nitrogen dioxide
PM _{2.5}	particulate matter with an aerodynamic diameter less than or equal to 2.5 microns in size
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to 10 microns in size
PPM	peak particle velocity
PRS	pressure reducing station
RAQS	Regional Air Quality Strategy
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SB	Senate Bill
SCADA	supervisory control and data acquisition
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDG&E	San Diego Gas & Electric

Acronym/Abbreviation	Definition
SO _x	sulfur oxides
SO ₂	sulfur dioxide
SPL	sound pressure level
SR-	State Route
ST	short-term
SWPPP	stormwater pollution prevention plan
VID	Vista Irrigation District
VMT	vehicle miles traveled
VOC	volatile organic compound

1 Introduction

1.1 Project Overview

In accordance with its 2017 Potable Water Master Plan (VID 2018), the Vista Irrigation District (VID) is proposing the replacement of the existing oval shaped, partially buried, 1.5-million-gallon (MG) Edgehill (E) Reservoir with a new reservoir and construction of a new pump station (proposed project). The proposed project would implement an adopted plan for facility improvements. Based on land use and population projections, the 2017 Potable Water Master Plan identified a storage deficit. The Potable Water Master Plan identified seven projects along with their cost estimates in their Capital Improvement Program, including all components of the proposed project. These projects would allow VID to provide service to the expected 158,627 people that the service area is expected to contain by 2040. The project is located on a 1.88-acre property comprised of one parcel (Assessor's Parcel Number 174-240-33) located at 2558 Edgehill Road in unincorporated County of San Diego, California, just east of the City of Vista (Figure 1, Project Location). The new reservoir would increase storage capacity and provide VID with a facility that meets applicable current codes and standards. The new pump station would provide a redundant water supply to higher-pressure zones within VID's service area when disruptions occur to primary water supplies.

The project would require the demolition of the existing E Reservoir and accessory facilities. Within a similar footprint, the proposed project would construct a cast-in-place hexagonal shaped structure that would increase the on-site capacity to approximately 2.92 MG, which is a 1.42 MG net increase. The hexagonal shape would allow for more easily maintained water quality. The proposed project would also construct a new water pump station. The pumps, control panel, and other electric and supervisory control and data acquisition (SCADA) equipment would be housed in an aboveground structure with approximate dimensions of 20 feet by 38 feet that would match the architectural features of the existing adjacent pressure reducing station (PRS) facility.

1.2 California Environmental Quality Act Compliance

The proposed E Reservoir Replacement and Pump Station project is considered a “project” under the California Environmental Quality Act (CEQA) and must comply with its requirements. In accordance with Section 15051 of the CEQA Guidelines, “Criteria for Identifying the Lead Agency,” VID, as a public agency proposing to carry out the project, is the lead agency.

This document is a Mitigated Negative Declaration (MND) prepared by VID pursuant to Title 14 of the California Code of Regulations, Section 15063 of the CEQA Guidelines. Section 15063 of the CEQA Guidelines requires the lead agency to prepare an Initial Study to analyze the potential environmental impacts associated with a project to determine if the project could have a significant effect on the environment. As a result of the Initial Study, this MND has been prepared (per CEQA Guidelines Sections 15070-15075) to identify potential environmental impacts of the proposed E Reservoir Replacement and Pump Station project and to identify mitigation measures to avoid or reduce the significance of those impacts. CEQA requires the lead agency to adopt a mitigation monitoring and reporting program for all required mitigation measures.

1.3 Project Planning Setting

The proposed project would be located on a 1.88-acre parcel of land located at 2258 Edgehill Road, Vista. The project site falls within Section 16 of Township 11 South, Range 3 West of the San Marcos, CA 7.5-minute U.S. Geological Survey Topographic Quadrangle Map. The project site is located in unincorporated land in the County of San Diego (County) just to the east of the City of Vista (City) in the northern portion of the County. The project site is composed of one parcel (Assessor's Parcel Number 174-240-33). The project location is shown in Figure 1, Project Location, and Figure 2, Project Site and Surroundings.

1.4 Public Review Process

The MND is subject to a 30-day public review period. The public is encouraged to provide written comments during the 30-day review, and/or attend the Board of Directors' hearing at which the project and the MND will be considered for approval. In accordance with Section 15074 of the CEQA Guidelines, VID's Board of Directors must consider the MND along with any comments received during the public review process. Comments may be submitted to VID at gkeppler@vidwater.org or by U.S. mail at:

ATTN: Greg Keppler, PE
Vista Irrigation District
1391 Engineer Street
Vista, California 92081

This MND ~~has been~~ was made available for download or viewing at VID's website (<https://www.vidwater.org/>); at VID's main office in Vista, California; and provided for review to state agencies via the California State Clearinghouse. In accordance with Section 15072 of the CEQA Guidelines, notice of the document's availability and intent to adopt an MND ~~has been~~ was filed at the San Diego County Clerk's office and provided via direct mailings to stakeholders, local agencies, owners/occupants contiguous to the project site, and other parties that have expressed interest in the proposed project.

1.5 Final MND

The Draft MND was circulated for a 30-day review period from March 25 to April 23, 2020, pursuant to Section 15105(b) of the CEOA Guidelines. Two (2) written comment letters were received on Draft EIR: Comment Letter A - Rincon Band of Luiseño Indians and Comment Letter B - State Clearinghouse.

Each of the written comment letters have been assigned a label, and the individual comments within each written comment letter are bracketed and numbered. For example, Comment Letter A contains one comment that is numbered A1-1. The responses to each comment on the Draft MND represent a good-faith, reasoned effort to address the environmental issues identified by the comments. Under the CEQA Guidelines, VID, as lead agency, is not required to respond to all comments on the Draft MND, but only those comments that raise environmental issues. In accordance with CEQA Guidelines 15074 and 15204, VID has independently evaluated the comments and prepared the attached written responses to any significant environmental issues raised.

This Final MND includes responses to public comments in Appendix G to this document. Additionally, a mitigation, monitoring, and reporting program is included in Appendix H.

2 Summary of Findings

2.1 Environmental Factors Potentially Affected

This MND analyzes the environmental impacts of the project consistent with the format and analysis prompts provided in Appendix G of the CEQA Guidelines. The analysis determined that the project would result in impacts associated with the following resource categories: Biological Resources, Cultural Resources, Noise, Tribal Cultural Resources, and Utilities and Services Systems. The analysis determined that all impacts identified in this MND would be less than significant with implementation of mitigation measures to avoid or minimize the impacts identified. Detailed analyses of impacts are provided under each resource section evaluated in this MND.

2.2 Environmental Determination

VID finds that this MND identifies potentially significant impacts, but that implementing the mitigation measures identified in Table 1 would avoid or minimize the impacts such that they would be less than significant. All mitigation measures are identified by analysis topic in Table 1, below.

Table 1. Mitigation Measures

Number	Mitigation Measure
<i>Biological Resources</i>	
MM-BIO-1	Pre-Construction Nesting Birds Surveys and Reporting. To avoid impacts to breeding and nesting birds in accordance with the Migratory Bird Treaty Act and California Fish and Game Code, construction activities shall take place outside of the nesting season; nesting season is March 1 (January 1 for raptors) through September 15. If construction cannot take place outside the nesting season, a breeding/nesting bird survey shall be conducted by a qualified biologist within 72 hours prior to ground-disturbing activities to determine if active nests of bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the impact area or within 300 feet of the impact area. If active nests are found, an avoidance buffer shall be established (typically 50 to 300 feet, depending on the species) until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers and construction personnel shall be instructed on the sensitivity of nest areas. A survey and monitoring report documenting the pre-construction survey results and implemented avoidance measures shall be submitted.
<i>Cultural Resources</i>	
MM-CUL-1	<ul style="list-style-type: none">Prior to the start of construction, a worker environmental awareness training program (WEAP) shall be implemented at the construction kickoff meeting to inform construction workers of the cultural sensitivity of the general area and of the types of artifacts that are commonly found during construction in the region. In the event that unanticipated discoveries are encountered during future project undertakings, all activity shall cease within 50 feet of the find until a qualified archaeologist can determine the significance of the find and appropriate mitigation. Examples of prehistoric resources may include: stone tools and manufacturing debris; milling equipment such as bedrock mortars, portable mortars, and pestles; darkened or stained soils (midden) that may contain dietary remains such as shell and bone; and human remains. Historic resources may include: burial plots; structural foundations; mining spoils piles and prospecting

Table 1. Mitigation Measures

Number	Mitigation Measure
	<p>pits; cabin pads; and trash scatters consisting of cans with soldered seams or tops, bottles, cut (square) nails, and ceramics; paleontological resources. The WEAP training shall also inform construction personnel on what to do in the event of a discovery.</p> <ul style="list-style-type: none"> • In the event that unanticipated archaeological resources (sites, features, or artifacts) are exposed during construction activities for the project, all construction work occurring in the immediate vicinity of the find shall immediately stop until a qualified archaeologist meeting the Secretary of the Interior's Professional Qualification Standards can evaluate the significance of the find and determine whether or not additional study is warranted. Depending upon the significance of the find under the California Environmental Quality Act (CEQA) (14 CCR 15064.5[f]; California Public Resources Code Section 21082) the archaeologist may record the find to appropriate standards (thereby addressing any data potential) and allow work to continue. If the archaeologist observes the discovery to be potentially significant under CEQA or Section 106 of the National Historic Preservation Act, additional efforts may be warranted as recommended by the qualified archaeologist.
MM-CUL-2	<p>In accordance with Section 7050.5 of the California Health and Safety Code, if potential human remains are found, all work in the immediate vicinity shall be suspended and the county coroner shall be immediately notified of the discovery. The coroner shall provide a determination within 48 hours of notification. No further excavation or disturbance of the identified material, or any area reasonably suspected to overlie additional remains, shall occur until a determination has been made. If the county coroner determines that the remains are, or are believed to be, Native American, they shall notify the Native American Heritage Commission (NAHC) within 24 hours. In accordance with California Public Resources Code Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendent (MLD) from the deceased Native American. Within 48 hours of their notification, the MLD will recommend to the lead agency their preferred treatment of the remains and associated grave goods.</p>
Noise	
MM NOI-1	<p>Construction Noise Reduction. The Vista Irrigation District (VID) and/or its construction contractor shall comply with the following measures during construction:</p> <ol style="list-style-type: none"> 1. Construction activities shall not occur between the hours of 7:00 p.m. and 7:00 a.m. Monday through Saturdays, or on Sundays or national holidays. In the event that construction is required to extend beyond these times, extended hours permits shall be required. 2. Equipment (e.g., portable generators) shall be shielded from sensitive uses using local temporary noise barriers or enclosures or shall otherwise be designed or configured to minimize noise at nearby noise-sensitive receptors. 3. All noise-producing equipment and vehicles using internal combustion engines should be equipped with mufflers; air-inlet silencers, where appropriate; and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) should be equipped with shrouds and noise control features that are readily available for that type of equipment. 4. All mobile or fixed noise-producing equipment used on the project facilities that are regulated for noise output by a local, state, or federal agency should comply with such regulation while in the course of project activity. 5. Idling equipment should be kept to a minimum and moved as far as practicable from noise-sensitive land uses. 6. Electrically powered equipment should be used instead of pneumatic or internal-combustion-powered equipment, where feasible. 7. Material stockpiles and mobile equipment staging, parking, and maintenance areas should be located as far as practicable from noise-sensitive receptors.

Table 1. Mitigation Measures

Number	Mitigation Measure
	<p>8. The use of noise-producing signals, including horns, whistles, alarms, and bells, should be for safety warning purposes only.</p> <p>9. Residences within 500 feet of the construction site should be notified of the construction schedule in writing at least 3 calendar days prior to construction. VID or its contractor(s) shall designate a noise disturbance point of contact who would be responsible for responding to complaints regarding construction noise. The point of contact should make reasonable effort to investigate the cause of the complaint and, if indeed related to construction noise attributed to the project, see that reasonable measures are implemented to help address the problem. A contact number for the noise disturbance point of contact should be conspicuously placed on construction site fences and written into the construction notification schedule sent to nearby residences.</p>
MM NOI-2	<p>Blasting Requirements. Blasting for rock excavation shall be only be used by the contractor upon receipt of approval by Vista Irrigation District and after other non-explosive techniques have been exhausted, such as rock breaking attachments (both with and without pre-drilling), hydro-fracturing, and expansive chemical agents. If blasting is required for rock excavation, Vista Irrigation District or its contractor shall prepare a blasting plan that will reduce impacts associated with construction-related noise, drilling operations and vibrations related to blasting. The blasting plan shall be site specific, based on general and exact locations of required blasting and the results of a project-specific geotechnical investigation. The blasting plan shall include a description of the planned blasting methods, an inventory of receptors potentially affected by the planned blasting, and calculations to determine the area affected by the planned blasting. Noise calculations in the blasting plan shall account for blasting activities and all supplemental construction equipment. The final blasting plan and pre-blast survey shall meet the requirements provided below.</p> <ul style="list-style-type: none"> • Prior to blasting, a qualified geotechnical professional shall inspect and document the existing conditions of facades and other visible structural features or elements of the nearest residential buildings. Should this inspector determine that some structural features or elements appear fragile or otherwise potentially sensitive to vibration damage caused by the anticipated blasting activity, the maximum per-delay charge weights and other related blast parameters shall be re-evaluated to establish appropriate quantified limits. • All blasting shall be performed by a blast contractor and blasting personnel licensed to operate per appropriate regulatory agencies. • Each blast shall be monitored and recorded with an air-blast overpressure monitor and groundborne vibration accelerometer that is located outside the closest residence to the blast. This data shall be recorded, and a post-blast summary report shall be prepared and be available for public review or distribution as necessary. • Blasting shall not exceed 1 inch per second peak particle velocity (PPV) (transient or single-event), or a lower PPV determined by the aforesaid inspector upon completion of the pre-blast inspection, at the façade of the nearest occupied residence • To ensure that potentially impacted residents are informed, the applicant will provide notice by mail to all property owners within 500 feet of the project at least 1 week prior to a scheduled blasting event. • Drilling operations associated with blasting preparations shall be performed in a manner consistent with adherence to guidance that emulates Sections 36.408, 36.409, and 36.410 of the San Diego County Code Noise Ordinance.
Utilities and Services Systems	
-	Refer to mitigation measures MM-BIO-1, MM-CUL-1, MM-CUL-2, MM NOI-1, and MM NOI-2.

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3 Initial Study Checklist

1. Project title:

E Reservoir Replacement and Pump Station

2. Lead agency name and address:

Vista Irrigation District
1391 Engineer Street
Vista, California 92081

3. Contact person and phone number:

Greg Keppler, PE, Vista Irrigation District
Phone: 760.597.3136
Email: gkeppler@vidwater.org

4. Project location:

Assessor's Parcel Number: 174-240-33; Unincorporated land in the County of San Diego just to the east of the City of Vista in the northern portion of San Diego County. Refer to Figures 1 and 2.

5. Project sponsor's name and address:

Vista Irrigation District
1391 Engineer Street
Vista, California 92081

6. General plan designation:

Semi-Rural Residential (SR-1)

7. Zoning:

A70 (Limited Agricultural)

8. Description of project. (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary):

Demolition

The proposed project would require the demolition of the existing E Reservoir and accessory facilities, which are shown on Figure 3, Existing Project Site. The existing reservoir is comprised of a 3-inch-thick reinforced concrete hopper bottom type floor, square concrete columns and footings, a reinforced perimeter stem wall, timber roof framing, and several layers of painted galvanized corrugated sheet metal which serve as

roofing. Hazardous materials testing was conducted and it was found that the pressure treated timber framing within the reservoir and railroad tie retaining wall fronting Edgehill road require further testing and/or special disposal and handling. It is not anticipated that the remaining reservoir demolition and disposal activities would require special equipment or handling. There are numerous buried pressure and gravity pipes that require removal or abandonment to accommodate the proposed improvements. Additional demolition includes the on-site paved access road and cul-de-sac, existing trees and landscaping, chain-link fencing, irrigation, and drainage swales and catch basins. The existing site has several mature pepper trees that flank the slope on the western side of the reservoir and aid in partial concealment of the existing reservoir. There is other existing vegetation ground cover and non-distinct landscaping that would be removed along with the pepper trees as part of the proposed improvements.

Proposed Project Components

As shown in Figure 4, Proposed Project Site Plan, the new reservoir would have a capacity of approximately 2.92 MG with a floor elevation of approximately 739 feet to match the existing reservoir elevation and high water level of 758 feet, which is 6 feet higher than the existing reservoir. The proposed reservoir would be approximately 4.5 feet taller than the existing reservoir. The internal dimensions would be approximately 230 feet by 110 feet. The reinforced concrete floor would be 12 inches thick; the wall footing would be 5 feet by 18 inches; the wall itself would be 18 inches thick; and the roof would be 9 inches thick. Additionally the dimensions of the column footing would be 54 inches by 54 inches by 18 inches, and the drop panel would be 78 inches by 78 inches by 14 inches. Belowground walls would be water proofed with a sheet membrane waterproofing system. The observation and access roof hatches, roof guardrail, and roof vent would be constructed of anodized aluminum. Reservoir roof access would be via a 5-foot-wide concrete stairwell. Access into the reservoir interior would be through a roof hatch and a 3-foot-wide stainless steel stairway.

Reservoir inlet and outlet valves would be located in a cast-in-place concrete vault at a location accessible by maintenance vehicles. The vault would be open, non-grated, protected by bollards on two sides from vehicles and maintenance equipment, and equipped with a perimeter guard rail for fall prevention. The top of the vault would be constructed approximately 6 inches above the adjacent grades to prevent surface water entry from storm events. Access in and out of the vault would be controlled through a ship's ladder with handrails and fall protection.

The proposed pump station would provide redundant water supply and would have a capacity of 3,000 gallons per minute to meet peak hour during max day demand conditions. The pump station would consist of skid-mounted multi-stage vertical pumps with aboveground headers. The pumps would be housed in an aboveground structure that would match the architectural features of the existing PRS facility. The pump station structure would also house the pump station control panel, electrical panels, and SCADA equipment for the site. The station would be approximately 20 feet by 38 feet with a height of 14 feet. It would be constructed of a 12-inch, cast-in-place concrete floor with an 8- to 12-inch concrete masonry wall. Additionally, the roof would be composed of sloped composite shingles supported by wood trusses and plywood sheathing, with a 20-pounds-per-square-foot load limit. The pump station would also include louvers and ventilation fans to remove heat generated by the pump equipment. Access to the structure would be provided through two entry points: a single solid door, and a 14-foot-wide and 12-foot-tall roll-up door.

Visual renderings of the proposed project from several vantage points in the surrounding area are provided in Figures 5a through 5c.

Electrical Improvements

An existing San Diego Gas & Electric (SDG&E) electric service supplies power to the existing on-site PRS and reservoir. The pump station addition requires an upgrade of the electric service, which would be supplied by a pad-mounted utility transformer. During construction and commissioning of the new pump station, concurrent utility power supply to the existing 120/240-volt service panel and the new 480-volt service panel would be required to prevent interruption of power service to the existing loads.

Lighting

Interior and exterior lighting fixtures would be wet-location rated with energy-efficient LED lamping. Interior fixtures would be linear type similar in appearance to linear fluorescent fixtures. Interior lighting controls would utilize vacancy sensors and manual override switches. Exterior fixtures would be small form, wall pack fixtures. Exterior lighting controls would utilize a timeclock control panel with photocell sensor for shutoff of the lights when daylight is present. All lighting would be consistent with County Zoning Ordinance Number 9716. The ordinance lists standards for outdoor lighting based on location, land use type, lumen intensity, required shielding, and hours of operation. The proposed project would have Class II lighting within Zone B (not adjacent to Palomar Observatory) and would be required to have fully shielded outdoor lighting.

Access and Circulation

The existing fencing and gates would be removed and replaced as part of the proposed improvements along with the two site entry gates. There is an existing 20-foot-wide private dirt road easement that would continue to run from Edgehill Road through the eastern third of the project site. Access to the reservoir would be provided by a gravel driveway off of the dirt road easement. New 7-foot-tall tubular steel fencing topped with spiked pickets would be constructed around the perimeter of the site. Manual double swing gates would be constructed in the same or nearly identical location to the existing gate. A new motor-operated rolling gate will be constructed at the PRS/pump station entrance at the southwest corner of the site. Fencing and gates would be constructed in compliance with the Standard Specifications for Public Works Construction and Standard Plans. The proposed project would maintain the asphalt concrete curb that runs parallel to the southern boundary and would connect to the proposed AC curb along the proposed gravel driveway as to provide pedestrian access to the E Reservoir.

Materials Storage Areas and Equipment Staging

The proposed project does not require storage of operations and maintenance materials on-site, as VID will utilize existing off-site operations and maintenance storage yards.

On-site Landscaping and Drainage

Landscaping would be provided along Edgehill Road and around the perimeter of the site on the west, north, and east sides of the structure to provide screening and visually break up large sections of the tank wall. Landscaping would conform to the City of Vista Landscape Manual. Plant species would feature a mix of native and other drought-tolerant species appropriate to the area, and no invasive species, defined as species with a rating of moderate or high in the California Invasive Plant Council database, would be used. Landscape design would follow fire-safe principles. Healthy existing native vegetation would be retained.

where possible and suitable, and existing non-native ornamental species may be retained if structurally sound, drought-tolerant, and individual plants work with the overall facility design.

The project includes the addition of a water quality basin on site. The basin would be equipped with a standpipe and outlet along the western boundary of the project site to the on-site channel and would be conveyed to Edgehill Road. It is important to note that while the project is not required to comply with San Diego County stormwater standards as VID is a special district, the on-site detention basins would meet San Diego County Flood Control design standards.

Project Construction

For the purposes of analysis, it was assumed that construction of the proposed project would commence in September 2020¹ and would last approximately 18 months, ending in February 2022². The analysis contained herein is based on the following subset area schedule assumptions (duration of phases is approximate):

- Demolition – 3 months
- Site preparation and grading – 3 months
- Reservoir construction – 12 months
- Pump station construction – 4 months
- Paving – 1 week
- Piping – 4 months
- Retaining wall construction – 1 month
- Architectural coating – 1 week

The majority of the phases listed above would occur concurrently and would not occur sequentially in isolation. The estimated construction duration was provided by the project engineering team. Refer to Section 3.3, Air Quality, for more detailed information regarding construction assumptions.

For the analysis, it was assumed that heavy construction equipment would be operating 5 days per week (22 days per month) during proposed project construction. Proposed project construction would include approximately 1,830 cubic yards of cut and 1,337 cubic yards of fill as represented in the site preparation and grading phase. It is anticipated that earth movement would be primarily, if not completely, accomplished using off-road equipment (e.g., scrapers and excavators); however, on-site truck trips were conservatively assumed in the event cut and fill would be transported via trucks within the site boundary. There would also be export of approximately 650 tons of waste during the demolition phase.

Based on the known presence of hard rock at the project site, there is a high likelihood that rock excavation would be required. Rock excavation methods would generally consist of non-explosive techniques, such as rock breaking attachments (both with and without pre-drilling), hydro-fracturing, or expansive chemical agents.

¹ The analysis assumes a construction start date of September 2020, which represents the earliest date construction would initiate. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

² It is understood that once construction commences, potential circumstances unknown at this time (such as inclement weather) may cause delays in the schedule. The construction schedule represents the best known anticipated phasing/timing, based on known site information, input from project engineers, and expert construction contractors. Such potential delays would not substantially affect the emissions modeling and the analysis contained herein represents a worst-case scenario.

There is some potential that these methods would be unable to excavate the underlying rock and limited blasting would be required. Because of this potential, the analysis presented in this MND conservatively assumes blasting would be required. Rock blasting is the controlled use of explosives to excavate, break down, or remove rock. The result of rock blasting is often known as a rock cut. It is anticipated that blasting operations would occur during the site preparation and grading phase. No more than one blast per day would occur during construction activities. All blasting activity would require appropriate permits and approvals consistent with local and state requirements, such as Section 96.1.5601.2 of the County of San Diego 2017 Consolidated Fire Code. Consistent with state and local requirements, the fire district/local fire department, San Diego Sheriff's Department, and utilities require notification prior to the start of any blasting activity.

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

The project site is bounded by agriculture and residential land to the north; open land including the San Marcos mountain range and agriculture and rural residential buildings to the east; commercial and residential development to the south; and commercial and agriculture and rural residential uses to the west. Refer to Figure 2.

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

- Encroachment Permit by the County of San Diego
- Blasting Permit by the County of San Diego
- Haul Route Permit by the City of Vista
- National Pollutant Discharge Elimination System Permit by the San Diego Regional Water Quality Control Board (RWQCB)
- Amendment to Existing Domestic Water Supply Permit by the Department of Public Health Division of Drinking Water

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

Letters were sent to each of the representatives on February 07, 2019, for any additional information of resources that may be located in the project Area of Potential Effect. To date, five responses have been received for the current proposed project.

- On February 14, 2019, the Tribal Historic Preservation Office for the Agua Caliente Band of Cahuilla Indians responded the project is out of their tribe's Traditional Use Area and therefore they defer to other tribes in the area once formal government-to-government consultation is initiated by the lead agency for this project.
- On February 20, 2019, representatives of the Cultural Department for the Rincon Band of Luiseño Indians contacted Dudek and shared that the identified Area of Potential Effect is within the Ancestral Territory of the Luiseño people, and is also within Rincon's specific Area of Historic Interest. While they did not have knowledge of cultural resources within or near the proposed project area, this does not mean that none exist. They suggested archival research be conducted for the project and that they were interested in participation in any survey.
- On February 20, 2019, representatives of the Campo Band of Mission Indians responded, indicating that the project area has a rich history for the Kumeyaay people and requesting that a qualified Kumeyaay monitor be present for any cultural work and additional ground-disturbing activities to ensure that Kumeyaay resources are not overlooked.
- Dudek received a response on March 12, 2019, from Clinton Linton, Cultural Resources Director, representing the Lipay Nation of Santa Ysabel. Mr. Linton stated that, for the project, Santa Ysabel defers to and supports the comments and requests of the San Luis Rey Band.
- Dudek received a response on March 18, 2019, from Ray Teran, resources management, representing the Viejas Band of Kumeyaay Indians. Mr. Teran stated that, for the project, Viejas recommends that the San Pasqual Band of Mission Indians be notified of the project. In addition, Mr. Teran requested that all National Environmental Policy Act/CEQA/Native American Graves Protection and Repatriation Act laws be followed, and that San Pasqual be notified of any project changes and updates.

Additionally, in accordance with Assembly Bill (AB) 52, VID provided a notification letter to tribal groups that have formally requested such notification under AB 52. This notification letter was sent to the Rincon Band of Luiseño Indians and the Torres Martinez Desert Cahuilla Indians on November 7, 2018. Neither tribe responded with a request for consultation within the 30-day response period provided by AB 52. On December 21, 2018, the Rincon Band of Luiseño Indians requested consultation under AB 52 and that an archaeological records search be conducted. However, because this request was outside of the response period, consultation is no longer required under AB 52. Regardless, communication regarding the project outside of AB 52 with the Rincon Band of Luiseño Indians is ongoing.

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

Determination (To be completed by the Lead Agency)

On the basis of this initial evaluation:

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

Signature



7/15/2020

Date

3.1 Aesthetics

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

Setting

The site is approximately 1.88 acres, and a portion of Edgehill Road is constructed on the southern edge of the parcel. Existing elevations on the site range from 765 to 730 feet above mean sea level, sloping generally from northeast to southwest. The existing oval-shaped reservoir on site was constructed in 1929. It is partially buried with sloped walls and constructed of reinforced gunite concrete walls and floor. The roof is comprised of two layers of corrugated metal roofing with wood timber framing. Other facilities on the site include a slump block building, fencing, access roads, and associated landscaping. The site is currently characterized by developed and ornamental planting land cover. The project site is adjacent to Edgehill Road and is visible from the surrounding semi-rural residential area.

Officially, designated state scenic highways within the unincorporated San Diego County are State Route (SR-) 78 through the Anza-Borrego Desert State Park and SR-125 between Interstate (I-) 8 and SR-94. Additionally, there are several portions of highways that may be eligible for scenic designation: I-5, I-15, SR-94, I-8, SR-79, SR-78, and SR-76. The proposed project is not within the viewshed of these highways.

County of San Diego General Plan Environmental Impact Report (EIR) Resource Conservation Areas include the following (County of San Diego 2011a):

- Jesmond Dene Oaks. The scenic value of the oaks contributes to the character of the semi-rural residential community of Jesmond Dene.
- Valley Center Ridge. This steep, high ridge contains a diversity of oak woodlands and large growth chaparral that provides a scenic backdrop for the subregion.
- Burnt Mountain. This area serves as wildlife habitat and is a visual landmark for residents of the Subregion as well as the Valley Center Community Plan Area.
- San Marcos Mountains: These mountains are an important visual landmark for residents of the subregion and the Bonsall Community Plan Area and are especially significant because they contain rare and endangered plant species such as Cleveland sage and southern mountain misery.

Impact Discussion

- a) ***Would the project have a substantial adverse effect on a scenic vista?***
- b) ***Would the project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?***
- c) ***In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?***

As discussed above under Setting, the project site is not within a Resource Conservation Area (scenic vista) identified in the San Diego County General Plan EIR. While the project is adjacent to the San Marcos Mountains, the project involves the reconstruction of an existing water reservoir with no significant increase in elevations. As discussed below, the project includes revegetation that would reduce the impact of the proposed reconstruction of the site. Additionally, the project site is not visible from a designated State Scenic Highway. The project would be visible from Edgehill Road and the surrounding residential homes, similar to the existing condition.

The project would replace and expand the existing water reservoir. During project implementation, construction equipment and materials may be temporarily visible from vantage points located along Edgehill Road, but these views would be temporary, occurring only during construction periods. The proposed project includes revegetation with native vegetation of disturbed areas serving as a natural screen and thereby reducing visual contrast of areas disturbed as a result of the project. Because post-project conditions would be similar to the current visible conditions, the project would not result in a substantial change in the visual environment as viewed from surrounding roadways or residences. Proposed improvements would require removal of the existing trees. However, revegetation of these areas would be completed, which would help blend these project-affected areas with the surrounding natural landscape. Additionally, the project would include replanting of trees throughout the project site, which, at maturity, would aid in visual softening and screening of the project. Therefore, tree removal associated with the project would not result in a substantial change in the visual character as viewed from surrounding roadways or vantage points.

The project is located immediately adjacent to the urbanized City of Vista and within its sphere of influence. Overall, the project would result in the development similar to that of the existing reservoir on site. Once construction is complete and plantings reach maturity, the project would be visually similar to the existing condition. Refer also to Figures 5a through 5c for visual simulations of the proposed project. Based on the provided analysis, the project would result in no substantial change in the existing visual condition of the project area as viewed from Edgehill Road and the surrounding areas, such that visual character or quality would be substantially degraded. Impacts to scenic vistas, scenic resources within a scenic highway, and degradation of the existing visual character or quality of the site and the surrounding area would be **less than significant**.

- d) *Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

The project does not include an increase in lighting for security or other purposes. Construction may occur over nighttime hours and would introduce temporary sources of light to areas that are normally not illuminated, but construction activities during nighttime would be short term, if necessary at all. Interior and exterior lighting fixtures would be wet-location rated with energy-efficient LED lamping. Interior fixtures would be linear type similar in appearance to linear fluorescent fixtures. Interior lighting controls would utilize vacancy sensors and manual override switches. Exterior fixtures would be small form, wall pack fixtures. Exterior lighting controls would utilize a timeclock control panel with photocell sensor for shutoff of the lights when daylight is present. Therefore, impacts associated with light or glare would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

3.2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
II. AGRICULTURE AND FORESTRY RESOURCES – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Setting

The project would occur on land within San Diego County and is located adjacent to the City of Vista. The project site is designated in the General Plan land use designation as Semi-Rural Residential (SR-1) (County of San Diego 2011b), and zoned A70 (Limited Agricultural).

- a) **Would the project 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?**

The project site is located on land classified as “Other Land” per the San Diego County Important Farmland 2016 map, as part of the Farmland Mapping and Monitoring Program (DOC 2018). Therefore, **no impact** would occur.

- b) **Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?**

Under the San Diego County General Plan (General Plan) (2011b), the project site is designated Semi-Rural Residential (SR-1). Under the San Diego County Zoning Ordinance (County of San Diego 2007a), the project site is zoned A70 (Limited Agricultural). The project site is not under a Williamson Act contract. While the project site is zoned as Limited Agricultural within the County, it has been used as a water reservoir since 1929. The project does not involve a new land use, but rather is reconstructing an existing water reservoir facility for the continued use of the surrounding communities. Per California Government Code Sections 53091(d) and 53091(e), the County cannot prohibit the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy. Thus, the proposed project is not in conflict with the existing land use designation or zoning code. Therefore, the project would have **no impact**.

- c) **Would the project 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))?**

The project would not occur on land zoned or designated as forestland; it would not necessitate rezoning and would not conflict with existing zoning. Therefore, there will be **no impact**.

- d) **Would the project result in the loss of forest land or conversion of forest land to non-forest use?**

The project would not result in the loss or conversion of forest land as the site is not zoned or designated as forest land. The project would not result in permanent loss or conversion of forest land, and therefore, **no impact** would occur.

- e) **Would the project 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?**

The project consists of the reconstruction and expansion of an existing water reservoir that would serve existing and planned communities. The reconstruction of the reservoir would not result in the unplanned conversion of farmland or forest land to a non-agricultural or non-forestland uses. Therefore, **no impact** would occur.

Mitigation Measures

No mitigation measures are required.

3.3 Air Quality

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Setting

Dudek completed an Air Quality and Greenhouse Gas Emissions Memorandum for the proposed project, which is included as Appendix A to this MND. As detailed in Appendix A, the following provides a brief summary of the existing setting with respect to air quality.

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. Criteria air pollutants that are evaluated include volatile organic compounds (VOCs), oxides of nitrogen (NO_x), carbon monoxide (CO), sulfur oxides (SO_x), particulate matter with an aerodynamic diameter less than or equal to 10 microns in size (PM₁₀), and particulate matter with an aerodynamic diameter less than or equal to 2.5 microns in size (PM_{2.5}). VOCs and NO_x are important because they are precursors to ozone (O₃). Criteria air pollutant emissions associated with construction of the project were estimated for the following emission sources: operation of off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. Operational emissions include those from maintenance vehicles and architectural coating off-gassing.

San Diego Air Pollution Control District

Although the California Air Resources Board (CARB) is responsible for the regulation of mobile emission sources within the state, local air quality management districts and air pollution control districts are responsible for enforcing standards and regulating stationary sources. The project is located within the San Diego Air Basin (SDAB) and is subject to San Diego Air Pollution Control District (SDAPCD) guidelines and regulations. In San Diego County,

O₃ and particulate matter are the pollutants of main concern because exceedances of the California Ambient Air Quality Standards (CAAQS) for those pollutants are experienced here in most years. For this reason, the SDAB has been designated as a nonattainment area for the state PM₁₀, PM_{2.5}, and O₃ (1-hour and 8-hour) standards. The SDAB is also designated as a federal O₃ maintenance attainment area for the 1997 8-hour National Ambient Air Quality Standards (NAAQS) and a marginal nonattainment area for the 2008 8-hour NAAQS for O₃.

The SDAPCD and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The Regional Air Quality Strategy (RAQS) for the SDAB was initially adopted in 1991, and is updated every 3 years (most recently in 2016). RAQS outlines the SDAPCD's plans and control measures designed to attain the CAAQS for O₃. RAQS relies on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in San Diego County and the cities in the County, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by the County and the cities in the County as part of the development of their general plans.

The 8-Hour Ozone Attainment Plan for San Diego County indicates that local controls and state programs would allow the region to reach attainment of the federal 8-hour O₃ standard by 2018 (SDAPCD 2016). In this plan, SDAPCD relies on the RAQS to demonstrate how the region will comply with the federal O₃ standard. RAQS details how the region will manage and reduce O₃ precursors (NO_x and VOCs) by identifying measures and regulations intended to reduce these contaminants. The control measures identified in the RAQS generally focus on stationary sources; however, the emissions inventories and projections in the RAQS address all potential sources, including those under the authority of CARB and the U.S. Environmental Protection Agency (EPA). Incentive programs for reduction of emissions from heavy-duty diesel vehicles, off-road equipment, and school buses are also established in the RAQS.

In December 2005, the SDAPCD prepared a report titled “Measures to Reduce Particulate Matter in San Diego County” to address implementation of Senate Bill (SB) 656 in San Diego County (SB 656 required additional controls to reduce ambient concentrations of PM₁₀ and PM_{2.5}). In the report, the SDAPCD evaluates the implementation of source-control measures that would reduce particulate matter emissions associated with residential wood combustion.

San Diego Air Basin Attainment Designation

An area is designated as “in attainment” when it is in compliance with the NAAQS and/or the CAAQS. These standards are set by the EPA and CARB, respectively, for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or the public welfare. The criteria pollutants of primary concern that are considered in this air quality assessment include O₃, nitrogen dioxide (NO₂), CO, sulfur dioxide (SO₂), PM₁₀, and PM_{2.5}. Although there are no ambient standards for VOCs or NO_x, they are important as precursors to O₃.

The SDAB is designated as an attainment area for the 1997 8-hour O₃ NAAQS and as a nonattainment area for the 2008 8-hour O₃ NAAQS. The SDAB is designated as a nonattainment area for O₃, PM₁₀, and PM_{2.5} CAAQS. The portion of the SDAB where the project site is located is designated as attainment or unclassifiable/unclassified for all other criteria pollutants under the NAAQS and CAAQS.

Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses) (CARB 2005).

The project site is bounded by agriculture and residential land to the north, open land including the San Marcos mountain range and residential buildings to the east, commercial and residential development to the south, and commercial and residential uses to the west. The land uses near the project alignment that are considered sensitive receptor land uses with regard to air quality concerns include the residential land uses.

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

The SDAPCD and SANDAG are responsible for developing and implementing the clean air plans for attainment and maintenance of the ambient air quality standards in the SDAB—specifically, the State Implementation Plan (SIP) and RAQS.³ The federal O₃ maintenance plan, which is part of the SIP, was adopted in 2012. SIP includes a demonstration that current strategies and tactics will maintain acceptable air quality in the basin based on the NAAQS. RAQS was initially adopted in 1991 and is updated every 3 years (most recently in 2016). RAQS outlines the SDAPCD's plans and control measures designed to attain the state air quality standards for O₃. SIP and RAQS rely on information from CARB and SANDAG, including mobile and area source emissions as well as information regarding projected growth in the County as a whole and the cities in the County, to project future emissions and determine the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by the County and the cities in the County as part of the development of their general plans.

If a project involves development that is greater than that anticipated in the local plan and SANDAG's growth projections, the project might be in conflict with the SIP and RAQS and may contribute to a potentially significant cumulative impact on air quality. As the project is located at the existing reservoir site, the project would not conflict with the existing zoning and General Plan land use designations. Implementation of the project would not be growth inducing (refer also to Section 3.14, Population and Housing). Additionally, the project would neither include a residential component that would increase local population growth, nor provide additional water supplies that would result in growth-inducing effects.

In summary, the project would not provide for residential development growth or local employment growth; therefore, the project would not result in development in excess of that anticipated in local plans or increases in population/housing growth beyond those contemplated by SANDAG. As such, vehicle trip generation and planned development for the various project-proposed maintenance activities is considered to be anticipated in the SIP and RAQS. Because the proposed project activities and associated vehicle trips are anticipated in local air quality plans, the project would be consistent at a regional level with the underlying growth forecasts in the RAQS. Impacts as a result of project-level activities would be **less than significant**.

³ For the purpose of this discussion, the relevant federal air quality plan is the Ozone Maintenance Plan (SDAPCD 2012). RAQS is the applicable plan for purposes of state air quality planning. Both plans reflect growth projections in the SDAB.

- b) *Would the project 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?*

Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the SDAPCD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality.

A quantitative analysis was conducted to determine whether construction of the project may result in emissions of criteria air pollutants that may cause exceedances of federal and/or state ambient air quality standards or contribute to existing nonattainment of ambient air quality standards. The following discussion identifies potential short-term impacts that would result from implementation of the project and concludes that impacts would be less than significant. The project would not involve routine daily activities following construction; therefore, the project is not anticipated to generate long-term operational criteria air pollutant emissions.

Construction Emissions

Emissions from the construction phase of the proposed project were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 (CAPCOA 2017).

As described in Section 1.1, Project Description, the proposed project would replace an existing reservoir with a new reservoir and pump station. For the purposes of modeling, it was assumed that construction of the proposed project would commence in September 2020⁴ and would last approximately 18 months, ending in February 2022. The analysis contained herein is based on the following subset area schedule assumptions (duration of phases is approximate):

- Demolition – 3 months
- Site preparation and grading – 3 months
- Reservoir construction – 12 months
- Pump station construction – 4 months
- Paving – 1 week
- Piping – 4 months
- Retaining wall construction – 1 month
- Architectural coating – 1 week

The majority of the phases listed above would occur concurrently and would not occur sequentially in isolation. The estimated construction duration was provided by the project engineering team. Detailed construction equipment modeling assumptions are provided in Appendix A.

⁴ The analysis assumes a construction start date of September 2020, which represents the earliest date construction would initiate. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

For the analysis, it was assumed that heavy construction equipment would be operating 5 days per week (22 days per month) during proposed project construction. Construction worker and vendor trips were based on CalEEMod default assumptions and rounded up to the nearest whole number to account for whole round trips.

Proposed project construction would include 1,830 cubic yards of cut and 1,337 cubic yards of fill as represented in the site preparation and grading phase. It is anticipated that earth movement would be primarily, if not completely, accomplished using off-road equipment (e.g., scrapers and excavators); however, on-site truck trips were conservatively assumed in the event cut and fill would be transported via trucks within the site boundary. There would also be export of approximately 650 tons of waste during the demolition phase.

Construction of proposed project components would be subject to SDAPCD Rule 55, Fugitive Dust Control, which requires that proposed construction include steps to restrict visible emissions of fugitive dust beyond the property line (SDAPCD 2009). Compliance with Rule 55 would limit fugitive dust (PM_{10} and $PM_{2.5}$) that may be generated during proposed grading and construction activities.

Blasting

Based on the known presence of hard rock at the project site, there is a high likelihood that rock excavation would be required during the site preparation and grading phase. Rock excavation methods would generally consist of non-explosive techniques, such as rock breaking attachments (both with and without pre-drilling), hydro-fracturing, and expansive chemical agents. There is some potential that these methods would be unable to excavate the underlying rock to the required depths and limited blasting would be required. As discussed previously, for the purposes of a conservative analysis, construction modelling assumes that limited blasting operations would be required for site preparation. Rock blasting is the controlled use of explosives to excavate, break down, or remove rock. The result of rock blasting is often known as a rock cut. The most commonly used explosives today are ammonium nitrate/fuel oil (ANFO)-based blends due to their lower cost compared to dynamite. The chemistry of ANFO detonation is the reaction of ammonium nitrate with a long-chain alkane to form NO_x , carbon dioxide, and water. When detonation conditions are optimal, these gases are the only products. In practical use, such conditions are impossible to attain, and blasts produce moderate amounts of other gases. The EPA's Compilation of Air Pollutant Emission Factors (AP-42), Section 13.3 – Explosives Detonation (EPA 1980), provided the emissions factors for CO, NO_x , and SO_x used in this assessment. According to AP-42, "Unburned hydrocarbons also result from explosions, but in most instances, methane is the only species that has been reported" (EPA 1980); methane is not a VOC, and a methane emission factor has not been determined for ANFO.

AP-42 states that CO is the pollutant produced in greatest quantity from explosives detonation. All explosives produce measurable amounts of CO. Particulates are produced as well, but such large quantities of particulate are generated during shattering of the rock and earth by the explosive that the quantity of particulates from the explosive charge cannot be distinguished. Accordingly, AP-42, Section 11.9 – Western Surface Coal Mining (EPA 1998), provided the basis for the PM_{10} and $PM_{2.5}$ emissions factors. The emissions factors are based on the horizontal area disturbed during blasting.

It is anticipated that blasting operations would occur during the site preparation and grading phase. No more than one blast per day would occur during construction activities. An average of 8 pounds of ANFO would be applied per blast (Dudek 2019). All blasting activity would comply with local and state requirements for permits/licenses, including Section 96.1.5601.2 of the County of San Diego 2017 Consolidated Fire Code.

Construction of the proposed project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, soil disturbance, and VOC off-gassing) and off-site sources (worker vehicle trips). Construction emissions can vary substantially day to day, depending on the level of activity, the specific type of operation, and for dust, the prevailing weather conditions.

Implementation of the proposed project would generate air pollutant emissions from entrained dust, off-road equipment, vehicle emissions, asphalt pavement application, and architectural coatings. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM₁₀ and PM_{2.5} emissions. The proposed project would be subject to SDAPCD Rule 55, Fugitive Dust Control. This rule requires that the proposed project take steps to restrict visible emissions of fugitive dust beyond the property line (SDAPCD 2009). Compliance with Rule 55 would limit fugitive dust (PM₁₀ and PM_{2.5}) generated during grading and construction activities.

Exhaust from internal combustion engines used by construction equipment and worker vehicles would result in emissions of VOC, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}. The application of asphalt pavement and architectural coatings would also produce VOC emissions. Table 2 shows the estimated maximum daily construction emissions associated with construction of the proposed project without mitigation. Complete details of the emissions calculations are provided in Appendix A.

Table 2. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions

Year	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	<i>Pounds per day</i>					
2020 ¹	2.99	33.95	30.78	0.07	2.29	1.51
2021	7.81	33.37	33.74	0.07	2.43	1.56
2022	0.39	4.03	4.89	0.01	0.25	0.20
Maximum	7.81	33.95	33.74	0.07	2.43	1.56
<i>SDAPCD Threshold</i>	75	250	550	250	100	55
Threshold Exceeded?	No	No	No	No	No	No

Notes:

VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SDAPCD = San Diego Air Pollution Control District.

See Appendix A for complete results.

The values shown are the maximum summer or winter daily emissions results from CalEEMod. Although not considered mitigation, these emissions reflect the CalEEMod “mitigated” output, which accounts for the required compliance with SDAPCD Rule 55 (Fugitive Dust) and Rule 67.0.1 (Architectural Coatings).

¹ Emissions include blasting calculated outside of CalEEMod.

As shown in Table 2, daily construction emissions would not exceed the significance thresholds for any criteria air pollutant. Therefore, impacts during construction would be **less than significant**.

Operational Emissions

Operation of the proposed project would generate VOC, NO_x, CO, SO_x, PM₁₀, and PM_{2.5} emissions from area sources (consumer products, landscape maintenance equipment), energy sources, and mobile sources (vehicle trips).

Area Sources

CalEEMod was used to estimate operational emissions from area sources, including emissions from architectural coatings. VOC off-gassing emissions result from evaporation of solvents contained in surface coatings, such as in paints and primers used during building maintenance. CalEEMod calculates the VOC evaporative emissions from the application of surface coatings based on the VOC emission factor, the building square footage, the assumed fraction of surface area, and the reapplication rate. The VOC emissions factor is based on the VOC content of the surface coatings, and SDAPCD's Rule 67.0.1 (Architectural Coatings) governs the VOC content for interior and exterior coatings. This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories (SDAPCD 2015). The model default reapplication rate of 10% of area per year is assumed. Consistent with CalEEMod defaults, it is assumed that the surface area for painting equals 2.7 times the floor square footage, with 75% assumed for interior coating and 25% assumed for exterior surface coating (CAPCOA 2017).

Energy Sources

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage. Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for greenhouse gases (GHGs) in CalEEMod, since criteria pollutant emissions occur at the site of the power plant, which is typically off site. The project would not have natural gas use. It is estimated that the project would use up to 196,049 kilowatt-hours of electricity per year from three, 50-horsepower pumps, running an average of 20% of the time based on the anticipated model specifications (Dudek 2019).

Mobile Sources

Following the completion of construction activities, the proposed project would generate criteria pollutant emissions from mobile sources (vehicular traffic) as a result of monthly maintenance inspections. Project-related traffic was assumed to include a mixture of vehicles in accordance with the associated use, as modeled within the CalEEMod. Emission factors representing the vehicle mix and emissions for 2022 were used to estimate emissions associated with vehicular sources.

Table 3 presents the maximum daily area, energy, and mobile source emissions associated with operation (Year 2022) of the proposed project. The values shown are the maximum summer or winter daily emissions results from CalEEMod. Details of the emission calculations are provided in Appendix A.

Table 3. Estimated Maximum Daily Operational Criteria Air Pollutant Emissions

Emission Source	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
<i>Pounds per day</i>						
Area	0.01	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.01	0.04	0.00	0.01	0.00
Total	0.01	0.01	0.04	0.00	0.01	0.00
<i>SDAPCD Threshold</i>	75	250	550	250	100	55
Threshold Exceeded?	No	No	No	No	No	No

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SDAPCD = San Diego Air Pollution Control District.

See Appendix A for complete results.

The values shown are the maximum summer or winter daily emissions results from CalEEMod. These emissions reflect the CalEEMod “mitigated” output, which accounts for compliance with SDAPCD Rule 67.0.1 (Architectural Coatings).

As shown in Table 3, the combined daily area, energy, and mobile source emissions would not exceed the SDAPCD’s operational thresholds for VOC, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}. The SDAB is a nonattainment area for O₃ under the NAAQS and CAAQS. The poor air quality in the SDAB is the result of cumulative emissions from motor vehicles, off-road equipment, commercial and industrial facilities, and other emission sources. Projects that emit these pollutants or their precursors (i.e., VOCs and NO_x for O₃) potentially contribute to poor air quality. In analyzing cumulative impacts from a project, the analysis must specifically evaluate the project’s contribution to the cumulative increase in pollutants for which the SDAB is designated as nonattainment for the CAAQS and NAAQS. If the project does not exceed thresholds and is determined to have less-than-significant project-specific impacts, it may still contribute to a significant cumulative impact on air quality if the emissions from the project, in combination with the emissions from other proposed or reasonably foreseeable future projects, are in excess of established thresholds. However, a project would only be considered to have a significant cumulative impact if the project’s contribution accounts for a significant proportion of the cumulative total emissions (i.e., it represents a “cumulatively considerable contribution” to the cumulative air quality impact).

Additionally, for the SDAB, RAQS serves as the long-term regional air quality planning document for the purpose of assessing cumulative operational emissions in the basin to ensure the SDAB continues to make progress toward NAAQS- and CAAQS-attainment status. As such, cumulative projects located in the San Diego region would have the potential to result in a cumulative impact to air quality if, in combination, they would conflict with or obstruct implementation of the RAQS. Similarly, individual projects that are inconsistent with the regional planning documents upon which RAQS is based would have the potential to result in cumulative operational impacts if they represent development and population increases beyond regional projections.

The SDAB has been designated as a federal nonattainment area for O₃ and a state nonattainment area for O₃, PM₁₀, and PM_{2.5}. The nonattainment status is the result of cumulative emissions from all sources of these air pollutants and their precursors within the basin. As discussed previously, the proposed project would not exceed significance thresholds during construction or operation.

Regarding long-term cumulative operational emissions in relation to consistency with local air quality plans, the SIP and RAQS serve as the primary air quality planning documents for the state and SDAB, respectively.

The SIP and RAQS rely on SANDAG growth projections based on population, vehicle trends, and land use plans developed by the cities and the County as part of the development of their general plans. Therefore, projects involving development that is consistent with the growth anticipated by local plans would be consistent with the SIP and RAQS and would not be considered to result in cumulatively considerable impacts from operational emissions. As stated previously, the proposed project would be consistent with the existing zoning and land use designation for the site and would not result in significant regional growth that is not accounted for within the RAQS. As a result, the proposed project would not result in a cumulatively considerable contribution to regional O₃ concentrations or other criteria pollutant emissions. Cumulative impacts would be **less than significant** during construction and operation.

c) **Would the project expose sensitive receptors to substantial pollutant concentrations?**

Carbon Monoxide Hotspots

Mobile-source impacts occur on two basic scales of motion. Regionally, project-related travel will add to regional trip generation and increase the vehicle miles traveled (VMT) within the local airshed and the SDAB. Locally, proposed project traffic will be added to the City's roadway system. If such traffic occurs during periods of poor atmospheric ventilation, consists of a large number of vehicles "cold-started" and operating at pollution-inefficient speeds, and operates on roadways already crowded with non-project traffic, there is a potential for the formation of microscale CO "hotspots" in the area immediately around points of congested traffic. Because of continued improvement in mobile emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SDAB is steadily decreasing.

Projects contributing to adverse traffic impacts may result in the formation of CO hotspots. To verify that the project would not cause or contribute to a violation of the CO standard, a screening evaluation of the potential for CO hotspots was conducted. The potential for CO hotspots was evaluated based on the results of the traffic report. The County of San Diego's Guidelines (County of San Diego 2007b) CO hotspot screening guidance was followed to determine if the project would require a site-specific hotspot analysis. The County recommends that a quantitative analysis of CO hotspots be performed for intersections operating at or below a level of service (LOS) of "E" and have peak-hour trips exceeding 3,000 trips.

The project would not generate trips during construction or operation to exceed the screening thresholds set forth above. Therefore, the project would not cause a CO hotspot and would have a **less than significant impact**.

Health Impacts of Toxic Air Contaminants

In addition to impacts from criteria pollutants, project impacts may include emissions of pollutants identified by the state and federal government as toxic air contaminants (TACs) or hazardous air pollutants (HAPs). The greatest potential for TAC emissions during construction would be diesel particulate emissions from heavy equipment operations and heavy-duty trucks, and the associated health impacts to sensitive receptors. The closest sensitive receptors would be existing residents located directly adjacent to the proposed facility.

Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The SDAPCD recommends an incremental cancer risk threshold of 10 in a million. "Incremental cancer risk" is the likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 70-year lifetime will contract cancer based on the use of standard risk-assessment methodology. Construction of project components would not require the extensive use of heavy-duty construction equipment, which is

subject to a CARB Airborne Toxics Control Measure for in-use diesel construction equipment to reduce diesel particulate emissions, and would not involve extensive use of diesel trucks, which are also subject to an Airborne Toxics Control Measure. Construction of the project would occur over a period of 18 months and would be periodic and short term within each phase. Following completion of construction activities, project-related TAC emissions would cease. Additionally, there is no diesel-powered equipment that would operate during project operation.

Health Impacts of Criteria Air Pollutants

Construction and operation of the project would not result in emissions that exceed the SDAPCD's emission thresholds for any criteria air pollutants. Regarding VOCs, some VOCs would be associated with motor vehicles and construction equipment, while others would be associated with architectural coatings, the emissions of which would not result in the exceedances of the SDAPCD's thresholds. Generally, the VOCs in architectural coatings are of relatively low toxicity. Additionally, SDAPCD Rule 67.0.1 restricts the VOC content of coatings for both construction and operational applications.

In addition, VOCs and NO_x are precursors to O₃, for which the SDAB is designated as nonattainment with respect to the NAAQS and CAAQS (the SDAB is designated by the EPA as an attainment area for the 1-hour O₃ NAAQS standard and 1997 8-hour NAAQS standard). The health effects associated with O₃ are generally associated with reduced lung function. The contribution of VOCs and NO_x to regional ambient O₃ concentrations is the result of complex photochemistry. The increases in O₃ concentrations in the SDAB due to O₃ precursor emissions tend to be found downwind from the source location to allow time for the photochemical reactions to occur. However, the potential for exacerbating excessive O₃ concentrations would also depend on the time of year that the VOC emissions would occur because exceedances of the O₃ ambient air quality standards tend to occur between April and October when solar radiation is highest.

The holistic effect of a single project's emissions of O₃ precursors is speculative due to the lack of quantitative methods to assess this impact. Nonetheless, the VOC and NO_x emissions associated with project construction could minimally contribute to regional O₃ concentrations and the associated health impacts. Due to the minimal contribution during construction and operation, as well as the existing good air quality in coastal San Diego areas, health impacts would be considered **less than significant**.

Similar to O₃, construction of the project would not exceed thresholds for PM₁₀ or PM_{2.5} and would not contribute to exceedances of the NAAQS and CAAQS for particulate matter. The project would also not result in substantial diesel particulate matter emissions during construction and operation and therefore, would not result in significant health effects related to diesel particulate matter exposure. Due to the minimal contribution of particulate matter during construction and operation, health impacts would be considered **less than significant**.

Regarding NO₂, according to the construction emissions analysis, construction of the project would not contribute to exceedances of the NAAQS and CAAQS for NO₂. NO₂ and NO_x health impacts are associated with respiratory irritation, which may be experienced by nearby receptors during the periods of heaviest use of off-road construction equipment. However, these operations would be relatively short term, and the project would be required to comply with SDAPCD Rule 55, which limits the amount of fugitive dust generated during construction. Additionally, off-road construction equipment would be operating at various portions of the site and would not be concentrated in one portion of the site at any one time. Construction of the project would not require any stationary emission sources that would create substantial, localized NO_x impacts. Therefore, health impacts would be considered **less than significant**.

The VOC and NO_x emissions, as described previously, would minimally contribute to regional O₃ concentrations and the associated health effects. In addition to O₃, NO_x emissions would not contribute to potential exceedances of the NAAQS and CAAQS for NO₂. The existing NO₂ concentrations in the area are well below the NAAQS and CAAQS standards. Thus, it is not expected the project's operational NO_x emissions would result in exceedances of the NO₂ standards or contribute to the associated health effects. CO tends to be a localized impact associated with congested intersections. The associated CO "hotspots" were discussed previously as a less-than-significant impact. Thus, the project's CO emissions would not contribute to significant health effects associated with this pollutant. PM₁₀ and PM_{2.5} would not contribute to potential exceedances of the NAAQS and CAAQS for particulate matter and would not obstruct the SDAB from coming into attainment for these pollutants and would not contribute to significant health effects associated with particulates. Therefore, health impacts associated with criteria air pollutants would be considered **less than significant**.

- d) *Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

Odor is a form of air pollution that is possibly most obvious to the general public. Odors can present significant problems for the source and its surrounding community. Although offensive odors seldom cause physical harm, they can be annoying and cause concern. Construction and operation of the project would not create objectionable odors affecting a substantial number of people.

Construction

Potential sources that may emit odors during construction activities include diesel equipment, gasoline fumes, and asphalt paving material. Odors from these sources would be localized and generally confined to the project site. The project would use typical construction techniques in compliance with SDAPCD rules. Additionally, any odors would be temporary. As such, project construction would not cause an odor nuisance, and odor impacts would be **less than significant**.

Operation

Land uses and industrial operations associated with odor complaints include agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (CARB 2005). The project would only expand the size of the existing reservoir and thus would not create a new source of odors. Therefore, project operations would result in a **less-than-significant** odor impact.

Mitigation Measures

No mitigation measures required.

3.4 Biological Resources

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES – Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Setting

Dudek completed a Biological Resources Technical Letter Report for the project included as Appendix B. Nearly the entire proposed project site is characterized by developed and ornamental planting land cover. Developed land cover on the site is comprised of the existing E Reservoir facility, associated facilities, and access roads, which cover approximately 1.42 acres. Ornamental planting areas cover approximately 0.39 acres of the site and consist of eucalyptus trees (*Eucalyptus* sp.), ornamental pine trees (*Pinus* sp.), Peruvian peppertree (*Schinus molle*), onionweed (*Asphodelus fistulosus*), hottentot fig (*Carpobrotus edulis*), and bare ground. The proposed project site

is largely developed and provides limited habitat for wildlife. The ornamental tree species and limited native vegetation provide habitat for species common to urban areas, particularly bird species such as black phoebe (*Sayornis nigricans*), American crow (*Corvus brachyrhynchos*), and song sparrow (*Melospiza melodia*).

The narrow, steep slope on the east side of the reservoir is characterized by plant species associated with disturbed coastal sage scrub, including predominantly California sagebrush (*Artemisia californica*) and black sage (*Salvia mellifera*). This small vegetation patch is open and sparse with evidence of ground disturbance and patches dominated by non-native exotic plant species, including black mustard (*Brassica nigra*) and tree tobacco (*Nicotiana glauca*). This area of the site was mapped as disturbed coastal sage scrub based on the characteristic dominant species; however, this isolated vegetation patch is very small (less than 0.07 acres) and well below the state-defined minimum mapping unit⁵ for vegetation community mapping (Appendix B). Coastal sage scrub vegetation is identified as a special-status vegetation type; however, the remnant patch on the project site would not be considered substantial or suitable to support special-status wildlife associated with coastal sage scrub due its size, disturbed nature, and isolation from other native vegetation.

Special-status species include plant and wildlife species that are federally- or state-listed as endangered, threatened, or candidates under the federal and state endangered species list, species listed as state rare or fully protected, wildlife designated as state species of special concern, and plant species with a California Rare Plant Rank (CRPR) 1A, 1B, 2A, or 2B (Appendix B). Special-status species occurrence information in the region is based on the federal, state, and local occurrence database records (Appendix B). No special-status plant species were identified on the proposed project site. Based on a review of the special-status plant species known from the region, each special-status plant species would either not be expected to occur or would have a low potential to occur on the proposed project site.

No jurisdictional wetlands or waters features potentially subject to the jurisdiction of the U.S. Army Corps of Engineers, RWQCB, or California Department of Fish and Wildlife occur on the proposed project site.

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

No special-status plant species were detected on the proposed project site, and no special-status plant species are likely to occur. The majority of the site (over 96%) is characterized by developed and ornamental planting land cover that does not provide suitable habitat to support special-status plant species, and the remainder of the site (0.07 acres) is not likely to or has a low potential to support these species. As a result, the proposed project would not have a substantial adverse effect on special-status plant species, and the impacts of the proposed project would be **less than significant**.

⁵ Minimum mapping unit can vary depending on the area of the mapping effort and the sensitivity of the vegetation community being mapped; however, minimum mapping unit size is not greater than 10 acres and is usually 1 or 2 acres in size. Special vegetation types are mapped at a 0.25-acre minimum mapping unit. Minimum width of a mapped polygon is generally no less than 30 feet.

No special-status wildlife species were detected on the proposed project site, and no special-status wildlife species are likely to occur. The majority of the site (over 96%) is characterized by developed and ornamental planting land cover that does not provide suitable habitat to support special-status wildlife species, and the remainder of the site (0.07 acres) is not likely to or has a low potential to support these species. As a result, the proposed project would not have a substantial adverse effect on special-status plant species, and the impacts of the proposed project would be **less than significant**.

Trees, shrubs, and structures on the proposed project site have the potential to support nesting birds protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code. Direct impacts to nesting birds would be a significant impact, absent mitigation. In order to avoid nesting birds during construction of the proposed project, pre-construction nesting bird surveys and avoidance measures shall be implemented pursuant to mitigation measure (MM) BIO-1 (Pre-Construction Nesting Bird Surveys and Reporting), included below. With implementation of the proposed mitigation measure to avoid impacts to nesting birds, this impact would be reduced to a level that is **less than significant**.

- 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, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

Implementation of the proposed project would result in ground disturbance and direct, permanent impact to the entire 1.88-acre proposed project site. Developed and ornamental planting land cover characterize the majority of the site (1.81 acres), which would not be considered sensitive under CEQA, and impacts to these areas would be less than significant. The California Department of Fish and Wildlife considers coastal sage scrub to be a sensitive natural community; however, impacts to 0.07 acres of this isolated, remnant patch of vegetation would not be considered a substantial impact on a sensitive natural community. The disturbed coastal sage scrub vegetation on the site is on a steep slope and surrounded by rural residential and agricultural land uses. The vegetation patch is open with evidence of past ground disturbance and non-native exotic plant species occur throughout. This vegetation patch was not considered suitable to support special-status plant or wildlife species and is considerably smaller than the state minimum mapping unit size for vegetation mapping. Therefore, the negligible loss of this vegetation would not be considered a substantial impact on a sensitive natural community and the impact would be **less than significant**.

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

As mentioned in the discussion of Setting above, the project site does not contain any jurisdictional wetlands or waters features potentially subject to the jurisdiction of the U.S. Army Corps of Engineers. Therefore, the proposed project would have **no impact** to wetlands or waters of the United States.

- d) *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

As discussed in the Biological Resources Technical Letter Report in Appendix B, the proposed project site provides little value or function for wildlife movement; therefore, the proposed project would not interfere substantially with the movement of wildlife and impacts would be **less than significant**.

- e) *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

No local policies or ordinances protecting biological resources or provisions of any approved habitat conservation plans would apply to the proposed project. The trees proposed for removal are not a protected species. Therefore, the **no impacts** would result.

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

The County of San Diego is in the process of developing the North County Multiple Species Conservation Program (MSCP), which would provide a regional strategy for conserving the County's biological resources and a process for permitting development activities. The North County MSCP has not been finalized or approved and would not apply to VID projects; however, the document provides relevant conservation planning information for the region. The preliminary draft of the North County MSCP (County of San Diego 2009) excludes the proposed project site and the surrounding rural residential/agricultural areas from the pre-approved mitigation area (future habitat reserve areas); therefore, the site and surroundings are not considered important for biological conservation in the draft North County MSCP. Therefore, the proposed project would have a **less than significant** impact.

Mitigation Measures

- MM-BIO-1: Pre-Construction Nesting Birds Surveys and Reporting.** To avoid impacts to breeding and nesting birds in accordance with the Migratory Bird Treaty Act and California Fish and Game Code, construction activities shall take place outside of the nesting season; nesting season is March 1 (January 1 for raptors) through September 15. If construction cannot take place outside the nesting season, a breeding/nesting bird survey shall be conducted by a qualified biologist within 72 hours prior to ground-disturbing activities to determine if active nests of bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the impact area or within 300 feet of the impact area. If active nests are found, an avoidance buffer shall be established (typically 50 to 300 feet, depending on the species) until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers and construction personnel shall be instructed on the sensitivity of nest areas. A survey and monitoring report documenting the pre-construction survey results and implemented avoidance measures shall be submitted.

3.5 Cultural Resources

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Setting

Dudek completed a Cultural Resources Report (Appendix C1) and a Historical Resources Technical Report (Appendix C2). The E Reservoir was the last to be constructed during VID's first formal period of development in the 1920s. The E Reservoir was built with two small buildings to its direct southwest. It is unknown whether these buildings were for a pump house or served another purpose. In 1952, the reservoir was reroofed, which expanded the structure's height. The reservoir was no longer underground but semi-buried. The earthen roof was replaced with a corrugated galvanized iron roof on a steel skeleton, and exterior walls were constructed of concrete. As part of VID's first phase of integrating a high-pressure flow system into VID lines in 1959, a 30-inch H-line was constructed between the Pechstein Reservoir and the E Reservoir and the E Reservoir was raised to a greater holding capacity. By the early 1980s, the two small buildings to the reservoir's southwest were demolished. The reservoir itself underwent several improvements in 1984. These improvements included paving a small driveway and a cul-de-sac along the structure's west elevation, the addition of a new access hatch, and construction of a new overflow structure. Between 2005 and 2009, a small PRS building was constructed to the southwest of the reservoir, near the same place as the two earlier buildings. From this point on there are no recorded changes made to the reservoir and PRS (VID 1984).

Dudek Archaeologist Scott Wolf conducted a records search at the South Coastal Information Center on February 13, 2019, for the project area of potential disturbance and a 1-mile buffer. No archaeological resources have been previously recorded within the area of potential disturbance. A total of seven previously recorded resources were identified within the surrounding 1-mile search buffer. These resources include two prehistoric temporary habitation sites and five historic sites, including three buildings, one shed remains, and one historic trail. South Coastal Information Center records also indicated that a total of 20 technical studies have been conducted within the 1-mile records search area.

- a) *Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?*

The existing reservoir was evaluated for National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR) historic resource designation in consideration of all applicable criteria and integrity requirements. NRHP guidelines for the evaluation of historic significance were developed to be flexible and to recognize the accomplishments of all who have made significant contributions to the nation's history and heritage. Its criteria are designed to guide state and local governments, federal agencies, and others in evaluating potential entries in the NRHP. For a property to be listed in or determined eligible for listing, it must be demonstrated to possess integrity and to meet at least one of the following criteria:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded, or may be likely to yield, information important in prehistory or history.

The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP, enumerated below. According to California Public Resources Code Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains “substantial integrity,” and (ii) meets at least one of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. Is associated with the lives of persons important in our past.
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
4. Has yielded, or may be likely to yield, information important in prehistory or history.

Additionally, the local designation criterion for the County of San Diego mirror that of the NRHP and CRHR criterion A/1, B/2, C/3, and D/4.

As detailed in Appendix C2, the project site does not meet any of the designation criteria for significance. The structure was evaluated for NRHP, CRHR, and County of San Diego designation criteria, and assessed for integrity. As a result of the evaluation, the reservoir was found not eligible under all designation criteria due to a lack of historical associations, architectural merit, and compromised integrity. As such, the subject property is not considered a historical resource under CEQA, and no management recommendations are required. The proposed project would not cause a substantial adverse change in the significance of a historical resource. Therefore the proposed project would have a **less-than-significant impact**.

- b) *Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?*

As discussed in Appendix C1, the South Coastal Information Center records indicated that no archaeological resources have been previously recorded within the project disturbance area. Dudek's archival research for the project indicates that there is a low sensitivity for encountering potential subsurface archaeological deposits. No resources were identified in the project disturbance area, and only seven resources are located within a 1-mile radius of the project area, indicating a low volume of cultural resources in the vicinity. Modern and historic disturbances have disturbed near-surface sediments throughout the project disturbance area. This disturbance suggests there is little to no potential to encounter unidentified significant cultural resources in the disturbance area. In addition, the Native American Heritage Commission (NAHC) Sacred Lands File search did not indicate that cultural resources are in the vicinity of the project site, and subsequent tribal information requests have not yielded any responses to-date that provide information or concerns about the project site. Finally, the cultural resources pedestrian survey of the project area of disturbance was negative for archaeological resources. However, there is a risk, while low, of the disturbance of previously unknown archeological or historic resources during ground-disturbing activities. Mitigation measure MM CUL-1 would ensure that construction would stop and appropriate measures are taken in the event that unanticipated discovery of a cultural resource is identified during construction. Therefore, the proposed project will have a **less-than-significant impact with mitigation**.

- c) *Would the project disturb any human remains, including those interred outside of dedicated cemeteries?*

While unlikely, there is some potential that earth disturbance associated with the proposed project could disturb or uncover human remains. With the implementation of mitigation measure MM CUL-2, which prescribes measures to appropriately address the inadvertent discovery of human remains, project impacts from potential disturbance of human remains would be **less than significant with mitigation**.

Mitigation Measures:

- MM-CUL-1** Prior to the start of construction, a worker environmental awareness training program (WEAP) shall be implemented at the construction kickoff meeting to inform construction workers of the cultural sensitivity of the general area and of the types of artifacts that are commonly found during construction in the region. Examples of prehistoric resources may include stone tools and manufacturing debris; milling equipment such as bedrock mortars, portable mortars, and pestles; darkened or stained soils (midden) that may contain dietary remains such as shell and bone; and human remains. Historic resources may include burial plots; structural foundations; mining spoils piles and prospecting pits; cabin pads; and trash scatters consisting of cans with soldered seams or tops, bottles, cut (square) nails, and ceramics. The WEAP training shall also inform construction personnel on what to do in the event of a discovery.

In the event that unanticipated archaeological resources (sites, features, or artifacts) are exposed during construction activities for the project, all construction work occurring in the immediate vicinity of the find shall immediately stop until a qualified archaeologist meeting the Secretary of the Interior's Professional Qualification Standards can evaluate the significance of the find and determine whether or not additional study is warranted. Depending upon the significance of the find under the California Environmental Quality Act

(CEQA) (14 CCR 15064.5[f]; California Public Resources Code Section 21082) the archaeologist may record the find to appropriate standards (thereby addressing any data potential) and allow work to continue. If the archaeologist observes the discovery to be potentially significant under CEQA or Section 106 of the National Historic Preservation Act, additional efforts may be warranted as recommended by the qualified archaeologist.

- MM-CUL-2** In accordance with Section 7050.5 of the California Health and Safety Code, if potential human remains are found, all work in the immediate vicinity shall be suspended and the county coroner shall be immediately notified of the discovery. The coroner shall provide a determination within 48 hours of notification. No further excavation or disturbance of the identified material, or any area reasonably suspected to overlie additional remains, shall occur until a determination has been made. If the county coroner determines that the remains are, or are believed to be, Native American, they shall notify the Native American Heritage Commission (NAHC) within 24 hours. In accordance with California Public Resources Code Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendent (MLD) from the deceased Native American. Within 48 hours of their notification, the MLD will recommend to the lead agency their preferred treatment of the remains and associated grave goods.

3.6 Energy

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
VI. Energy – Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a) *Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

The analysis presented below is based on information obtained through CalEEMod, as detailed in Section 3.3, Air Quality, and Appendix A.

Energy Consumption

Electricity

Construction Use

Temporary electric power for as-necessary lighting and electronic equipment (such as computers inside temporary construction trailers, and heating, ventilation, and air conditioning) would be provided by SDG&E. The amount of electricity used during construction would be minimal; typical demand would stem from the use of electrically powered hand tools and several construction trailers by managerial staff during the hours of construction activities. The majority of the energy used during construction would be from petroleum. The electricity used for construction activities would be temporary and minimal; therefore, impacts would be **less than significant**.

Operational Use

The operational phase would require electricity for operating the electric pumps. CalEEMod Version 2016.3.2 and the default value for electricity consumption for the proposed uses were applied for the project (CAPCOA 2017). Table 4 presents the electricity demand for the project.

Table 4. Project Operations - Electricity Demand

Project Facility	kWh/Year
<i>Building and Lighting Electricity Demand</i>	
General Heavy Industry	196,049

Source: Appendix A.

Notes: kWh = kilowatt-hour.

The proposed project is estimated to have a total electrical demand of 196,049 kilowatt-hours per year. In comparison, the total countywide electricity demand in 2018 was 19,749 million kilowatt-hours (CEC 2018). The proposed project's buildings would be built in accordance with the current Title 24 standards at the time of construction and California Green Building Standards (CALGreen) Code. Therefore, due to the limited amount of electricity use compared to the County, and the inherent increase in efficiency of building code regulations, the proposed project would not result in a wasteful use of energy. Impacts related to operational electricity use would be **less than significant**.

Natural Gas

Construction Use

Natural gas is not anticipated to be required during construction of the proposed project. Fuels used for construction would primarily consist of diesel and gasoline. Any minor amounts of natural gas that may be consumed as a result of proposed project construction would be temporary and negligible and would not have an adverse effect; therefore, impacts would be **less than significant**.

Operational Use

Natural gas would not be supplied to the project site for use during operation. **No impact** would occur during operation.

Petroleum**Construction Use**

Petroleum would be consumed throughout construction of the proposed project. Fuel consumed by construction equipment would be the primary energy resource expended over the course of construction, and VMT associated with the transportation of construction materials and construction worker commutes would also result in petroleum consumption. Heavy-duty construction equipment associated with construction activities, vendor trucks, and haul trucks would rely on diesel fuel. Construction workers would travel to and from the project site throughout the duration of construction. It is assumed that construction workers would travel to and from the project site in gasoline-powered vehicles.

Heavy-duty construction equipment of various types would be used during construction. CALEEMod was used to estimate construction equipment usage. Based on that analysis, diesel-fueled construction equipment would operate for an estimated 14,606 hours, as summarized in Table 5.

Table 5. Hours of Operation for Construction Equipment

Phase	Hours of Equipment Use
Demolition	1,950
Site Preparation and Grading	3,528
Reservoir Construction	8,352
Paving	32
Architectural Coating	40
Pump Station Construction	0
Piping	704
Retaining Wall Construction	0
Total	14,606

Source: Appendix A.

Fuel consumption from construction equipment was estimated by converting the total carbon dioxide (CO₂) emissions from each construction phase to gallons using conversion factors for CO₂ to gallons of gasoline or diesel. The conversion factor for gasoline is 8.78 kilograms per metric ton (MT) CO₂ per gallon, and the conversion factor for diesel is 10.21 kilograms per MT CO₂ per gallon (The Climate Registry 2019). The estimated diesel fuel use from construction equipment is shown in Table 6. Fuel consumption from worker, vendor, and haul truck trips was estimated by converting the total CO₂ emissions from the construction phase to gallons using the conversion factors for CO₂ to gallons of gasoline or diesel. Worker vehicles are assumed to be gasoline fueled, whereas vendor and haul trucks are assumed to be diesel fueled. The estimated fuel use for worker vehicles, vendor trucks, and haul trucks are presented in Table 7.

Table 6. Construction Equipment Fuel Demand

Phase	Pieces of Equipment	Equipment CO ₂ (MT)	kg CO ₂ / Gallon	Gallons
Demolition	4	42.04	10.21	4,117.82
Site Preparation and Grading	8	94.15	10.21	9,221.49
Reservoir Construction	4	177.76	10.21	17,410.06
Paving	2	0.64	10.21	63.03
Architectural Coating	1	0.85	10.21	83.36
Pump Station Construction	0	0.00	10.21	0.00
Piping	1	19.97	10.21	1,955.50
Retaining Wall Construction	0	0.00	10.21	0.00
Total				32,851.25

Sources: Appendix A.

Notes: CO₂ = carbon dioxide; kg = kilogram; MT = metric ton.**Table 7. Construction Vehicle Fuel Demand**

Phase	Trips	Vehicle CO ₂ (MT)	kg CO ₂ / Gallon	Gallons
Construction Worker Vehicle Gasoline Demand				
Demolition	780	2.83	8.78	321.98
Site Preparation and Grading	880	3.15	8.78	358.61
Reservoir Construction	5,220	18.28	8.78	2,082.41
Paving	20	0.03	8.78	3.08
Architectural Coating	704	0.14	8.78	15.96
Pump Station Construction	176	3.08	8.78	351.06
Piping	880	2.47	8.78	280.84
Retaining Wall Construction	16	0.62	8.78	70.22
Subtotal				3,484.16
Construction Vendor Truck Diesel Demand				
Demolition	260	3.43	10.21	335.96
Site Preparation and Grading	0	0.00	10.21	0.00
Reservoir Construction	0	0.00	10.21	0.00
Paving	10	0.05	10.21	5.07
Architectural Coating	0	0.00	10.21	0.00
Pump Station Construction	0	0.00	10.21	0.00
Piping	0	0.00	10.21	0.00
Retaining Wall Construction	0	0.00	10.21	0.00
Subtotal				341.04
Construction Haul Truck Diesel Demand				
Demolition	64	2.47	10.21	241.72
Site Preparation and Grading	476	18.27	10.21	1,789.26
Reservoir Construction	800	30.46	10.21	2,983.83
Paving	0	0.00	10.21	0.00
Architectural Coating	0	0.00	10.21	0.00
Pump Station Construction	100	3.81	10.21	372.98
Piping	20	0.76	10.21	74.59

Table 7. Construction Vehicle Fuel Demand

Phase	Trips	Vehicle CO ₂ (MT)	kg CO ₂ / Gallon	Gallons
Retaining Wall Construction	10	0.38	10.21	37.30
			<i>Subtotal</i>	5,499.68
			Petroleum Total	9,324.87

Sources: Appendix A.**Notes:** CO₂ = carbon dioxide; kg = kilogram; MT = metric ton.

As shown in Table 6 and Table 7, the proposed project is estimated to consume approximately 42,176 gallons of petroleum during the construction phase. By comparison, approximately 31.1 billion gallons of petroleum would be consumed in California over the course of the project's construction phase based on the California daily petroleum consumption estimate of approximately 78.6 million gallons per day (EIA 2019). The proposed project would be required to comply with the CARB's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes. Overall, because petroleum use during construction would be temporary and relatively minimal, and would not be wasteful or inefficient, impacts would be **less than significant**.

Operational Use

The majority of fuel consumption resulting from the proposed project's operational phase would be attributable to the use of motor vehicles traveling to and from the project area for periodic maintenance. Petroleum fuel consumption associated with motor vehicles traveling to and from the project area is a function of VMT as a result of proposed project operation. The annual VMT attributable to the proposed project is expected to be 4,171 VMT per year based on CalEEMod default trip lengths. Similar to construction trips, fuel consumption was estimated by converting the total CO₂ emissions from each land use type to gallons using the conversion factors for CO₂ to gallons of gasoline or diesel. Based on the Countywide proportion of gasoline and diesel on-road vehicle generated CO₂ in EMFAC2017, the vehicles associated with project operations were assumed to be approximately 84% gasoline powered and 16% diesel powered. The estimated fuel use from project operational mobile sources is shown in Table 8.

Table 8. Petroleum Consumption – Operation

Fuel	Vehicle MT CO ₂	kg CO ₂ /Gallon	Gallons
Gasoline	1.51	8.78	172.40
Diesel	0.12	10.21	12.05
		Total	184.45

Sources: Appendix A.**Notes:** CO₂ = carbon dioxide; kg = kilogram; MT = metric ton.

Mobile sources from the proposed project would result in approximately 172 gallons of gasoline per year and 12 gallons of diesel consumed per year beginning in 2022. By comparison, California as a whole consumes approximately 28.7 billion gallons of petroleum per year (EIA 2019).

Over the lifetime of the proposed project, the fuel efficiency of the vehicles being used is expected to increase. As such, the amount of petroleum consumed as a result of vehicular trips to and from the project area during operation would decrease over time. There are numerous regulations in place that require and encourage increased fuel efficiency. For example, CARB has adopted an approach to passenger vehicles

by combining the control of smog-causing pollutants and GHG emissions into a single, coordinated package of standards. The approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emissions vehicles in California (CARB 2012). Additionally, in response to SB 375, CARB adopted the goal of reducing per-capita GHG emissions from 2005 levels by 8% by the year 2020 and 13% by the year 2035 for light-duty passenger vehicles in the planning area for the SANDAG. This reduction would occur by reducing VMT through the integration of land use and transportation planning (SANDAG 2015).

In summary, although the proposed project would increase petroleum use during operation, the use would be a small fraction of the statewide use and, due to efficiency increases, diminish over time. Given these considerations, petroleum consumption associated with the proposed project would not be considered inefficient or wasteful and would result in a **less-than-significant impact**.

b) *Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

Title 24 of the California Code of Regulations contains energy efficiency standards for residential and nonresidential buildings based on a state mandate to reduce California's energy demand. Specifically, Title 24 addresses a number of energy efficiency measures that impact energy used for lighting, water heating, heating, and air conditioning, including the energy impact of the building envelope such as windows, doors, wall/floor/ceiling assemblies, and roofs. Part 6 of Title 24 specifically establishes energy efficiency standards for residential and nonresidential buildings constructed in the State of California in order to reduce energy demand and consumption. Part 11 of Title 24 also includes the CALGreen standards, which established mandatory minimum environmental performance standards for new construction projects. The project would comply with Title 24, Part 6 and Part 11, per state regulations. Based on the foregoing, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency; therefore, impacts during construction and operation of the proposed project would be less than significant. The proposed project would continue the existing use of the project site and would reconstruct the existing reservoir and add a pump station. The proposed project would continue to use the existing connections with SDG&E for its electrical source. All buildings materials proposed for the project's building modifications would be compliant with all ~~City and state applicable~~ policies, codes, and regulations. Therefore, the proposed project would have a **less-than-significant impact**.

Mitigation Measures

No mitigation measures required.

3.7 Geology and Soils

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
VII. GEOLOGY AND SOILS – Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) 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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Setting

The proposed project would construct an expanded, in-situ replacement of an existing water reservoir and construct a new pump station along with minor improvements, such as asphalt pavement, steel security fence, and lighting. Minor grading of the existing slopes around the proposed reservoir may be recommended. A geotechnical investigation was completed by SCST on May 23, 2019, and is included in Appendix D. The investigation found that the site soil consisted of fill, colluvium, and Gabbro igneous rock.

The project site does not contain any known Alquist-Priolo Earthquake Fault Zones, as listed by the California Geological Survey. The closest known active fault is the Newport-Inglewood-Rose Canyon Fault Zone located about 13.4 miles southwest of the site. According to the Fault Activity Map of California and Adjacent Areas, no active faults are located on the project site (DOC 2015). The proposed project is not located in an area with a high chance of liquefaction or landslides (Appendix D).

a) *Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:*

- i) *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.*
- ii) *Strong seismic ground shaking?*
- iii) *Seismic-related ground failure, including liquefaction?*
- iv) *Landslides?*

The project site is located within seismically active Southern California, an area where several faults and fault zones are considered active by the California Division of Mines and Geology. The proposed project would construct an expanded, in-situ replacement of an existing water reservoir and construct a new pump station designed and constructed in accordance with Uniform Building Code Zone 3 standards and the recommendations of a California registered Engineering Geologist, and would thereby reduce the risk of structural failure as a result of seismic activity. The site is not located within or near any known Alquist-Priolo Earthquake Fault Zones, as listed by the California Geological Survey. According to the Fault Activity Map of California and Adjacent Areas, no active faults are located on the project site (DOC 2015). The closest fault is the Newport-Inglewood-Rose Canyon Fault Zone located about 13.4 miles southwest of the site. Risks associated with seismic-related activity such as rupture of a fault, strong ground shaking, and ground failure would be less than significant as a result of compliance with applicable codes. The project includes no elements that would increase the risk or susceptibility of the site to landslides and the potential for liquefaction is low to due to the lack of groundwater and the dense nature of the rock beneath the site. Risks associated with landslide or seismic activity would be **less than significant**.

b) *Would the project result in substantial soil erosion or the loss of topsoil?*

The project would result in ground disturbance within the project site. All areas disturbed during construction would be stabilized in accordance with erosion control best management practices (BMPs) identified in project plans and as specified in the stormwater pollution prevention plan (SWPPP) required for the project. The SWPPP would be prepared as required to obtain coverage under the State Construction General Permit and will specify the use of appropriate BMPs for erosion control and spill prevention during and following construction. This requires implementation of water quality BMPs to ensure that water quality standards are met and that stormwater runoff from the construction work areas does not cause degradation of water quality in receiving water bodies. Some of these BMPs include use of silt screening or fiber filtration rolls, appropriate handling and disposal of contaminants, fertilizer and pesticide application restrictions, litter control and pick up, and vehicle and equipment repair and maintenance in designated

areas. Upon completion of construction, the land disturbed by construction would be returned to conditions similar to existing conditions; revegetation and paved areas would stabilize soils to minimize erosion. Impacts from erosion would be **less than significant**.

- c) **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?**

The project site is not located within an area with any known geologic or soil instability and the proposed project would construct an expanded water reservoir and associated infrastructure that would be constructed in accordance with applicable codes that would not exert high loads on the ground surface and would not be expected to result in any increased risk of ground failure. Additionally, the project design and construction would be in accordance with recommendations of a California-registered engineering geologist to ensure it is constructed in consideration of site-specific conditions as determined by the geotechnical investigation included in Appendix D. Therefore, impacts associated with an unstable geologic unit or soil would be **less than significant**.

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

As determined by the geotechnical investigation, the soils on the project site were tested and exhibit a low expansion index (Appendix D). Project design and construction would be in accordance with Uniform Building Code Zone 3 standards, which take into account local conditions. The project design and construction would be in accordance with recommendations of a California-registered engineering geologist to ensure it is constructed in consideration of site-specific conditions as determined by the geotechnical investigation included in Appendix D. Therefore, the project would have a **less-than-significant impact** associated with expansive or otherwise unstable soils.

- e) **Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?**

The proposed project would not include fulltime work facilities and thus would not require the use of septic tanks or alternative wastewater disposal systems. Thus, there would be **no impact**.

- f) **Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

The project site contains no known paleontological resources or unique geologic features and is not within an area considered sensitive for these resources. The project site is underlain by Gabbro igneous rock, which has no potential to contain paleontological resources. Potential impacts associated with effects to unique paleontological or geologic features would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

3.8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
VIII. GREENHOUSE GAS EMISSIONS – Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Setting

GHGs are gases that absorb infrared radiation in the atmosphere. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature. Global climate change concerns are focused on whether human activities are leading to an enhancement of the greenhouse effect. Principal GHGs include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), O₃, and water vapor. If the atmospheric concentrations of GHGs rise, the average temperature of the lower atmosphere will gradually increase. Globally, climate change has the potential to impact numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. Climate change is already affecting California: average temperatures have increased, leading to more extreme hot days and fewer cold nights; shifts in the water cycle have been observed, with less winter precipitation falling as snow, and both snowmelt and rainwater running off earlier in the year; sea levels have risen; and wildland fires are becoming more frequent and intense due to dry seasons that start earlier and end later (CAT 2010).

The effect each GHG has on climate change is measured as a combination of the mass of its emissions and the potential of a gas or aerosol to trap heat in the atmosphere, known as its global warming potential (GWP), which varies among GHGs. Total GHG emissions are expressed as a function of how much warming would be caused by the same mass of CO₂. Thus, GHG emissions are typically measured in terms of pounds or tons of CO₂ equivalent (CO₂E).⁶

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs (CAT 2010). This approach is consistent with the Final Statement of Reasons for Regulatory Action for amendments to the CEQA Guidelines, which confirms that an environmental impact report or other environmental document must analyze the incremental contribution of a project to GHG levels and determine whether those emissions are cumulatively considerable (CNRA 2009).

⁶ The CO₂E for a gas is derived by multiplying the mass of the gas by the associated GWP, such that metric tons of CO₂E = (metric tons of a GHG) × (GWP of the GHG). CalEEMod assumes that the GWP for CH₄ is 25, which means that emissions of 1 metric ton of CH₄ are equivalent to emissions of 25 metric tons of CO₂, and the GWP for N₂O is 298, based on the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report.

GHG emissions associated with construction of the project were estimated for the following emission sources: operation of off-road construction equipment, on-road hauling and vendor trucks, and worker vehicles. GHG emission sources associated with operation of the project were evaluated for energy use (generation of electricity consumed by the project), area sources, and project-generated vehicle traffic.

CEQA Guidelines

The California Natural Resources Agency adopted amendments to the CEQA Guidelines on December 30, 2009, which became effective on March 18, 2010. With respect to GHG emissions, the amended CEQA Guidelines state in Section 15064.4(a) that lead agencies should “make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate” GHG emissions. The CEQA Guidelines note that an agency may identify emissions by either selecting a “model or methodology” to quantify the emissions or by relying on “qualitative analysis or other performance based standards” (14 CCR 15064.4(a)). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment:

- The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.
- Whether a project’s emissions exceed a threshold of significance that the lead agency determines applies to the project.
- The extent to which a project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

In addition, CEQA Guidelines Section 15064.7(c) specifies that “[w]hen adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.” Accordingly, the CEQA Guidelines do not prescribe specific methodologies for performing an assessment, establish specific thresholds of significance, or mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency’s discretion to determine the appropriate methodologies and thresholds of significance that are consistent with the manner in which other impact areas are handled in CEQA (14 CCR 15000 et seq.).

Cumulative Nature of Climate Change

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. There are currently no established thresholds for assessing whether the GHG emissions of a project in the SDAB, such as the project, would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize a project’s contribution to global climate change.

While the project would result in emissions of GHGs during construction and operation, no guidance exists to indicate what level of GHG emissions would be considered substantial enough to result in a significant adverse impact on global climate. However, it is generally believed that an individual project is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory as scientific uncertainty regarding the significance a project’s individual and cumulative effects on global climate change remains.

Thus, GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA 2008). This approach is consistent with that recommended by the California Natural Resources Agency (CNRA), which noted in its Public Notice for the proposed CEQA amendments (pursuant to SB 97) that the evidence before it indicates that in most cases, the impact of GHG emissions should be considered in the context of a cumulative impact, rather than a project-level impact (CNRA 2009). Similarly, the Final Statement of Reasons for Regulatory Action on the CEQA Amendments confirm that an EIR or other environmental document must analyze the incremental contribution of a project to GHG levels and determine whether those emissions are cumulatively considerable (CNRA 2009).

As VID has no adopted guidance regarding GHG emissions, and the project is located within the geographic bounds of the County, the County's Climate Action Plan (CAP) Consistency Checklist is relied upon for determining significance. In regards to evaluating the project's significance with respect to CEQA Guidelines checklist a and checklist question b, the project will be evaluated against the County's CAP, Assembly Bill (AB) 32, and SANDAG's Regional Transportation Plan/Sustainable Communities Strategy. A project's consistency with the County's CAP is evaluated in a two-step process. Step 1 in the CAP Checklist assesses a project's consistency with the growth projections and land use assumptions made in the CAP. If a project is consistent with the projections in the CAP, its associated growth in terms of GHG emissions was accounted for in the CAP's projections and would not increase emissions beyond what is anticipated in the CAP or inhibit the County from reaching its reduction targets. If a project is consistent with the existing General Plan land use designation(s), it can be determined to be consistent with the CAP projections and can move forward to Step 2 of the Checklist. Step 2 of the Checklist identifies CAP GHG reduction measures that would apply to discretionary projects and establishes clear questions that can be used to assess a project's consistency with CAP measures. The specific applicable requirements outlined in the Checklist shall be required as a condition of project approval. The project must provide substantial evidence that demonstrates how the proposed project would implement each applicable Checklist requirement described in Appendix A to the satisfaction of the Director of Planning and Development Services.

- a) *Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*
- b) *Would the project generate conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

Construction Emissions

Construction of the proposed project would result in GHG emissions, which are primarily associated with use of off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. GHG emissions associated with temporary construction activity were quantified using CalEEMod. A detailed depiction of the construction schedule—including information regarding phasing, equipment utilized during each phase, haul trucks, vendor trucks, and worker vehicles—is included in Appendix A.

Table 9 shows the estimated annual GHG construction emissions associated with the proposed project, as well as the amortized construction emissions over a 30-year project life.

Table 9. Estimated Annual Construction GHG Emissions

Year	CO2	CH4	N2O	CO2e
	<i>Metric Tons per Year</i>			
2020 ¹	122.27	0.03	0.00	123.12
2021	302.64	0.08	0.00	304.65
2022	0.72	0.00	0.00	0.73
			Total	428.50
			Amortized Emissions	14.28

Notes:

CO₂ = carbon dioxide; CH₄ = methane; N₂O = nitrous oxide; CO₂e = carbon dioxide equivalent.

See Appendix A for complete results.

¹ Emissions include blasting calculated outside of CalEEMod.

Total construction emissions for the proposed project were estimated to be 429 MT CO₂e. Estimated amortized project-generated construction emissions over 30 years would be approximately 14 MT CO₂e per year. As with project-generated construction air quality pollutant emissions, GHG emissions generated during construction of the proposed project would be short-term in nature, lasting only for the duration of the construction period for each phase, and would not represent a long-term source of GHG emissions.

Operational Emissions

Operation of the proposed project would generate GHG emissions through motor vehicle trips to and from the project site and energy use (generation of electricity consumed by the proposed project). CalEEMod was used to calculate the annual GHG emissions based on the operational assumptions (Appendix A). The GHG emissions from the existing golf course were also estimated and are presented below.

Table 10 shows the estimated operational (year 2022) project-generated GHG emissions from area sources, energy usage, motor vehicles, solid waste generation, and water usage and wastewater generation.

Table 10. Estimated Annual Operational GHG Emissions

Emission Source	CO2	CH4	N2O	CO2e
	<i>Metric Tons per Year</i>			
Area	0.00	0.00	0.00	0.00
Energy	64.08	0.00	0.00	64.29
Mobile	1.63	0.00	0.00	1.64
			Total	65.93
			Amortized Construction Emissions	14.28
			Operation + Amortized Construction Total	80.21

Notes: CO₂ = carbon dioxide; CH₄ = methane; N₂O = nitrous oxide; CO₂e = carbon dioxide equivalent.

See Appendix A for detailed results.

These emissions reflect CalEEMod “mitigated” output and operational year 2022.

As shown in Table 10, estimated annual project-generated GHG emissions in 2022 would be approximately 66 MT CO₂e per year as a result of proposed project operations. Estimated annual project-generated emissions in 2022 from area, energy, and mobile sources and amortized project-generated construction emissions would be approximately 80 MT CO₂e per year.

Consistency with Applicable Plans and Policies

Consistency with SANDAG's San Diego Forward: The Regional Plan

Regarding consistency with SANDAG's Regional Plan, the proposed project would include site design elements and project design features developed to support the policy objectives of the Regional Plan and SB 375. SANDAG's Regional Plan is a regional growth-management strategy that targets per-capita GHG reduction from passenger vehicles and light-duty trucks in the San Diego region. The Regional Plan will integrate land use and transportation strategies to meet GHG emissions reduction targets that are forecasted to achieve the state's 2035 and 2050 GHG reduction goals. The Regional Plan incorporates local land use projections and circulation networks in city and county general plans. Typically, a project would be consistent with the Regional Plan if it does not exceed the underlying growth assumptions within the Regional Plan. The proposed project is not growth inducing. Therefore, the proposed project would be consistent with the total VMT per capita, growth projections, and GHG reductions assumed within the Regional Plan.

Table 11 illustrates the proposed project's consistency with all applicable goals and policies of SANDAG's Regional Plan (SANDAG 2015).

Table 11. San Diego Forward: The Regional Plan Consistency Analysis

Category	Policy Objective or Strategy	Consistency Analysis
<i>The Regional Plan – Policy Objectives</i>		
Mobility Choices	Provide safe, secure, healthy, affordable, and convenient travel choices between the places where people live, work, and play.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to provide safe, secure, healthy, affordable, and convenient travel choices between the places where people live, work, and play.
Mobility Choices	Take advantage of new technologies to make the transportation system more efficient and environmentally friendly.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to take advantage of new technologies to make the transportation system more efficient and environmentally friendly.
Habitat and Open Space Preservation	Focus growth in areas that are already urbanized, allowing the region to set aside and restore more open space in our less developed areas.	<i>Consistent.</i> The proposed project would be developed on the existing developed site of the current E Reservoir, thus not impacting open space.
Habitat and Open Space Preservation	Protect and restore our region's urban canyons, coastlines, beaches, and water resources.	<i>Consistent.</i> The proposed project would be developed on the existing developed site of the current E Reservoir, thus not impacting open space.
Regional Economic Prosperity	Invest in transportation projects that provide access for all communities to a variety of jobs with competitive wages.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to invest in transportation projects available to all members of the community.
Regional Economic Prosperity	Build infrastructure that makes the movement of freight in our community more efficient and environmentally friendly.	<i>Not Applicable.</i> The proposed project does not include regional freight movement, nor would it impair SANDAG's ability to

Table 11. San Diego Forward: The Regional Plan Consistency Analysis

Category	Policy Objective or Strategy	Consistency Analysis
		preserve and expand options for regional freight movement.
Partnerships/Collaboration	Collaborate with Native American tribes, Mexico, military bases, neighboring counties, infrastructure providers, the private sector, and local communities to design a transportation system that connects to the mega-region and national network, works for everyone, and fosters a high quality of life for all.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to provide transportation choices to better connect the San Diego region with Mexico, neighboring counties, and tribal nations.
Partnerships/Collaboration	As we plan for our region, recognize the vital economic, environmental, cultural, and community linkages between the San Diego region and Baja California.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to provide transportation choices to better connect the San Diego region with Mexico.
Healthy and Complete Communities	Create great places for everyone to live, work, and play.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to create great places for everyone to live, work, and play.
Healthy and Complete Communities	Connect communities through a variety of transportation choices that promote healthy lifestyles, including walking and biking.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to connect communities through a variety of transportation choices that promote healthy lifestyles, including walking and biking.
Environmental Stewardship	Make transportation investments that result in cleaner air, environmental protection, conservation, efficiency, and sustainable living.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to make transportation investments that result in cleaner air, environmental protection, conservation, efficiency, and sustainable living.
Environmental Stewardship	Support energy programs that promote sustainability.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to support energy programs that promote sustainability.
Sustainable Communities Strategy – Strategies		
Strategy #1	Focus housing and job growth in urbanized areas where there is existing and planned transportation infrastructure, including transit.	Consistent. The proposed project would be located close to major urban and employment centers.
Strategy #2	Protect the environment and help ensure the success of smart growth land use policies by preserving sensitive habitat, open space, cultural resources, and farmland.	Consistent. The proposed project would be developed on the existing developed site of the current E Reservoir, thus not impacting open space.
Strategy #3	Invest in a transportation network that gives people transportation choices and reduces greenhouse gas emissions.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to invest in a transportation network that

Table 11. San Diego Forward: The Regional Plan Consistency Analysis

Category	Policy Objective or Strategy	Consistency Analysis
		gives people transportation choices and reduces GHG emissions.
Strategy #4	Address the housing needs of all economic segments of the population.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to address the housing needs of all economic segments of the population.
Strategy #5	Implement the Regional Plan through incentives and collaboration.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to implement the Regional Plan through incentives and collaborations.

Source: SANDAG 2015.

Note: SANDAG = San Diego Association of Governments.

As shown in Table 11, the proposed project would be consistent with all applicable Regional Plan policy objectives or strategies. The second of the four objectives of the SANDAG Regional Housing Needs Assessment is to promote infill development and socioeconomic equity, the protection of environmental and agricultural resources, and the encouragement of efficient development patterns. Also, one of the key achievements projected for the Regional Plan is for nearly three-quarters of multifamily housing to be built on redevelopment or infill sites. The proposed project would be consistent with that goal as it would be built on an existing developed site. As shown in Table 11, the proposed project would be consistent with policy objectives of SANDAG's Regional Plan. Impacts would be **less than significant**.

Consistency with CARB's Scoping Plan

The Scoping Plan, approved by CARB on December 12, 2008, provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. As such, the Scoping Plan is not directly applicable to specific projects. Relatedly, in the Final Statement of Reasons for the Amendments to the CEQA Guidelines, the CNRA observed that “[t]he [Scoping Plan] may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan” (CNRA 2009). Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., low-carbon fuel standard), among others. The proposed project would comply with all applicable regulations adopted in furtherance of the Scoping Plan to the extent required by law.

The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32 and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. Table 12 highlights measures that have been developed under the Scoping Plan and the proposed project's consistency with those measures. The table also includes measures proposed in the 2017 Scoping Plan Update. To the extent that these regulations are applicable to the proposed project, its inhabitants, or uses, the proposed project would comply with all applicable regulations adopted in furtherance of the Scoping Plan.

Table 12. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Transportation Sector		
Advanced Clean Cars	T-1	The proposed project's employees would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.
1.5 million zero-emission and plug-in hybrid light-duty electric vehicles by 2025 (4.2 million Zero-Emissions Vehicles by 2030)	NA	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Low Carbon Fuel Standard	T-2	Motor vehicles driven by the proposed project's employees would use compliant fuels.
Low Carbon Fuel Standard (18 percent reduction in carbon intensity by 2030)	NA	Motor vehicles driven by the proposed project's employees would use compliant fuels.
Regional Transportation-Related GHG Targets	T-3	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Advanced Clean Transit	NA	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Last Mile Delivery	NA	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Reduction in Vehicle Miles Traveled	NA	The proposed project is located on an infill site, which promotes compact walkable communities with an emphasis on proximity and accessibility.
Vehicle Efficiency Measures 1. Tire Pressure 2. Fuel Efficiency Tire Program 3. Low-Friction Oil 4. Solar-Reflective Automotive Paint and Window Glazing	T-4	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Ship Electrification at Ports (Shore Power)	T-5	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Goods Movement Efficiency Measures 1. Port Drayage Trucks 2. Transport Refrigeration Units Cold Storage Prohibition 3. Cargo Handling Equipment, Anti-Idling, Hybrid, Electrification 4. Goods Movement Systemwide Efficiency Improvements 5. Commercial Harbor Craft Maintenance and Design Efficiency 6. Clean Ships 7. Vessel Speed Reduction	T-6	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
California Sustainable Freight Action Plan	NA	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.

Table 12. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Heavy-Duty Vehicle GHG Emission Reduction 1. Tractor-Trailer GHG Regulation 2. Heavy-Duty Greenhouse Gas Standards for New Vehicle and Engines (Phase I)	T-7	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Medium- and Heavy-Duty Vehicle Hybridization Voucher Incentive Project	T-8	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Medium and Heavy-Duty GHG Phase 2	NA	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
High-Speed Rail	T-9	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Electricity and Natural Gas Sector		
Energy Efficiency Measures (Electricity)	E-1	The proposed project will comply with current Title 24, Part 6, of the California Code of Regulations energy efficiency standards for electrical appliances and other devices at the time of building construction.
Energy Efficiency (Natural Gas)	CR-1	The proposed project will comply with current Title 24, Part 6, of the California Code of Regulations energy efficiency standards for electrical appliances and other devices at the time of building construction.
Solar Water Heating (California Solar Initiative Thermal Program)	CR-2	The proposed project would not employ solar water heating as part of the design.
Combined Heat and Power	E-2	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Renewables Portfolio Standard (33 percent by 2020)	E-3	The proposed project would use energy supplied by SDG&E, which is in compliance with the Renewables Portfolio Standard.
Renewables Portfolio Standard (50 percent by 2050)	NA	The proposed project would use energy supplied by SDG&E, which is in compliance with the Renewables Portfolio Standard.
Senate Bill 1 Million Solar Roofs (California Solar Initiative, New Solar Home Partnership, Public Utility Programs) and Earlier Solar Programs	E-4	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Water Sector		
Water Use Efficiency	W-1	The project would not consume water.
Water Recycling	W-2	Recycled water will not be used on site.
Water System Energy Efficiency	W-3	This is applicable for the transmission and treatment of water, but it is not applicable for the proposed project.
Reuse Urban Runoff	W-4	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.

Table 12. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Renewable Energy Production	W-5	Applicable for wastewater treatment systems. Not applicable for the proposed project.
<i>Green Buildings</i>		
State Green Building Initiative: Leading the Way with State Buildings (Greening New and Existing State Buildings)	GB-1	The proposed project would be required to be constructed in compliance with state or local green building standards in effect at the time of building construction.
Green Building Standards Code (Greening New Public Schools, Residential and Commercial Buildings)	GB-2	The proposed project's buildings would meet green building standards that are in effect at the time of construction.
Beyond Code: Voluntary Programs at the Local Level (Greening New Public Schools, Residential and Commercial Buildings)	GB-3	The proposed project would be required to be constructed in compliance with local green building standards in effect at the time of building construction.
Greening Existing Buildings (Greening Existing Homes and Commercial Buildings)	GB-4	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
<i>Industry Sector</i>		
Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	I-1	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Oil and Gas Extraction GHG Emission Reduction	I-2	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Reduce GHG Emissions by 20 percent in Oil Refinery Sector	NA	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
GHG Emissions Reduction from Natural Gas Transmission and Distribution	I-3	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Refinery Flare Recovery Process Improvements	I-4	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Work with the local air districts to evaluate amendments to their existing leak detection and repair rules for industrial facilities to include methane leaks	I-5	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
<i>Recycling and Waste Management Sector</i>		
Landfill Methane Control Measure	RW-1	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Increasing the Efficiency of Landfill Methane Capture	RW-2	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.

Table 12. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Mandatory Commercial Recycling	RW-3	During both construction and operation of the proposed project, the proposed project would comply with all state regulations related to solid waste generation, storage, and disposal, including the California Integrated Waste Management Act, as amended. During construction, all wastes would be recycled to the maximum extent possible.
Increase Production and Markets for Compost and Other Organics	RW-4	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Anaerobic/Aerobic Digestion	RW-5	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Extended Producer Responsibility	RW-6	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Environmentally Preferable Purchasing	RW-7	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Forests Sector		
Sustainable Forest Target	F-1	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
High Global Warming Potential Gases Sector		
Motor Vehicle Air Conditioning Systems: Reduction of Refrigerant Emissions from Non-Professional Servicing	H-1	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
SF ₆ Limits in Non-Utility and Non-Semiconductor Applications	H-2	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Reduction of Perfluorocarbons in Semiconductor Manufacturing	H-3	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Limit High Global Warming Potential Use in Consumer Products	H-4	The proposed project's employees would use consumer products that would comply with the regulations that are in effect at the time of manufacture.
Air Conditioning Refrigerant Leak Test During Vehicle Smog Check	H-5	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Stationary Equipment Refrigerant Management Program – Refrigerant Tracking/Reporting/Repair Program	H-6	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Stationary Equipment Refrigerant Management Program – Specifications for Commercial and Industrial Refrigeration	H-6	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.

Table 12. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
SF ₆ Leak Reduction Gas Insulated Switchgear	H-6	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
40 percent reduction in methane and hydrofluorocarbon emissions	NA	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
50 percent reduction in black carbon emissions	NA	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.
Agriculture Sector		
Methane Capture at Large Dairies	A-1	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan measure.

Sources: CARB 2008, 2017.

Notes: GHG = greenhouse gas; CARB = California Air Resources Board; EV = electric vehicle; SF₆ = sulfur hexafluoride.

Based on the analysis in Table 12, the proposed project would be consistent with the applicable strategies and measures in the Scoping Plan.

In addition to the measures outlined in the Table 12, the Scoping Plan also highlights, in several areas, the goals and importance of infill projects. Specifically, the Scoping Plan calls out an ongoing and proposed measure to streamline CEQA compliance and other barriers to infill development. The plan encourages infill projects and sees them as crucial to achieving the state's long-term climate goals. The plan encourages accelerating equitable and affordable infill development through enhanced financing and policy incentives and mechanisms.

The state completed an Integrated Natural and Working Lands Climate Change Action Plan (Action Plan) in 2018, which will consider aggregation of eco-regional plans and efforts to achieve net sequestration goals. The Action Plan will include goals and plans to promote and provide incentives for infill development through community revitalization and urban greening and promote the adoption of regional transportation and development plans, such as SB 375 Sustainable Communities Strategy and CAPs, which prioritize infill and compact development and also consider the climate change impacts of land use and management.

The following strategies were outlined to expand infill development within the Scoping Plan:

- Encouraging regional transfer of development rights programs to allow owners of natural and working lands to sell their development rights to developers who can use those rights to add additional density to development projects in preferred infill areas.
- Promoting regional transit-oriented development funds that leverage public resources with private-sector investment capital to provide flexible capital for transit-oriented development projects.
- Rebates for low-VMT/location-efficient housing, similar to programs that use rebates to encourage adoption of energy-efficient appliances, zero-energy vehicles, water-efficient yards, or renewable energy installation. For example, the rebate could reimburse residents for a portion of the down payment for purchasing or renting a qualified home in exchange for a minimum term of residence.

- Promotion of cross-subsidizing multi-station financing districts along transit corridors to leverage revenues from development in strong-market station areas in order to seed needed infrastructure and development in weaker-market station areas.
- Abatement of residential property tax increases in exchange for property-based improvements in distressed infill areas.
- Ways to promote reduced parking in areas where viable transportation alternatives are present.
- Additional creative financing mechanisms to enhance the viability of priority infill projects.
- Ways to promote and strengthen urban growth boundaries to promote infill development and conservation of natural and working lands by defining and limiting developable land within a metropolitan area according to projected growth needs.

County of San Diego Climate Action Plan

This consistency analysis is provided for information only as the County's CAP is currently subject to ongoing litigation and thus is not relied upon for determining significance.

Step 1 – Land Use Consistency

The project would be consistent with the existing General Plan for the site. Therefore, the project would answer YES to question 1 of Step 1. Therefore, the project can advance to Step 2 of the Checklist.

Step 2 – CAP Consistency Checklist

As a reservoir replacement project, the project is a unique development that is not addressed in the County's CAP Consistency Checklist. The project does not include a residential component, typical commuting workers (such as commuters traveling to an office land use), or agricultural operations, which are addressed in the CAP Consistency Checklist. Implementation of the project would not interfere with the County's implementation of the Consistency Checklist action items on projects where they are applicable. Further, the CAP was developed to reduce GHG emissions throughout the County over time; therefore, any project that is contemplated in the CAP and/or would be consistent with the CAP would directly aid in the County's reduction of GHG emissions throughout the County's jurisdictional area.

Each CAP Checklist item and why each specific measure does not apply to the project is outlined in Table 13.

Table 13. Climate Action Plan Consistency Checklist

CAP Checklist Item	Project Compliance
1a. Reducing Vehicle Miles Traveled: Non-Residential: For non-residential projects with anticipated tenant occupants of 25 or more, will the project achieve a 15% reduction in emissions from commute vehicle miles traveled (VMT), and commit to monitoring and reporting results to demonstrate on-going compliance? VMT reduction may be achieved through a combination of Transportation Demand Management (TDM) and parking strategies, as long as the 15% reduction can be substantiated.	Not Applicable. The project would have no tenants or employees commuting to the site on a regular basis.

Table 13. Climate Action Plan Consistency Checklist

CAP Checklist Item	Project Compliance
2a. Shared and Reduced Parking: Non-Residential: For non-residential projects with anticipated tenant-occupants of 24 or less, will the project implement shared and reduced parking strategies that achieves a 10% reduction in emissions from commute VMT? Check “N/A” if the project is a residential project or if the project would accommodate 25 or more tenant-occupants.	Not Applicable. Employee trips would only be related to periodic maintenance activities associated with operation of the reservoir and pump station. The project would not have employees commuting to the site on a regular basis.
3a. Electric or Alternatively-Fueled Water Heating Systems Residential: For projects that include residential construction, will the project, as a condition of approval, install the following types of electric or alternatively-fueled water heating system(s)? <input type="checkbox"/> Solar thermal water heater <input type="checkbox"/> Tankless electric water heater <input type="checkbox"/> Storage electric water heaters <input type="checkbox"/> Electric heat pump water heater <input type="checkbox"/> Tankless gas water heater <input type="checkbox"/> Other	Not Applicable. The project does not include a residential component.
4a. Water Efficient Appliances and Plumbing Fixtures Residential: For new residential projects, will the project comply with all of the following water efficiency and conservation BMPs? 1. Kitchen Faucets: The maximum flow rate of kitchen faucets shall not exceed 1.5 gallons per minute at 60 pounds per square inch (psi). Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.5 gallons per minute at 60 psi. 2. Energy Efficient Appliances: Install at least one qualified ENERGY STAR dishwasher or clothes washer per unit.	Not Applicable. The project does not include a residential component.
5a. Rain Barrel Installations: Residential: For new residential projects, will the project make use of incentives to install one rain barrel per every 500 square feet of available roof area? Check “N/A” if the project is a non-residential project; if State, regional or local incentives/rebates to purchase rain barrels are not available; or if funding for programs/rebates has been exhausted.	Not Applicable. The project does not include a residential component.

Table 13. Climate Action Plan Consistency Checklist

CAP Checklist Item	Project Compliance
6a. Reduce Outdoor Water: Residential: Will the project submit a Landscape Document Package that is compliant with the County's Water Conservation in Landscaping Ordinance and demonstrates a 40% reduction in current Maximum Applied Water Allowance (MAWA) for outdoor use? <u>Non-Residential:</u> Will the project submit a Landscape Document Package that is compliant with the County's Water Conservation in Landscaping Ordinance and demonstrates a 40% reduction in current MAWA for outdoor use?	Not Applicable. The project would not include additional landscaping.
7a. Agricultural and Farming Equipment: Will the project use the San Diego County Air Pollution Control District's (SDAPCD's) farm equipment incentive program to convert gas- and diesel-powered farm equipment to electric equipment? Check "N/A" if the project does not contain any agricultural or farming operations; if the SDAPCD incentive program is no longer available; or if funding for the incentive program has been exhausted.	Not Applicable. The project would not include gas or diesel-powered farm equipment and would not contain any agricultural or farming operations.
8a. Electric Irrigation Pumps: Will the project use SDAPCD's farm equipment incentive program to convert diesel- or gas-powered irrigation pumps to electric irrigation pumps? Check "N/A" if the project does not contain any agricultural or farming operations; if the SDAPCD incentive program is no longer available; or if funding for the incentive program has been exhausted.	Not Applicable. This is not applicable to the project, as the project would not include irrigation pumps and would not contain any agricultural or farming operations.
9a. Tree Planting: Residential: For residential projects, will the project plant, at a minimum, two trees per every new residential dwelling unit proposed? Check "N/A" if the project is a non-residential project	Not Applicable. The project does not include a residential component.

Source: County of San Diego 2018

Although the CAP Consistency Checklist individual GHG measures would not apply to the project, the project would be consistent with the underlying assumptions of the CAP and would support goals within the CAP. Therefore, the project would have a **less than significant** impact on GHG emissions.

In summary, the proposed project would be consistent with the applicable measures and policy goals as shown in Tables 11, 12, and 13. Therefore, the proposed project would be consistent with SANDAG's Regional Plan, CARB's Scoping Plan, and the County's CAP. Finally, the SDAPCD has not adopted GHG reduction measures that would apply to the GHG emissions associated with the proposed project. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation measures required.

3.9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
IX. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site that 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Setting

Hazardous materials stored and used in the area surrounding the project site would likely be associated with common materials used in utility work, residential uses, and recreational activities, such as paints, cleaning solvents, bonding agents, and small quantity petroleum fuels and lubricants.

Dudek conducted a Preliminary Environmental Site Assessment (ESA) on May 8, 2019 (Appendix E1). The Preliminary ESA includes a search of regulatory records from the Environmental Data Resources (EDR) database. The EDR records search gives a listing of sites within the defined search radii that are identified on one or more environmental regulatory databases. EnviroStor had two listings, the nearest of which is 0.551 miles south-

southwest of the project site; both sites were historically orchards and neither has an identified environmental concern. Additionally, 12 sites were identified in the California Environmental Protection Agency database within 1 mile of the project site. Dudek reviewed these listings and determined most of the sites are listed for permitting, inventory, and regulatory compliance purposes, and do not indicate a release of hazardous substances or petroleum products to the environment. Based on the information from the database search, it is unlikely these sites have altered the environmental conditions of the project site.

Additionally, testing of the existing reservoir structure and other miscellaneous site appurtenances (interior and exterior concrete, metals, and wood) was conducted for asbestos, lead, and wood treatment compounds (arsenic, chromium, copper, creosote, pentachlorophenol, and polychlorinated biphenyl). The purpose of the testing was to document the presence and levels of these chemical compounds for proper disposal upon demolition. The report of findings prepared by Aurora Industrial Hygiene, dated March 22, 2019, is included in Appendix E2.

No school exists within 0.25 miles of the project site and the site is not near any private airstrip or within the boundaries of an airport land use plan.

a) ***Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?***

Construction activities would involve the use of common hazardous materials used in construction, including bonding agents, paints and sealant coatings, and petroleum-based fuels, hydraulic fluids, and lubricants used in vehicles and equipment. Direct impacts to human health and biological resources from accidental spills of small amounts of hazardous materials from construction equipment during construction would potentially occur. Large quantities of these materials would not be stored at or transported to the construction site. However, compliance with federal, state, and local regulations including the California Division of Occupational Safety and Health, California Accidental Release Prevention Program, the Hazardous Material Management Act, and Hazardous Waste Control Act that provide safety and control measures for those materials handled on site would ensure that potentially significant impacts would not occur. Additionally, storage and handling of these materials and construction staging areas would be limited to the project site. During the construction period, standard BMPs would be applied, such as those required by the SWPPP, to ensure that all hazardous materials (e.g., construction equipment fuels) are stored properly and that no hazards occur during this phase of the project, in compliance with applicable regulations. Construction would comply with the requirements for storage, spill prevention and response and reporting procedures, and by implementing spill prevention measures included in the SWPPP.

All construction waste materials would be disposed of in compliance with state and federal hazardous waste requirements and at appropriate facilities. Testing of the existing reservoir structure and other miscellaneous site appurtenances (interior and exterior concrete, metals, and wood) was conducted for asbestos, lead, and wood treatment compounds (arsenic, chromium, copper, creosote, pentachlorophenol, and polychlorinated biphenyl). The purpose of the testing was to document the presence and levels of these chemical compounds for proper disposal upon demolition. Asbestos was not detected in any of the samples collected, and lead did not exceed hazardous levels according to the Department of Housing and Urban Development Guidelines for Lead Based Paint Inspection (Appendix E2). However, the wood treatment compounds were found to have varying levels of semi-volatile organic compounds, creosote, chromium, and copper (Appendix E2). As such, project construction would require disposal of treated wood at a solid waste landfill that has been approved for treated wood waste by the RWQCB (in accordance with California Department of Toxic Substances Control alternative management standards for treated wood waste, per California Code of Regulations Title 22, Division 4.5, Chapter 34).

Hazardous materials such as oils, lubricants, and other materials related to equipment operation may be periodically required during project operation to ensure proper system functionality. As with construction, hazardous materials handling during the operation of the proposed project would comply with the applicable federal, state, and local regulations that ensure safe use, handling, transport, storage, and disposal of hazardous materials. Impacts associated with transport, use, or disposal of hazardous materials would be **less than significant**.

- 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?*

Construction of the project would involve temporary use of hazardous materials, including fuel for construction equipment, paints, solvents, and sealants. Storage, handling, and use of these materials would occur in accordance with standard construction BMPs to minimize the potential for spill or release and ensure that any such spill or release would be controlled on site. Construction plans and specifications would include standard construction BMPs for handling, storage, use, and disposal of hazardous materials, such as requirements to contain materials inside buildings or under other cover, vehicle specifications for hazardous material transport and disposal, procedures for safe storage, and training requirements for those handling hazardous materials. All hazardous materials would be in accordance to the requirements for storage, spill prevention and response and reporting procedures, and the SWPPP. Hazardous materials used during construction and operation of the proposed project would be subject to applicable local, state, and federal regulations, which are intended to minimize risk of hazards and hazardous materials release. In addition, the proposed project site is not listed within any Cortese list databases; therefore, it is not expected that construction activities would result in the release of hazardous materials associated with contaminated soils, or underground tanks. Compliance with standard construction specifications and applicable laws would ensure that impacts would be **less than significant**.

- c) *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

The project site is not within 0.25 miles of an existing or proposed school; thus, the project would have **no impact**.

- d) *Would the project be located on a site that 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?*

As determined in Appendix E1, the project site is not on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, therefore, would have **no impact**.

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

There are no public airports within the vicinity of the project site. Therefore, **no impact** would occur.

- f) *Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

The proposed project does not include the development of any land uses or structures that may impede emergency access or movement during an emergency or evacuation. The majority of construction would be contained within the project site, with encroachment into Edgehill Road and surrounding developed areas. Construction would maintain access to all surrounding properties and within the public right-of-way. Once operational, the project would not affect accessibility along the surrounding roadways. Therefore, the project would not impair or interfere with an adopted emergency response or evacuation plan, and impacts would be less than significant.

- g) *Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?*

The proposed project is adjacent to the City of Vista within the County of San Diego. The proposed project is located adjacent to an urbanized area on a site that has been previously developed as a water reservoir. While the project site is located within a Very High Fire Hazard Severity Zone as mapped by CAL FIRE (CAL FIRE 2019), the proposed project would also continue the existing use of the site and would not introduce uses that may result in an accidental ignition. The majority of construction would employ standard equipment and practices that would not introduce potential sources of ignition. While blasting to excavate hard rock is not anticipated, if all other non-explosive rock breaking methods are exhausted, blasting may be required to excavate limited areas of hard rock from the project site. Such blasts would be completed in accordance with the requirements of Section 96.1.5601.2 of the County of San Diego 2017 Consolidated Fire Code to minimize risk to public safety. Consistent with state and local requirements, the fire district/local fire department, San Diego Sheriff's Department, and utilities require notification prior to the start of any blasting activity. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures required.

3.10 Hydrology and Water Quality

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
X. HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on or off site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) 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; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Setting

The project involves in-situ reconstruction and expansion of an existing water reservoir and construction of a pump station. The project site is currently developed as a water reservoir that would be deconstructed in order to accommodate the in-situ replacement and pump station as proposed. Runoff from the existing site flows into existing City storm drains located on the street adjacent to the project site. The proposed project also includes an on-site detention basin and would be subject to a SWPPP as the project is larger than 1 acre.

The project site does not contain any natural drainages or waterways. The Federal Emergency Management Agency's Flood Insurance Rate Maps indicate that the project site is located within flood Zone X. Zone X is considered an area of minimal flood hazard (FEMA 2012).

- a) ***Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?***

The proposed project is located within the San Diego RWQCB jurisdiction that oversees water quality in the San Diego region. The RWQCB has adopted the Water Quality Control Plan for the San Diego Basin (Basin Plan) that designates beneficial uses of the region's surface water and groundwater, identifies water quality objectives for the reasonable protection of those uses, and establishes an implementation plan to achieve the objectives. The RWQCB also regulates discharges from municipal separate storm sewer systems (MS4) in the San Diego region under a National Pollutant Discharge Elimination System Municipal Storm Water Permit (Regional MS4 Permit). The permit requires the development and implementation of BMPs in planning and construction of private and public development projects. Development projects are also required to include BMPs to reduce pollutant discharges from the project site in the permanent design.

Construction of the proposed project would involve ground-disturbing activities for grading and excavation that could result in sediment discharge in stormwater runoff. Additionally, construction would involve the use of oil, lubricants, and other chemicals that could be discharged from leaks or accidental spills. As discussed in Section 3.7 Geology and Soils, a SWPPP would be prepared that would ensure that appropriate measures are implemented to control erosion and protect water quality during and following construction. Once constructed, the project site would not act as a source of substantial surface water pollution. During operation, stormwater runoff would be treated by the proposed water quality basin prior to leaving the site. Additionally, the project would require an amendment to the existing Domestic Water Supply Permit prior to bringing the reservoir online to reflect the increased size of potable water storage. The project would not otherwise result in the alteration of the quality of VID's water supply. Implementation of SWPPP requirements and implementation of the on-site water quality basin would reduce potential hydrology and water quality impacts to **less than significant**.

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

The proposed project would not use of groundwater and would not result in depletion of groundwater supply or recharge. The existing site does not currently allow for substantial infiltration. While the project would increase impervious surfaces of the project site, any reduction in potential groundwater recharge would be minimal. Stormwater within the project site is intended to be captured by the proposed basin prior to leaving the site. Impacts would be **less than significant**.

c) *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 through the addition of impervious surfaces, in a manner which would:*

- i) *result in substantial erosion or siltation on or off site;*
- ii) *substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;*
- iii) *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; or*
- iv) *impede or redirect flood flows?*

The proposed project would result in minor temporary changes in site hydrology resulting from construction disturbance such as excavation, equipment use, and vegetation removal. As discussed in Section 3.7, Geology and Soils, construction may result in erosion of top soil and increased sedimentation. Implementation of the SWPPP would ensure that erosion is minimized during construction through implementation of BMPs.

The project site slopes generally from northeast to southwest. Overall, the proposed project would maintain the existing drainage pattern through the project site. The project includes a detention basin and on-site stormwater conveyance infrastructure that would be large enough to contain 7.2 cubic feet per second in the event of an unmitigated 100-year storm; this basin would also control for water quality prior to discharge of stormwater runoff from the site. The proposed project also includes two drainages ditches: one along the westerly property boundary to accommodate offsite drainage onto adjoining property and one along easterly and northeasterly property boundary to capture potential offsite runoff and discharge to Edgehill Road. These drainage ditches would comply with San Diego County Flood Control design standards and would control the flow of stormwater runoff from the project site. It is relevant to note that VID is not required to comply with San Diego County stormwater standards; however, on-site detention basins that meet San Diego County Flood Control design standards were included to match existing condition stormwater discharge rates onto Edgehill Road. The project site is located in Flood Hazard Zone X, which is an area of minimal flooding. The proposed drainage infrastructure would be designed to accommodate the surface flows of a 100-year storm event.

With implementation of the SWPPP during construction and the proposed drainage infrastructure during operation, the proposed project would not result in a substantial alteration of the existing drainage pattern that would result in substantial erosion or runoff, exceedance of capacity in an existing stormwater system, substantial additional sources of polluted runoff, or impede or redirect flows. Impacts would be **less than significant**.

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

As discussed above, the proposed project is located in Flood Hazard Zone X, which is an area of minimal flooding. The proposed project is not located within a tsunami inundation zone and is not located downslope of any large bodies of water that could adversely affect the site in an event of earthquake-induced failures or seiches or wave oscillations in an enclosed or semi-enclosed body of water. Therefore, impacts would be **less than significant**.

- e) ***Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?***

As discussed in a, b, and c above, the proposed project would be in compliance with applicable stormwater quality regulations, such as the Construction General Permit, the Basin Plan, and the MS4 Permit. The project consists of a reservoir and pump station, which would minimally affect water quality and groundwater supply. The project would not conflict with or obstruct the implementation of a water quality control plan or groundwater management plan. The proposed project would have no impact on groundwater and would therefore have no impact on a groundwater management plan. The proposed project would be consistent with applicable water quality control plans. Therefore, impacts would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

3.11 Land Use and Planning

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XI. LAND USE AND PLANNING – Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Setting

The project site is located within unincorporated San Diego County, just east of the City limits of Vista, California. It is designated in the General Plan as Semi-Rural Residential and zoned Limited Agricultural. The proposed project would not require a zoning or land use change and would continue to allow existing uses on site.

- a) ***Would the project physically divide an established community?***

The proposed project includes the in situ reconstruction and expansion of the existing water reservoir on the site. No new structures, access roads, or developments are included in the proposed project that would physically divide an established community. All of the construction activities associated with the project would be within or immediately adjacent to the existing developed project site. The project would continue the existing uses of the site and would comply with the General Plan land uses and zoning codes. Therefore, the proposed project would have **no impact**.

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

The proposed project would be consistent with the current zoning of the project site. The project would continue the existing allowed uses of the site. Per California Government Code Section 53091(d) and 53091(e), the project is exempt from the provisions of the County's Zoning Ordinance, and the County cannot prohibit the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy. The project is not subject to the General Plan land use designation and the County's Zoning Ordinance; however, it would not otherwise conflict with these plans and ordinances. Therefore, the proposed project would have **no impact**.

Mitigation Measures

No mitigation measures are required.

3.12 Mineral Resources

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XII. MINERAL RESOURCES – Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Setting

Extractive resources in the County of San Diego consist of cement, sand, gravel, crushed rock, clay, and limestone. The EIR for the County of San Diego's General Plan found that there are 18 active mines within the County's unincorporated areas as well as three active mines that are operated by the County of San Diego Department of Public Works: Buckman Springs Borrow Pit in the Mountain Empire Subregion, Warner Borrow Pit in the North Mountain Subregion, and Olive Street Borrow Pit in Ramona Community Plan Area (County of San Diego 2011a). None of these mines is located within the vicinity of the project site. No mineral resources are known from the site and no mineral extraction operations exist in the vicinity of the project.

- a) *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?*

The project site is not designated for mineral or extractive uses and has been used as a water reservoir since 1929. There are no known mineral resources within the project site (County of San Diego 2011a), and it is unlikely that undiscovered mineral resources are present. Therefore, there would be **no impact**.

- 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?*

The project site is not designated for mineral or extractive uses and has been used as a water reservoir. No mineral recovery activities have been known to occur on site. Thus, the proposed project would have **no impact**.

Mitigation Measures

No mitigation measures are required.

3.13 Noise

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

Setting

A Noise and Vibration Technical Memorandum was prepared by Dudek in January 2020 and is included as Appendix F to this MND. Noise level measurements were conducted on and near the project site on November 5, 2019, to characterize and quantify a representative sample of the existing outdoor ambient sound environment. Table 14 provides the location, date, and time for the sound pressure level (SPL) measurements collected with a Rion NL-52 sound level meter equipped with a 0.5-inch, pre-polarized condenser microphone and connected pre-amplifier. The sound level meter meets the current American National Standards Institute (ANSI) standard for a Type 1 (Precision) sound level meter. The accuracy of the sound level meter was verified in the field using a reference signal-generating calibrator before and after the SPL measurements; and, the measurements were conducted with the microphone positioned approximately 5 feet above the ground.

Table 14. Measured Existing Outdoor Ambient Noise Levels

Receptors	Location	Date & Time	L _{eq} (dBA)	L _{max} (dBA)
ST1	Eastern property line	2019-11-05, 09:00 AM to 09:15 AM	37.0	49.5
ST2	West of existing pump house at southern property line	2019-11-05, 09:35 AM to 09:50 AM	40.8	55.2
ST3	Western property line	2019-11-05, 09:20 AM to 09:35 AM	36.6	53.4
ST4	Adjacent from existing reservoir, south of Edgehill Road	2019-11-05, 10:00 AM to 10:15 AM	42.1	58.7

Notes: L_{eq} = equivalent continuous sound level (time-averaged sound level); L_{max} = maximum sound level during the measurement interval; dBA = A-weighted decibels.

Four (4) short-term SPL measurement locations (ST) that represent the existing noise-sensitive receivers were selected on and near the project site. The measured energy-averaged (L_{eq}) and maximum (L_{max}) noise levels are provided in Table 14. The primary noise sources at the sites identified in Table 2 consisted of birds, distant roadway traffic, distant aviation traffic, and rustling leaves. As shown in Table 14, the measured sound levels ranged from approximately 37 A-weighted decibels (dBA) L_{eq} at ST1 to 42.1 dBA L_{eq} at ST4.

Noise- and vibration-sensitive land uses are locations where people reside or where the presence of unwanted sound and/or vibration could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would be considered noise and vibration sensitive and may warrant unique measures for protection from intruding noise.

Sensitive receptors near the project site include existing single-family residential uses to the south, west, and north, the closest of which are located approximately 35 feet from the project site boundary. These sensitive receptors represent the nearest residential land uses with the potential to be impacted by construction and operation of the proposed project. Additional sensitive receptors are located farther from the project site in the surrounding community and would be less impacted by noise and vibration levels than the above-listed sensitive receptors.

As described previously, because VID is an independent local agency, it is not required to comply with County of San Diego requirements with respect to noise criteria and ordinances. However, because VID does not have adopted noise standards, the County noise thresholds in combination with state and federal standards serve as criteria against which potential noise and vibration impacts can be assessed.

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

Construction

Conventional Construction Activities

Construction noise and vibration are temporary phenomena, and their levels can vary from hour to hour and day to day depending on the equipment in use, the operations being performed, and the distance between the source and receptor.

Equipment that would be in use during construction would include, in part, backhoes, loaders, cranes, forklifts, pavers, rollers, a rock drill rig, an impact hammer, and air compressors. The typical maximum noise levels for various pieces of construction equipment at a distance of 50 feet are presented in Table 6. Note that the equipment noise levels presented in Table 15 are maximum noise levels (L_{max}). Typically, construction equipment operates in alternating cycles of full power and low power, producing average noise levels less than the maximum noise level. The average sound level of construction activity also depends on the amount of time that the equipment operates and the intensity of construction activities during that time.

Table 15. Construction Equipment Maximum Noise Levels

Equipment Type	Typical Equipment (dBA at 50 Feet)
Backhoe	78
Compressor (air)	78
Crane	81
Excavator	81
Flatbed truck	74
Front-end loader	79
Impact hammer	90
Man lift	75
Paver	77
Rock drill	81
Roller	80
Welder/torch	73

Source: FHWA 2006.

Notes: dBA = A-weighted decibels.

Construction noise in a well-defined area typically attenuates at approximately 6 decibels (dB) per doubling of distance. Project construction would take place both near and far from adjacent, existing noise-sensitive uses. For example, construction near the western project boundary would take place within approximately 35 feet of existing residences, but during construction of other project components, construction would be further away from these noise-sensitive receptors. Most construction activities associated with the proposed project would occur at distances of approximately 100 feet or more from existing noise-sensitive uses, which represents activities both near and far from any one receiver, as is typical for construction projects.

Aggregate noise emission from proposed project construction activities, broken down by sequential phase, was predicted at two distances to the nearest existing noise-sensitive receptor: (1) from the nearest position of the construction site boundary and (2) from the geographic center of the construction site, which serves as the time-averaged location or geographic acoustical centroid of active construction equipment for the phase under study. The intent of the former distance is to help evaluate anticipated construction noise from a limited quantity of equipment or vehicle activity expected to be at the boundary for some period of time, which would be most appropriate for phases such as site preparation, demolition, or paving. The latter distance is used in a manner similar to the general assessment technique as described in the Federal Transit Administration (FTA) guidance for construction noise assessment, when the location of individual equipment for a given construction phase is uncertain over some extent of (or the entirety of) the construction site area. Because of this uncertainty, all the equipment for a construction phase is assumed to operate—on average—from the acoustical centroid.

Table 16 summarizes these two distances to the apparent closest noise-sensitive receptor for each of the seven sequential construction phases. At the site boundary, this analysis assumes that up to only one piece of equipment of each listed type per phase will be involved in the construction activity for a limited portion of the 8-hour period. In other words, at such proximity, the operating equipment cannot “stack” or crowd the vicinity and still operate. For the acoustical centroid case, which intends to be a geographic average position for all equipment during the indicated phase, this analysis assumes that the equipment may be operating up to all 8 hours per day.

Table 16. Estimated Distances between Phase Activities and the Nearest Noise-Sensitive Receptors

Construction Phase (and Equipment Types Involved)	Approximate Distance from Nearest Noise-Sensitive Receptor to Construction Site Boundary (Feet)	Approximate Distance from Nearest Noise-Sensitive Receptor to Acoustical Centroid of Site (Feet)
Demolition (backhoe, excavator, front-end loader)	60	100
Site preparation (excavator, backhoe, front-end loader, rock drill, impact hammer)	50	100
Pump Station Construction (crane, flatbed truck, man lift, welder/torch)	50	100
Paving (paver, roller)	50	100
Reservoir Construction (backhoe, excavator, front-end loader)	35	100
Piping (excavator)	50	100
Architectural finishes (air compressor)	50	100

Construction noise modeling used reference data from the Federal Highway Administration Roadway Construction Noise Model (FHWA 2008)⁷. Input variables for the predictive modeling consist of the equipment type and number of each (e.g., two graders, a loader, a tractor), the duty cycle for each piece of equipment (e.g., percentage of time within a specific time period, such as an hour, when the equipment is expected to operate at full power or capacity and thus make noise at a level comparable to what is presented in Table 15), and the distance from the noise-sensitive receiver to the construction zone. The predictive model also considers how many hours that equipment may be on site and operating (or idling) within an established work shift. Conservatively, no topographical or structural shielding was assumed in the modeling. The RCNM has default duty-cycle values for the various pieces of equipment, which were derived from an extensive study of typical construction activity patterns.

As presented in Table 17, the construction noise levels are predicted to have an 8-hour L_{eq} value as high as 85 dBA at the nearest existing residences when site preparation and grading activities take place.

⁷ Although the RCNM was funded and promulgated by the Federal Highway Administration, it is often used for non-roadway projects, because the same types of construction equipment used for roadway projects are often used for other types of construction.

Table 17. Construction Noise Model Results Summary

Construction Phase	Estimated Construction Noise Level at Representative Locations (8-hour L _{eq} dBA)	
	Construction Site Boundary	Acoustical Centroid of Site
Demolition	78.4	75.7
Site Preparation and Grading	85.1	79.1
Pump Station Construction	76.5	70.5
Paving	76.5	72.1
Reservoir Construction	79.1	76.0
Piping	77.0	71.0
Architectural Coating	74.0	68.0

Notes: L_{eq} = equivalent continuous sound level (time-averaged sound level); dBA = A-weighted decibel.

On an average construction workday, heavy equipment will be operating sporadically throughout the project site and more frequently away from the southernmost edge of the site. At more typical distances closer to the center of the project site (approximately 100 feet from the nearest existing residence), construction noise levels are estimated to range from approximately 68 dBA L_{eq} to 79 dBA L_{eq} at the nearest existing residence.

Although nearby off-site residences would be exposed to elevated construction noise levels, the increased noise levels would typically be relatively short term. It is anticipated that construction activities associated with the proposed project would take place primarily within the allowable hours of the County of San Diego (7:00 a.m. and 7:00 p.m. Monday through Saturday), and would not occur at any time on Sunday or on national holidays.

VID is a local agency that is not required to comply with the County's thresholds, such as the 75 dBA 8-hour L_{eq}. For this reason, the FTA guidance-based standard daytime construction noise level threshold of 80 dBA L_{eq} over an 8-hour period was adopted herein for purposes of this environmental impact assessment. However, as best practice, VID would aim for compliance with County noise standards. Therefore, because the prediction results presented in Table 17 indicate that noise from conventional construction activities attributed to the project would exceed the County's 8-hour L_{eq} threshold for most of the activity phases and exceed the FTA threshold at the nearest existing residential receivers when site grading and preparation occurs, implementation of common noise-reducing construction activity best practices listed below in mitigation measure MM-NOI-1 would be recommended. Conventional construction noise impacts would be less than significant with mitigation incorporated.

Blasting

Based on the known presence of hard rock at the project site, there is a high likelihood that rock excavation would be required during the site preparation and grading phase. Rock excavation methods would generally consist of non-explosive techniques, such as rock breaking attachments (both with and without pre-drilling), hydro-fracturing, or expansive chemical agents. Although potential noise from these rock excavation activities has been included in the preceding predictive analysis of conventional construction equipment, there is some potential that these methods would be unable to excavate the underlying rock and limited blasting would be required. Because of this potential, the analysis presented in this report conservatively assumes blasting would be required.

Blasting typically involves drilling a series of boreholes, placing explosives (the “charge”) in each hole, then topping the charge with fill material to help confine the blast. These multiple holes are typically arranged so as to yield optimal fracturing of the rock strata and thus allow gravity to subsequently collapse or “implode” the volume of rock in as safe and controlled manner as possible after detonation. Post-detonation material can then be further broken down to manageable size and hauled away with conventional construction equipment and vehicles.

By limiting the amount of charge in each hole, and detonating each charge successively with a time delay, the blasting contractor can limit the total energy released at any single time, which in turn reduces the airborne noise L_{max} and groundborne vibration energy associated with each individual detonated charge.

If required, no more than one blast per day would occur during construction activities. To keep groundborne vibration magnitude from each charge-delayed detonation at a peak particle velocity (PPV) that does not exceed the single-event threshold of 1 inches per second (ips) for residential structures, per Caltrans guidance, Table 9 presents the preliminarily determined maximum charge weights with respect to the nearest eastern and western residential receptors. Table 18 also displays the predicted A-weighted L_{max} for each detonated charge, under a fully confined condition, using mathematical expressions and typical parameters provided by the Blasting and Explosives Quick Reference Guide (Dyno Nobel 2010).

Table 18. Preliminary Blasting Charge Weights and Predicted L_{max} Values

Nearest Receiving Residential Structure	Per-Detonation Charge Weight (lbs)	Single Charge Detonation Airborne SPL (dBA L_{max})	Single Charge Detonation (inches per second)
West (75 feet distance to expected closest detonation)	1.56	105	0.992
East (130 feet distance to expected closest detonation)	4.62	104	0.994

Notes: lbs = pounds; SPL = sound pressure level; dBA = A-weighted decibels; L_{max} = maximum sound level during the measurement interval; PPV = peak particle velocity.

The total quantity of successive detonations would vary with the charge weight but result in an estimated 8-hour L_{eq} of 85 to 91 dBA using the values in Table 17 as a guide. Hence, and for informational purposes, noise from the blast at these indicated distances could exceed the County’s standard. Implementation of mitigation measure MM-NOI-2, which would require preparation of a blasting plan, would reduce potentially significant impacts to **less than significant**.

Operation

Operation of the project would require routine maintenance and site visits by VID staff similar to existing conditions. Operating pump station equipment would have the potential to create noise impacts. The proposed new pump station would provide redundant water supply and would have a capacity of 3,000 gallons per minute to meet peak hour expectations during maximum-day demand conditions. The pumps would be housed in an aboveground structure that would match the architectural features of the existing PRS facility. It would be constructed of a 12-inch, cast-in-place concrete floor with an 8- to 12-inch concrete masonry wall. Additionally, the roof would be composed of sloped composite shingles supported by wood trusses and plywood sheathing, with a 20-pounds-per-square-foot load limit. The pump station would also include outside air intake louvers on one of the walls and a roof-mounted ventilation fan to remove heat generated by the pump equipment.

Prediction of pump noise propagation from the new pump station structure under typical expected operating conditions utilized techniques based on International Organization of Standardization 9613-2 (ISO 1996). Estimated noise levels during typical operation would range from approximately 35.3 to 44.2 dBA and thus comply with the County's noise standards of 45 dBA hourly L_{eq} during nighttime hours (10:00 p.m. to 7:00 a.m.). These predicted levels are also below the suggested hourly L_{eq} limit of 48.6 dBA, based on EPA guidance. Operational noise would be **less than significant**.

b) ***Would the project result in generation of excessive groundborne vibration or groundborne noise levels?***

Construction activities may expose persons to excessive groundborne vibration or groundborne noise, causing a potentially significant impact. The California Department of Transportation (Caltrans) has collected groundborne vibration information related to construction activities (Caltrans 2013). Information from Caltrans indicates that continuous vibrations with a PPV of approximately 0.2 ips is considered annoying. For context, heavier pieces of construction equipment, such as a vibratory roller that may be expected on the project site as part of the paving phase, have PPVs of 0.21 ips PPV at a reference distance of 25 feet (DOT 2006).

Groundborne vibration attenuates rapidly, even over short distances. The attenuation of groundborne vibration as it propagates from source to receptor through intervening soils and rock strata can be estimated with expressions found in FTA and Caltrans guidance. By way of example, for the aforementioned roller operating on site and as close as the western project boundary (i.e., 35 feet from the nearest receiving sensitive land use) the estimated vibration velocity level would be less than 0.13 ips.

Construction vibration, at sufficiently high levels, can also present a building damage risk. However, the predicted 0.13 ips PPV at the nearest residential receiver 35 feet away from on-site operation of the roller during paving would not surpass the guidance limit of 0.2 to 0.3 ips PPV for preventing damage to residential structures (Caltrans 2013). Because the predicted vibration level at 35 feet is less than both the annoyance and building damage risk thresholds, vibration from project conventional construction activities is considered **less than significant**.

Once operational, the proposed project would not be expected to feature major on-site producers of groundborne vibration. Anticipated mechanical systems such as pumps are designed and manufactured to feature rotating components (e.g., impellers) that are well-balanced with isolated vibration within or external to the equipment casings. On this basis, potential vibration impacts due to proposed project operation would be **less than significant**.

Blasting Vibration

Although conventional construction equipment using mechanical means for earth-moving are not expected to yield vibration velocity levels that exceed applicable standards, potential blasting activities represent a separate category of vibration assessment. The project may require limited blasting to facilitate excavation in areas where mechanical rock breaking equipment (both with and without pre-drilling), hydro-fracturing, or expansive chemical agents are unable to excavate the bedrock to required depths. The right-most column in Table 9 presents the estimated per-detonation PPV that would be received at each of the indicated residential receptors. Under such parameters, the blast vibration magnitudes would be compatible with Caltrans guidance limits for single-event or "transient" events. However, to help ensure that vibration from the blasting associated with project excavation would not cause undue temporary

annoyance and minimize damage risk to the receiving structures, proper implementation of the Blasting Plan introduced as MM NOI-2 is incorporated to help render vibration-related environmental impacts temporary and **less than significant with mitigation**.

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

There are no private airstrips within the vicinity of the project site. The closest airport to the project site is the McClellan Palomar Airport, approximately 7 miles southwest of the site. The project site is not located within any noise contours and would therefore not expose people residing or working in the project area to excessive noise levels. Impacts from aviation overflight noise exposure would be **less than significant**.

Mitigation Measures

MM NOI-1 Construction Noise Reduction. The Vista Irrigation District (VID) and/or its construction contractor shall comply with the following measures during construction:

1. Construction activities shall not occur between the hours of 7:00 p.m. and 7:00 a.m. Monday through Saturdays, or on Sundays or national holidays. In the event that construction is required to extend beyond these times, extended hours permits shall be required.
2. Equipment (e.g., portable generators) shall be shielded from sensitive uses using local temporary noise barriers or enclosures or shall otherwise be designed or configured to minimize noise at nearby noise-sensitive receptors.
3. All noise-producing equipment and vehicles using internal combustion engines should be equipped with mufflers; air-inlet silencers, where appropriate; and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) should be equipped with shrouds and noise control features that are readily available for that type of equipment.
4. All mobile or fixed noise-producing equipment used on the project facilities that are regulated for noise output by a local, state, or federal agency should comply with such regulation while in the course of project activity.
5. Idling equipment should be kept to a minimum and moved as far as practicable from noise-sensitive land uses.
6. Electrically powered equipment should be used instead of pneumatic or internal-combustion-powered equipment, where feasible.
7. Material stockpiles and mobile equipment staging, parking, and maintenance areas should be located as far as practicable from noise-sensitive receptors.
8. The use of noise-producing signals, including horns, whistles, alarms, and bells, should be for safety warning purposes only.
9. Residences within 500 feet of the construction site should be notified of the construction schedule in writing at least 3 calendar days prior to construction. VID or its contractor(s) shall

designate a noise disturbance point of contact who would be responsible for responding to complaints regarding construction noise. The point of contact should make reasonable effort to investigate the cause of the complaint and, if indeed related to construction noise attributed to the project, see that reasonable measures are implemented to help address the problem. A contact number for the noise disturbance point of contact should be conspicuously placed on construction site fences and written into the construction notification schedule sent to nearby residences.

MM NOI-2

Blasting Requirements. Blasting for rock excavation shall be only be used by the contractor upon receipt of approval by Vista Irrigation District and after other non-explosive techniques have been exhausted, such as rock breaking attachments (both with and without pre-drilling), hydro-fracturing, and expansive chemical agents. If blasting is required for rock excavation, Vista Irrigation District or its contractor shall prepare a blasting plan that will reduce impacts associated with construction-related noise, drilling operations, and vibrations related to blasting. The blasting plan shall be site specific, based on general and exact locations of required blasting and the results of a project-specific geotechnical investigation. The blasting plan shall include a description of the planned blasting methods, an inventory of receptors potentially affected by the planned blasting, and calculations to determine the area affected by the planned blasting. Noise calculations in the blasting plan shall account for blasting activities and all supplemental construction equipment. The final blasting plan and pre-blast survey shall meet the requirements provided below.

- Prior to blasting, a qualified geotechnical professional shall inspect and document the existing conditions of facades and other visible structural features or elements of the nearest residential buildings. Should this inspector determine that some structural features or elements appear fragile or otherwise potentially sensitive to vibration damage caused by the anticipated blasting activity, the maximum per-delay charge weights and other related blast parameters shall be re-evaluated to establish appropriate quantified limits.
- All blasting shall be performed by a blast contractor and blasting personnel licensed to operate per appropriate regulatory agencies.
- Each blast shall be monitored and recorded with an air-blast overpressure monitor and groundborne vibration accelerometer that is located outside the closest residence to the blast. This data shall be recorded, and a post-blast summary report shall be prepared and be available for public review or distribution as necessary.
- Blasting shall not exceed 1 inch per second peak particle velocity (PPV) (transient or single-event), or a lower PPV determined by the aforesaid inspector upon completion of the pre-blast inspection, at the façade of the nearest occupied residence.
- To ensure that potentially impacted residents are informed, the applicant will provide notice by mail to all property owners within 500 feet of the project at least 1 week prior to a scheduled blasting event.
- Drilling operations associated with blasting preparations shall be performed in a manner consistent with adherence to guidance that emulates Sections 36.408, 36.409, and 36.410 of the San Diego County Code Noise Ordinance.

3.14 Population and Housing

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XIV. POPULATION AND HOUSING – Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Setting

The project site is located in San Diego County, to the east of the city limits of Vista, and is generally surrounded by residential development. The existing water reservoir is operated by VID and serves customers within VID's service area in and around the City of Vista in San Diego County. Land use and development in VID's service area are guided by the Vista General Plan, and the land use and development around the project site are guided by the County of San Diego General Plan.

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

VID's 2017 Potable Water Master Plan recommends replacement of the existing E Reservoir with a new reservoir to address age and capacity issues and the addition of a pump station at the site to provide a redundant water supply to higher-pressure zones. The 2017 Potable Water Master Plan identified seven projects along with their cost estimates in their Capital Improvement Program, including all components of the proposed project. These projects would allow VID to provide service to the expected 158,627 people that the service area is expected to contain by 2040. The project would not extend utility infrastructure beyond areas that are currently served. The proposed project does not include the construction of housing or substantial new employment opportunities and would not result in substantial unplanned population growth either directly or indirectly. The expansion of the water reservoir would be sufficient to meet current and planned growth but would not induced unplanned growth. Therefore, impacts would be **less than significant**.

- b) *Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

The proposed project does not involve demolition of any residential structure and would not displace populations or housing through the proposed project's operation. Therefore, the proposed project would have **no impact**.

Mitigation Measures

No mitigation measures are required.

3.15 Public Services

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XV. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Setting

Fire Protection: Fire protection services are provided to the project site by the Vista Fire Department. The closest fire station to the project site is Station 6, located at 651 E. Vista Way, Vista, California 92084, about 2.02 miles from the project.

Police Protection: Police protection services are provided to the project site by the San Diego Sheriff's Department substation at 30 Main St G130, Vista, California 92083, about 2.29 miles from the project. The San Diego County Sheriff's Department provides contract law enforcement services for the cities of Del Mar, Encinitas, Imperial Beach, Lemon Grove, Poway, San Marcos, Santee, Solana Beach, and Vista, as well as for unincorporated areas in the County. The San Diego County Sheriff's Department handles over 300,000 emergency calls a year along with another 400,000 non-emergency calls and employs 1,300 personnel, including 900 sworn deputies (San Diego Sheriff Department 2019).

Parks: The City of Vista maintains a system of 20 parks, the closest of which is Brengle Terrace Park, which is 1.15 miles from the project site.

Libraries: The Vista Library, operated by the City of Vista, is located 1.94 miles west of the project site at 700 Eucalyptus Avenue, Vista, California 92084.

- a) *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:*

Fire protection?

Police protection?

Schools?

Parks?

Other public facilities?

Construction would encroach upon Edgehill Road and surrounding developed areas. Construction would maintain access to all surrounding properties and within the public right-of-way, and would not affect fire or police response to the site or surroundings. Once operational, the project would not affect accessibility along the surrounding roadways. The project would not result in additional population in the area and thus would require no new or expanded facilities to support adequate fire or police protection, schools, parks or other public facilities. Continued operation of the proposed project would be similar to the existing conditions and would not affect the demand of public services or facilities. Therefore, the project would result in **no impact** from physical impacts associated with providing new or modified facilities.

Mitigation Measures

No mitigation measures are required.

3.16 Recreation

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XVI. RECREATION				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Setting

Brengle Terrace Park located approximately 1.15 miles west of the project site. The project site does not contain a park, is not adjacent to a park, and does not provide access to a park or recreational facilities or areas.

- 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?*

The project would rebuild and expand an existing water reservoir facility. No neighborhood or regional parks exist on or adjacent to the project site. No other recreational facilities are located within or on the project site; nor does the project site provide or the project plan to remove access to recreational facilities. The proposed project would not result in an increased population and therefore, would not have an increased demand on recreational facilities. **No impact** would occur.

- 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?*

As stated above, the project would rebuild and expand an existing water reservoir facility. It would not result in an increased population that would require the construction of new, or expansion of existing, recreational facilities and therefore, would not have an increased demand on recreational facilities. **No impact** would occur.

Mitigation Measures

No mitigation measures are required.

3.17 Transportation

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XVII.TRANSPORTATION – Would the project:				
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Setting

Access to the project site is achieved via Edgewood Road. The local roadways that would be utilized during implementation of project activities are Foothill Drive and Vale Terrace Drive, which are publicly accessible City of Vista roadways. The City of Vista is accessed via SR-78 to the west and I-15 to the east.

- a) ***Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?***

The proposed project would not alter roadways nor would it add any population that would impact roadway service levels or transit, bicycle, and pedestrian facilities. Construction of the project would temporarily add trips to the local roadway network associated with construction workers and haul trucks. These trips would not be substantial and would cease upon completion of construction. Operation of the proposed project would not increase the number of trips per day to and from the project site, as it would not result in an increase in staffing at VID. Therefore, the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system and would not create any significant traffic impacts in terms of levels of service. Impacts would be **less than significant**.

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

The proposed project does not include land use types that would result in an increase in VMT, nor does it involve the construction of a transportation project. The proposed project would have a **less-than-significant impact**.

- c) ***Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?***

The proposed project does not include any changes to the public roadway design or access to and from the site or surrounding properties. The project would not result in an increase in traffic hazard. Therefore, **no impact** would occur.

- d) ***Would the project result in inadequate emergency access?***

As stated above, the proposed project includes improvements to ensure compliance with local plans and City codes to comply with compatible land uses and project design features that would not create circulation hazards or inadequate emergency vehicle access. Construction would maintain access to all surrounding properties and within the public right-of-way, and would not affect fire or police response to the site or surroundings. Once operational, the project would not affect accessibility along the surrounding roadways. The project does not include any changes to public circulation or the existing driveway leading to and from the existing facility. Therefore, impacts would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

3.18 Tribal Cultural Resources

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XVIII. TRIBAL CULTURAL RESOURCES				
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Setting

Dudek completed a Cultural Resources Report for the project site, which is included as Appendix C1. As discussed in the report, a letter requesting a search of the Sacred Lands File was sent to the NAHC on February 01, 2019. The NAHC responded February 06, 2019, indicating that Native American traditional cultural places have not previously recorded within 1 mile of the project Area of Potential Effect. The NAHC attached a list of Native American representatives to contact for more specific information that tribal representatives may have that is not on file with the NAHC. Letters were sent to each of the representatives on February 07, 2019, for any additional information of resources that may be located in the project Area of Potential Effect. To date, five responses have been received for the proposed project.

- On February 14, 2019, the Tribal Historic Preservation Office for the Agua Caliente Band of Cahuilla Indians responded the project is out of their Tribe's Traditional Use Area and therefore they defer to other tribes in the area once formal government-to-government consultation is initiated by the lead agency for this project.
- On February 20, 2019, representatives of the Cultural Department for the Rincon Band of Luiseño Indians contacted Dudek and shared that the identified Area of Potential Effect is within the Ancestral Territory of the Luiseño people, and is also within Rincon's specific area of Historic interest. While they did not have knowledge of cultural resources within or near the proposed project area, this does not mean that none exist. They suggested archival research be conducted for the project area and that they were interested in participation in any survey.

- On February 20, 2019, representatives of the Campo Band of Mission Indians responded, indicating that the project area has a rich history for the Kumeyaay people and requesting that a qualified Kumeyaay monitor be present for any cultural work and additional ground-disturbing activities to ensure that Kumeyaay resources are not overlooked.
- Dudek received a response on March 12, 2019, from Clinton Linton, Cultural Resources Director, representing the Lipay Nation of Santa Ysabel. Mr. Linton stated that, for the project, Santa Ysabel defers to and supports the comments and requests of the San Luis Rey Band.
- Dudek received a response on March 18, 2019, from Ray Teran, resources management, representing the Viejas Band of Kumeyaay Indians. Mr. Teran stated that, for the project, Viejas recommends that the San Pasqual Band of Mission Indians be notified of the project. In addition, Mr. Teran requested that all National Environmental Policy Act/CEQA/Native American Graves Protection and Repatriation Act laws be followed, and that San Pasqual be notified of any project changes and updates.

Additionally, in accordance with AB 52, VID provided a notification letter to tribal groups that have formally requested such notification under AB 52. This notification letter was sent to the Rincon Band of Luiseño Indians and the Torres Martinez Desert Cahuilla Indians on November 7, 2018. Neither tribe responded with a request for consultation within the 30-day response period provided by AB 52. On December 21, 2018, the Rincon Band of Luiseño Indians requested consultation under AB 52 and that an archaeological records search be conducted. However, because this request was outside of the response period, consultation is no longer required under AB 52. Regardless, communication regarding the project outside of AB 52 with the Rincon Band of Luiseño Indians is ongoing.

a) *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:*

- i) *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)?*
- ii) *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?*

No tribal cultural resources were identified as a result of consultation conducted in accordance with AB 52. A search of NAHC's Sacred Lands File and a California Historical Resources Information System records search identified no previously recorded cultural resources of Native American origin within the project area or a surrounding 0.25-mile area. However, unanticipated discoveries of tribal cultural resources may occur during construction activities. Mitigation measures MM-CUL-1 and MM-CUL-2 would protect tribal cultural resources in the event of discovery. Therefore, the project would have a **less-than-significant impact with mitigation**.

Mitigation Measures

Refer to MM-CUL-1 and MM-CUL-2.

3.19 Utilities and Service Systems

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XIX. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Setting

The project site consists the redevelopment and expansion of an existing water reservoir. No water or sewer service is required within the project site. Stormwater drainage in the project area is by natural drainages and would connect to the drainage system along Edgehill Drive. Solid waste collection, transportation, and disposal is provided by and is overseen by the Solid Waste Planning and Recycling Division of the San Diego County Department of Public Works, which is responsible for ensuring that solid waste disposal services meet state and federal mandates for integrated waste management. Collected solid waste is sent to the Palomar Transfer Station, which is then sent to either the Miramar Landfill at 5161 Convoy Street operated by the City of San Diego, or Borrego Landfill at 2449 Palm Canyon Drive, operated by Republic Services.

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

The proposed project would not result in a development that would substantially increase the demand for utility infrastructure, such as new commercial or residential land uses. The project consists primarily of the construction of new and expanded water facilities in the form of a water reservoir and pump station. As part of the project, new storm water drainage and electrical power infrastructure would be developed. The project does not require the relocation or construction of wastewater treatment, natural gas, or telecommunications facilities. The environmental effects of the construction and operation of the project and its components are analyzed throughout this MND. As discussed throughout this MND, mitigation measures would be required to ensure that impacts remain **below a level of significance**.

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

Based on land use and population projections, the 2017 Potable Water Master Plan identified a storage deficit within VID's service area. The project is implementing VID's 2017 Potable Water Master Plan, which identified seven projects along with their cost estimates in their Capital Improvement Program, including all components of the proposed project. These projects would allow VID to provide service to the expected 158,627 people that the service area is expected to contain by 2040. The project would result in an increase in available water supply to VID's service population. Therefore, **no impact** would occur.

- c) *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?*

As discussed previously, the project would not result in an increase in wastewater generation or require the expansion of such facilities. **No impact** would occur.

- d) *Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

- e) *Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

All existing materials removed as part of the project would be properly disposed of at a facility with adequate permitted capacity to accept construction debris and solid waste. Project construction would require disposal of treated wood at a solid waste landfill that has been approved for treated wood waste by the RWQCB (in accordance with California Department of Toxic Substances Control alternative management standards for treated wood waste, per California Code of Regulations Title 22, Division 4.5, Chapter 34). As discussed previously, the project would not add to the population of the area and would not increase demand for solid waste disposal such that new facilities would be required. Therefore, impacts would be **less than significant**.

Mitigation Measures

Refer to MM-BIO-1, MM-CUL-1, MM-CUL-2, MM NOI-1, and MM NOI-2.

3.20 Wildfire

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XX. WILDFIRE – If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Setting

The project site is characterized developed and ornamental planting land cover and is surround by semi-rural residential development. The project site is located within a Very High Fire Hazard Severity Zone as mapped by CAL FIRE (CAL FIRE 2019).

a) Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

The majority of construction would be contained within the project site, with encroachment into Edgehill Road and surrounding developed areas. Construction would maintain access to all surrounding properties and within the public right-of-way. The project would update and expand of an existing water reservoir and would not alter existing land uses that might increase the risk of wildfire ignition. The project would rely on an existing driveway for access. The project does not include additional structures or features that would impair adopted emergency response or evacuation plans. The proposed project does not include a substantial addition of employees or increase in population that could impair adopted emergency or evacuation plans. Therefore, impacts would be **less than significant**.

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

No people would reside on the project site. Occupants would be limited to VID staff performing routine operational maintenance. The proposed project would update and expand an existing water reservoir facility and would not alter existing land uses that might increase the risk of wildfire ignition. Therefore, impacts would be **less than significant**.

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

The proposed project would rely on an existing driveway for access and would not require the installation or maintenance of a road, fuel break, emergency water source, or other utilities. Implementation of the proposed project would not increase fire risk. The majority of construction would employ standard equipment and practices that would not introduce potential sources of ignition. While blasting may be required to excavate hard rock from the project site, such blasts would be completed in accordance with the requirements of Section 96.1.5601.2 of the County of San Diego 2017 Consolidated Fire Code to minimize risk to public safety. Therefore, impacts would be **less than significant**.

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

The majority of the project site would be developed as a reservoir, pump station, and PRS. The proposed project site does not contain a risk of flooding, landslides, or slope instability post-fire or drainage changes. As noted in Section 3.7, Geology and Soils, and Section 3.10, Hydrology and Water Quality, the proposed project would have a less-than-significant impact with regards to landslides, flood, and runoff. The majority of construction would employ standard equipment and practices that would not introduce potential sources of ignition. While blasting may be required to excavate hard rock from the project site, such blasts would be completed in accordance with the requirements of Section 96.1.5601.2 of the County of San Diego 2017 Consolidated Fire Code to minimize risk to public safety. Therefore, the proposed project would have a **less-than-significant impact**.

Mitigation Measures

No mitigation measures are required.

3.21 Mandatory Findings of Significance

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XXI. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

As discussed in Section 3.4, Biological Resources, construction of the proposed project would potentially result in significant impacts to biological resources. However, with incorporation of mitigation measure MM-BIO-1, all potentially significant impacts would be reduced to a level below significance. The proposed project would not substantially degrade the quality of the environment, impact fish or wildlife species, or plant communities. As discussed in Section 3.5, Cultural Resources, and Section 3.18, Tribal Cultural Resources, potential impacts regarding inadvertent discovery of cultural resources and tribal cultural resources could occur during excavation. However, implementation of mitigation measures MM-CUL-1 and MM-CUL-2 would ensure that impacts would be less than significant. Overall, impacts would be **less than significant with the incorporation of mitigation.**

- 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)?*

As provided in the analysis presented in Chapter 3, the proposed project would not result in significant impacts to aesthetics, agriculture and forestry resources, air quality, energy, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, transportation and traffic, and utilities and service systems. Mitigation measures recommended for biological resources, cultural resources, noise, and tribal cultural resources would reduce impacts to below a level of significance.

The proposed project would incrementally contribute to cumulative impacts for projects occurring within the vicinity of the project site. With mitigation, however, implementation of the proposed project would not result in any residually significant impacts that could contribute to a cumulative impact. In the absence of residually significant impacts, the incremental accumulation of effects would not be cumulatively considerable and would be **less than significant**.

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

The potential for adverse direct or indirect impacts to human beings was considered throughout Chapter 3 of this MND. Based on this evaluation, there is no substantial evidence that construction or operation of the proposed project with the proposed mitigation measures incorporated would result in a substantial adverse effect on human beings. Impacts would be **less than significant with incorporation of mitigation measures**.

4 References and Preparers

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4.2 List of Preparers

Vista Irrigation District

Greg Keppler, PE, QSD, Engineering Project Manager

Dudek

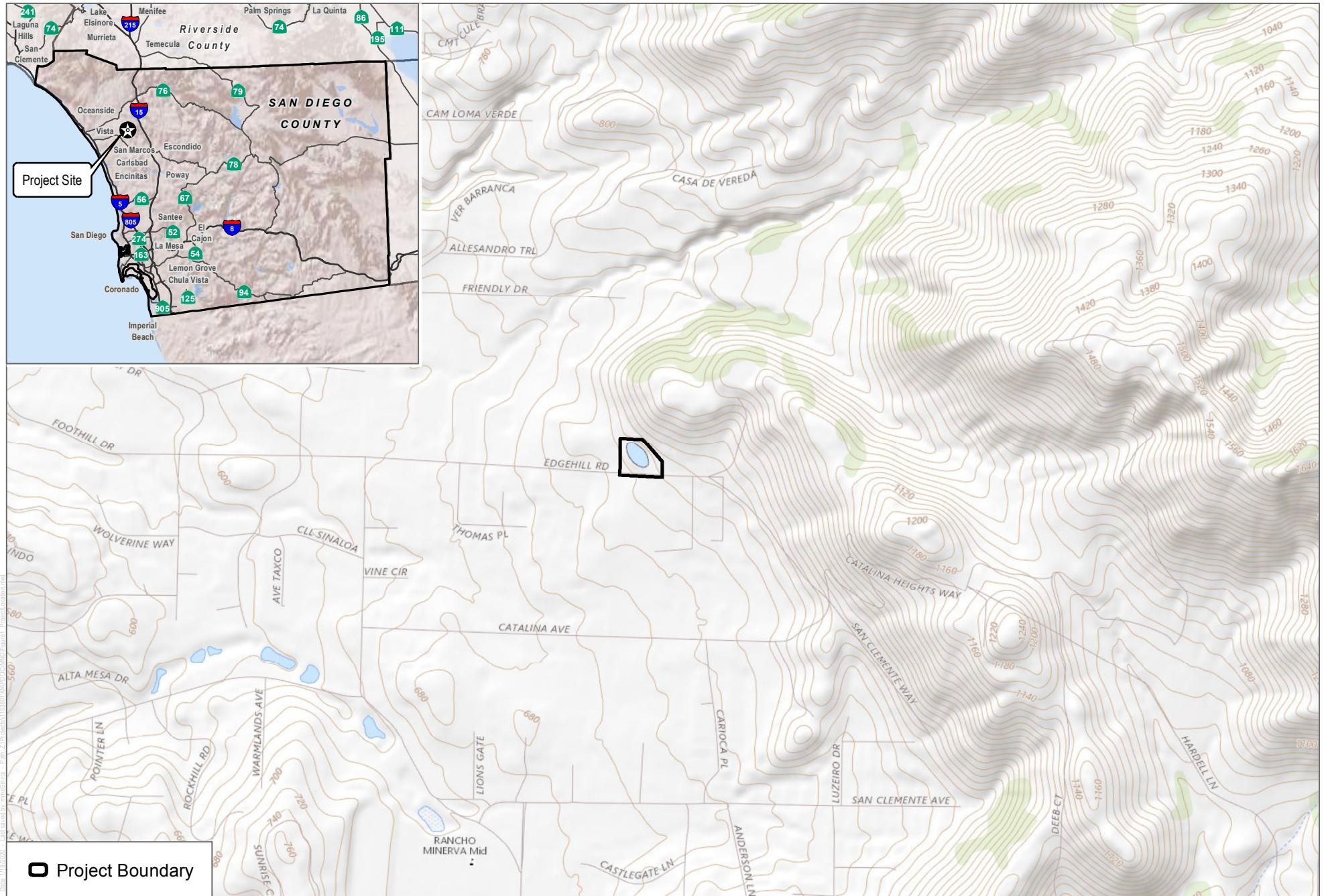
Andrew Talbert, AICP, Environmental Planner
Kimberly Ashbury, Environmental Analyst
Neil Harper, PE, Senior Engineer
Amanda Combs, PE, Senior Engineer
Adam Poll, Air Quality Specialist
Mike Howard, Senior Biologist
Scott Wolf, Archaeologist
Nicole Frank, MSHP, Architectural Historian
Kara Dotter, MSHP, Architectural Historian
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Connor Burke, Noise Analyst
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Amy Seals, Senior Technical Editor

SCST

Andrew Neuhaus, Senior Engineering Geologist

Aurora Industrial Hygiene

Karen Shockley



SOURCE: USGS 7.5-minute Quadrangle

DUDEK



0 500 1,000
Feet

FIGURE 1

Project Location

E Reservoir Replacement and Pump Station Project

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SOURCE: SANGIS 2017

DUDEK

0 200 400
Feet

FIGURE 2

Project Site and Surroundings
E Reservoir Replacement and Pump Station Project

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SOURCE: SANGIS 2017

DUDEK

0 37.5 75 Feet

FIGURE 3

Existing Project Site

E Reservoir Replacement and Pump Station Project

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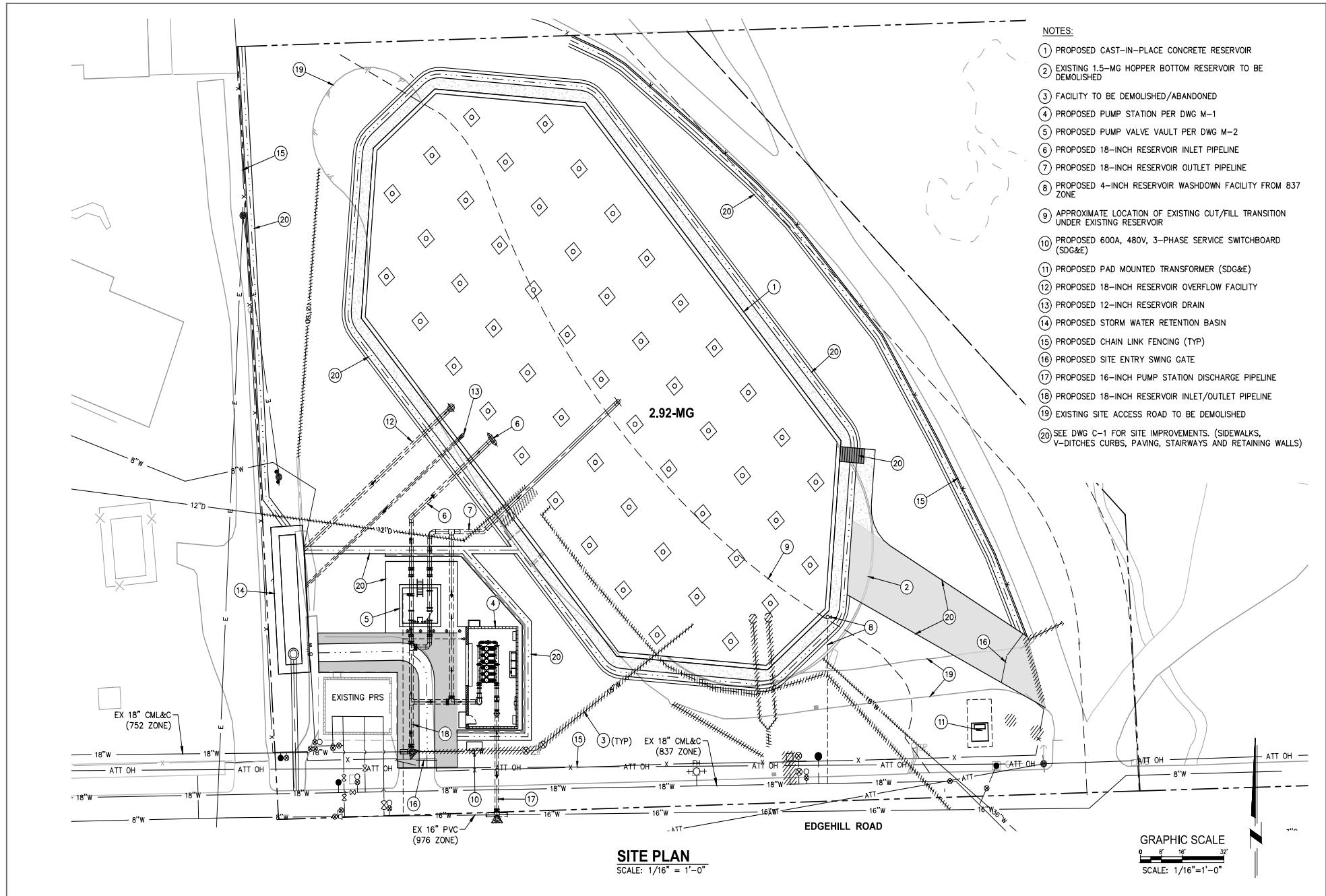
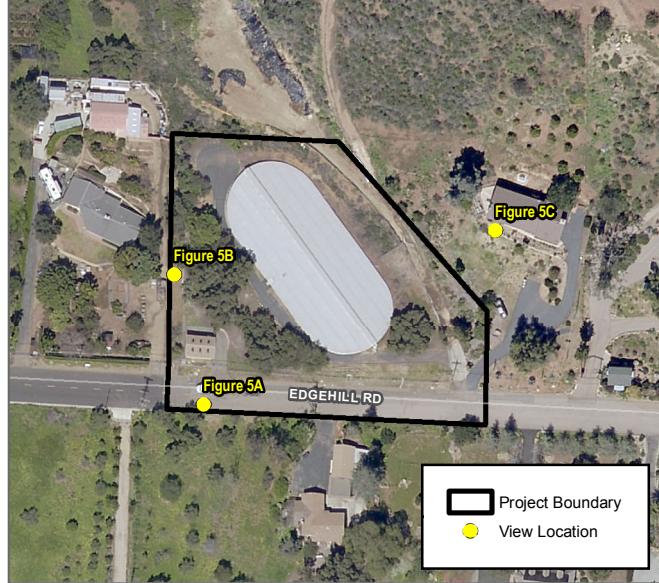


FIGURE 4

Proposed Project Site Plan

E Reservoir Replacement and Pump Station Project

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Existing

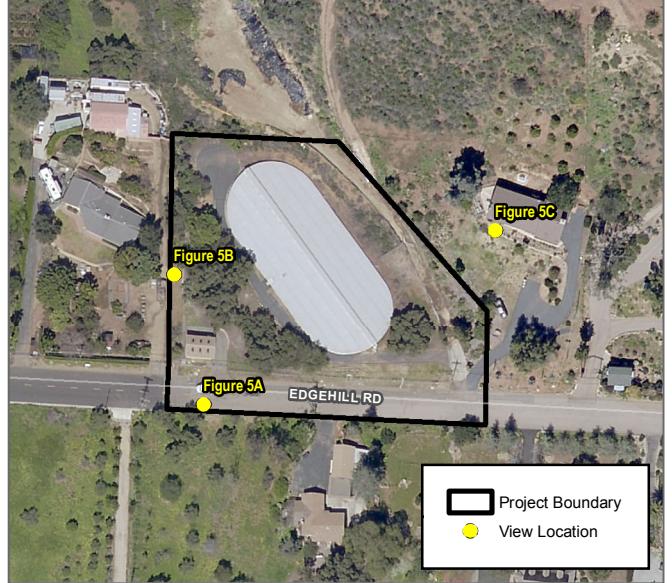


Proposed - Landscaping at Planting



Proposed - Landscaping at Maturity

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Existing

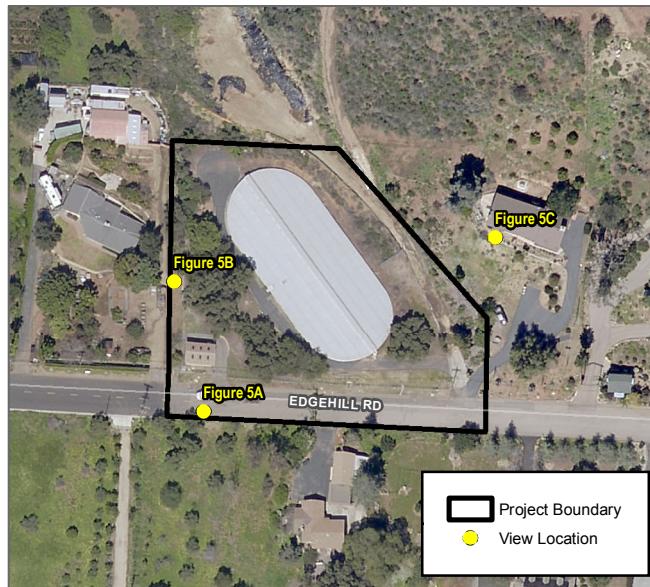


Proposed - Landscaping at Planting



Proposed - Landscaping at Maturity

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Existing



Proposed - Landscaping at Planting



Proposed - Landscaping at Maturity

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Appendix A

Air Quality and Greenhouse Gas Emissions Memorandum

Appendix B

Biological Resources Technical Letter Report

Appendix C1

Cultural Resources Report

Appendix C2

Historical Resources Technical Report

Appendix D

Geotechnical Investigation

Appendix E1

Preliminary Environmental Site Assessment

Appendix E2

Asbestos Building Inspection, Lead-Based Paint Testing, and Bulk Sampling of Treated Wood

Appendix F

Noise and Vibration Technical Memorandum

Appendix G

Responses to Comments

Appendix H

Mitigation, Monitoring, and Reporting Program