Draft Mitigated Negative Declaration

Poway Pump Station
Secondary Power Source Project

AUGUST 2013

PREPARED FOR:
Ramona Municipal Water District
105 Earlham Street
Ramona, CA 92065
Contact: Ricardo Soto

PREPARED BY:
DUDEK
605 Third Street
Encinitas, CA 92024
Contact: Sarah Lozano

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1.0 INTRODUCTION

1.1 Project Overview

The Ramona Municipal Water District (RMWD) is a special governmental district formed in 1956 to provide the residents of 75 square miles of unincorporated San Diego County with potable water service. Organized under the Municipal Water District Law of 1911, Water Code Section 71000, the RMWD provides water, sewer, recycled water, fire protection, emergency medical services, and park services. The RMWD currently operates and maintains the Poway Pump Station, which provides potable and non-potable water to the unincorporated community of Ramona. The RMWD plans to construct improvements to the energy sources powering Poway Pump Station. In an effort to improve the station's operational capabilities and power reliability and to increase energy savings, the RMWD plans to replace one of the seven existing electric motors that power the treated-water portion of the Poway Pump Station with one natural-gas-powered engine. To fuel the proposed natural-gas-powered engine, the RMWD, in concert with San Diego Gas & Electric (SDG&E), would install a 4-inch-diameter, 7,390-foot-long polyethylene natural gas pipeline in order to extend existing natural gas service in Espola Road to the Poway Pump Station. The natural gas line would be located within the existing roadway, which is located within the RMWD's existing 40-foot-wide easement. A gas meter station would be installed at the end of the lateral within the pump station site to serve as a connection between the pipeline and the engine. The Poway Pump Station Secondary Power Source Project (proposed project) would create a secondary power source for the Poway Pump Station.

1.2 CEQA Authority to Prepare a Mitigated Negative Declaration

The RMWD is the lead agency pursuant to the California Environmental Quality Act (CEQA) and is responsible for approving the project and certifying the CEQA document. The RMWD has determined that a mitigated negative declaration (MND) is the appropriate environmental document to be prepared in compliance with CEQA. This finding is based on the Environmental Checklist/Discussion of Environmental Evaluation (Chapters 3.0 and 4.0 of this document) prepared for this project. As provided for by CEQA Section 21064.5, an MND may be prepared for a project subject to CEQA when an initial study (IS) has identified potentially significant effects on the environment, but (1) revisions in the project plans or proposals made by, or agreed to by, the Applicant before the proposed MND and IS are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur; and (2) there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment (California Public Resources Code, Section 21000 et seq.).

This draft MND has been prepared by the RMWD as the lead agency and in conformance with Section 15070, subsection (a), of the CEQA Guidelines (14 CCR 15000 et seq.). The purpose of the MND and the Environmental Checklist/Discussion of Environmental Evaluation is to determine the potential significant impacts associated with the construction and operation of the proposed project and incorporate mitigation measures as necessary to reduce or eliminate the significant or potentially significant effects of the project.

1.3 Other Agencies That May Use the MND and Initial Study

This MND is intended to be used by responsible and trustee agencies that may have an interest in reviewing the project. At the time of publication, the RMWD does not believe permits or authorizations required from other agencies or individuals would require such agencies' or individuals' need to comply with CEQA. Therefore, it is assumed that no other agencies or individuals would use this MND for their actions or decisions.

1.4 Public Review Process

In accordance with CEQA, a good faith effort has been made during the preparation of this MND to contact affected agencies, organizations, and persons who may have an interest in this project.

In reviewing the MND and Environmental Checklist/Discussion of Environmental Evaluation, affected public agencies and the interested public should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment.

Comments may be made on the MND in writing before the end of the public review period. A 30-day review and comment period from August 13, 2013, to September 11, 2013, has been established, in accordance with Section 15072(a) of the CEQA Guidelines (14 CCR 15000 et seq.). Following the close of the public comment period, the RMWD will consider this MND and comments thereto in determining whether to approve the proposed project.

Written comments on the MND should be sent to the following address by 4:00 p.m., September 11, 2013.

Ramona Water District
Attention: Ricardo Soto
105 Earlham Street
Ramona, California 92065
Phone: 760.788.2202
Fax: 949.643.2489
email: rsoto@rmwd.org

2.0 PROJECT DESCRIPTION

2.1 Project Background

The Ramona Municipal Water District (RMWD) is located within San Diego County, California, and provides water, sewer, recycled water, fire protection, emergency medical services, and park services to over 40,000 customers. The RMWD was formed in August 1956 under the Municipal Water District Law of 1911, Water Code Section 71000. The RMWD is governed by a five-member board of directors who serve staggered 4-year terms of office, representing five geographical divisions. The RMWD boundaries encompass approximately 45,800 acres (75 square miles) in the unincorporated area of San Diego County (see Figure 1, Regional Map). The RMWD provides services to approximately 7,000 urban parcels and 3,000 rural parcels, located primarily in the unincorporated community of Ramona.

The RMWD service area encompasses the Santa Maria Valley and surrounding hills with elevations ranging from 1,300 feet to 2,100 feet above mean sea level (amsl). In general, elevations increase from west to east, with the higher elevations located in the eastern portion of the RMWD service area. The RMWD service area is bordered by City of Poway and City of Escondido to the west, Valley Center and Wynola Water District to the north, Padre Dam Municipal Water District and Lakeside Water District to the south, and the Santa Teresa Community Services District to the east.

In an effort to improve the station's operational capabilities and power reliability and to increase energy savings, the RMWD plans to replace one of the seven existing electric motors that power the treated-water portion of the Poway Pump Station with one natural-gas-powered engine. To fuel the proposed natural-gas-powered engine, the RMWD, in concert with San Diego Gas & Electric (SDG&E), would install a 4-inch-diameter, 7,390-foot-long polyethylene natural gas pipeline in order to extend existing natural gas service in Espola Road to the Poway Pump Station The natural gas line would be owned and operated by SDG&E and located within a 6-foot-wide SDG&E easement located within the RMWD's existing 40-foot-wide easement. The natural gas line would be installed entirely within the existing access road that follows the existing RMWD easement. A gas meter station would be installed at the end of the lateral within the pump station site to serve as a connection between the pipeline and the engine. The Poway Pump Station Secondary Power Source Project (proposed project) would create a secondary power source for the Poway Pump Station.

2.2 Project Location

The Poway Pump Station is located at the eastern edge of the City of Poway, in the Blue Sky Ecological Reserve. Lake Ramona is located to the north and Lake Poway to the south. The

proposed pipeline would be located within an existing unpaved access road that follows the RMWD 40-foot-wide easement that is located south of and generally parallels the Green Valley Truck Trail within the Blue Sky Ecological Reserve. The project site is within Section 30, Township 13 south, and Range 1 west of U.S. Geological Survey (USGS) 7.5-minute Escondido topographic quadrangle. Latitude and longitude of the center of the alignment is N 33°00'57" and W 117°01'02" (see Figure 2, Vicinity Map).

The Poway Pump Station is located on land owned by the RMWD. The existing RMWD 40-foot-wide utility and access easement, which generally coincides with the dirt access road, traverses land owned by the City of Poway, the County of San Diego, and the State of California (in association with the Blue Sky Ecological Reserve) (see Figure 3, Proposed Project). Elevation of the site ranges from approximately 715 feet amsl along the pipeline route to 800 feet amsl at the Poway Pump Station.

2.3 Project Description

The existing treated-water portion of the Poway Pump Station operates seven electric motors varying in power from 400 to 900 horsepower that are used to operate vertical-turbine water pumps. Depending on the service area's water demand, at least one of the motors operates continuously. The RMWD plans to replace one of the existing motors with one natural-gas-powered engine. The new natural gas engine would be 900 horsepower. It is anticipated that ultimately the new engine would operate almost continuously based on electrical power rates versus natural gas pricing. The new engine would be mounted on a 15-foot-wide by 25-foot-long by 4-foot-tall concrete foundation adjacent to the existing pump cans. The engine would be installed with a noise-attenuation enclosure and equipped with nonselective catalytic reduction (i.e., three-way catalyst) for control of air pollutants. A new gas meter station would be installed at the pump station site to meter the RMWD's use of SDG&E-supplied natural gas. SDG&E would own and maintain the gas pipe lateral from Espola Road to the meter pad. RMWD would own and maintain the lateral from the meter pad to the engine. All improvements planned at the pump station are shown on Figure 4, Proposed Pump Station Improvements.

The new natural-gas-powered engine would be supplied by a new natural gas pipeline within the existing RMWD water pipeline easement that traverses the Blue Sky Ecological Reserve. A new 6-foot-wide easement would be granted to SDG&E, centered on the new natural gas pipeline, to provide for maintenance. The SDG&E natural gas pipeline easement would be fully contained within the existing RMWD water pipeline easement.

The natural gas pipeline would be owned and operated by SDG&E and would consist of a 4-inch-diameter, 7,390-foot-long polyethylene pipeline installed inside a 6-foot-wide SDG&E easement within the existing dirt access road/RMWD easement. The 4-inch natural gas pipeline

would be installed approximately 34 inches underground, with the exception of two culvert crossings. The first culvert crossing would necessitate a depth of approximately 5 to 6 feet to cross beneath the existing culvert. The second culvert crossing would result in a depth of approximately 2 to 3 feet to cross above the existing culvert. The new pipeline would connect to existing SDG&E infrastructure within Espola Road and terminate at a new meter pad on RMWD property at the pump station (see Figures 5a and 5b, Proposed Pipeline).

For construction planning purposes, the pipeline trench would be approximately 18 inches in width and an average of 41 inches deep. To effectively dig the trench, install the pipeline, and backfill the trench, the RMWD would use the width of the existing access roadway, which averages approximately 15 feet and is located entirely within the existing RMWD 40-foot-wide easement. The trench would generally be centered 3 feet north of the southern edge of the access road. All project impacts would be limited to the RMWD 40-foot-wide easement, all construction vehicles would park and deliver material within the RMWD easement, and any trench material that needs to be temporarily stockpiled or equipment/supplies that need to be stored would be contained within the RMWD easement or at the Poway Pump Station.

Trenchless pipe installation (water jetting or similar) would be used to install the pipeline beneath an existing storm drain culvert located approximately 5,650 feet from Espola Road. This trenchless boring technique would necessitate establishment of two bore pits on either side of the culvert. A bore rig would be installed in one of the pits to establish the pipeline alignment. The boring mechanism would use potable water from an imported water truck and through force, jet the water beneath the culvert to establish a pipeline tunnel. Excess bore water would be discharged into the nearby drainage. Hydraulic pipe jacking (jack and bore) may also be used as a means of pipe installation. Figures 6a through 6d depict the trenchless boring locations at each jurisdictional drainage crossing.

The overall project is expected to take approximately 120 working days to construct and would necessitate a crew of five to six workers. The first phase of construction includes construction of the pipeline from Espola Road to the proposed SDG&E gas meter station, which would entail use of a hand jack, backhoe, excavator, Ditch Witch, loader, and utility trucks. This phase would take approximately 40 days to complete. Pipeline construction would occur in intervals of approximately 300 feet of open trench at a time; a Ditch Witch would be used to dig the trench, in which the 4-inch-diameter polyethylene natural gas pipeline would be placed by SDG&E crews. Stockpiled soil would then be backfilled over the trench with a backhoe and compacted. If rock is encountered, a hand jack may be used to establish the trench; if necessary, the alignment may be adjusted to avoid the rock. Prior to completing the pipeline work, RMWD would restore the pipeline alignment area to its pre-construction condition. A 5-foot by 10-foot concrete gas meter pad would be constructed approximately 100 feet from the proposed natural gas engine. Termination of the natural gas pipeline from Espola Road to the meter pad would conclude phase 1 of the project.

The second phase of construction would entail installation of the SDG&E gas meter, the lateral pipeline to the natural gas engine, the new natural-gas-powered engine, the enclosure and associated concrete equipment pad, and a new retaining wall. To accommodate the new engine next to the existing pumps, additional level area would be created by grading the slope northwest of the existing pumps up to the current grade of the existing pump pad (approximately 750 feet amsl). A new retaining wall approximately 20 feet high and 70 feet long would be constructed along the bottom of the existing slope to facilitate the new grading. Approximately 500 cubic yards of fill would be imported for the required grading, and construction would necessitate a backhoe for excavation and backfill and a concrete mixing truck for construction of the new retaining wall. The grading work and retaining wall construction would take approximately 60 days to complete. One 15-foot by 25-foot by 4-foot-tall concrete pad would be constructed to support the engine. Foundation establishment would necessitate a backhoe for pad excavation and backfill as well as a concrete-mixing truck, and would take approximately 20 days. Once the pad is established, a crane would be used to install the new engine. This second phase of construction would take approximately 80 days for completion, including installation and testing.

2.4 Discretionary Actions

In conjunction with the RMWD's formal actions regarding approval of the project and certification of this Mitigated Negative Declaration (MND), the following additional actions are being taken or will be taken by other entities:

- Final project approvals by the RMWD Board of Directors
- Approval of the MND by the RMWD Board of Directors
- Adoption of the Mitigation Monitoring and Reporting Program (MMRP) (as disclosed in the MND) by the RMWD Board of Directors
- Establishment of a temporary construction easement from adjacent property owners to be used during construction
- Establishment/granting of a 6-foot-wide easement to SDG&E.

In addition to the RMWD actions, California Department of Fish and Wildlife (CDFW), County of San Diego, and City of Poway (underlying land owners) will grant a temporary construction easement to SDG&E for purposes of pipeline construction and then a permanent easement once construction has been completed and the exact location of the pipeline within the existing RMWD easement can be surveyed and documented.

The San Diego Air Pollution Control District will grant an Authority to Construct and a Permit to Operate for the new natural gas engine.

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FIGURE 1

Regional Map

Poway Pump Station Secondary Power Source Project - Mitigated Negative Declaration

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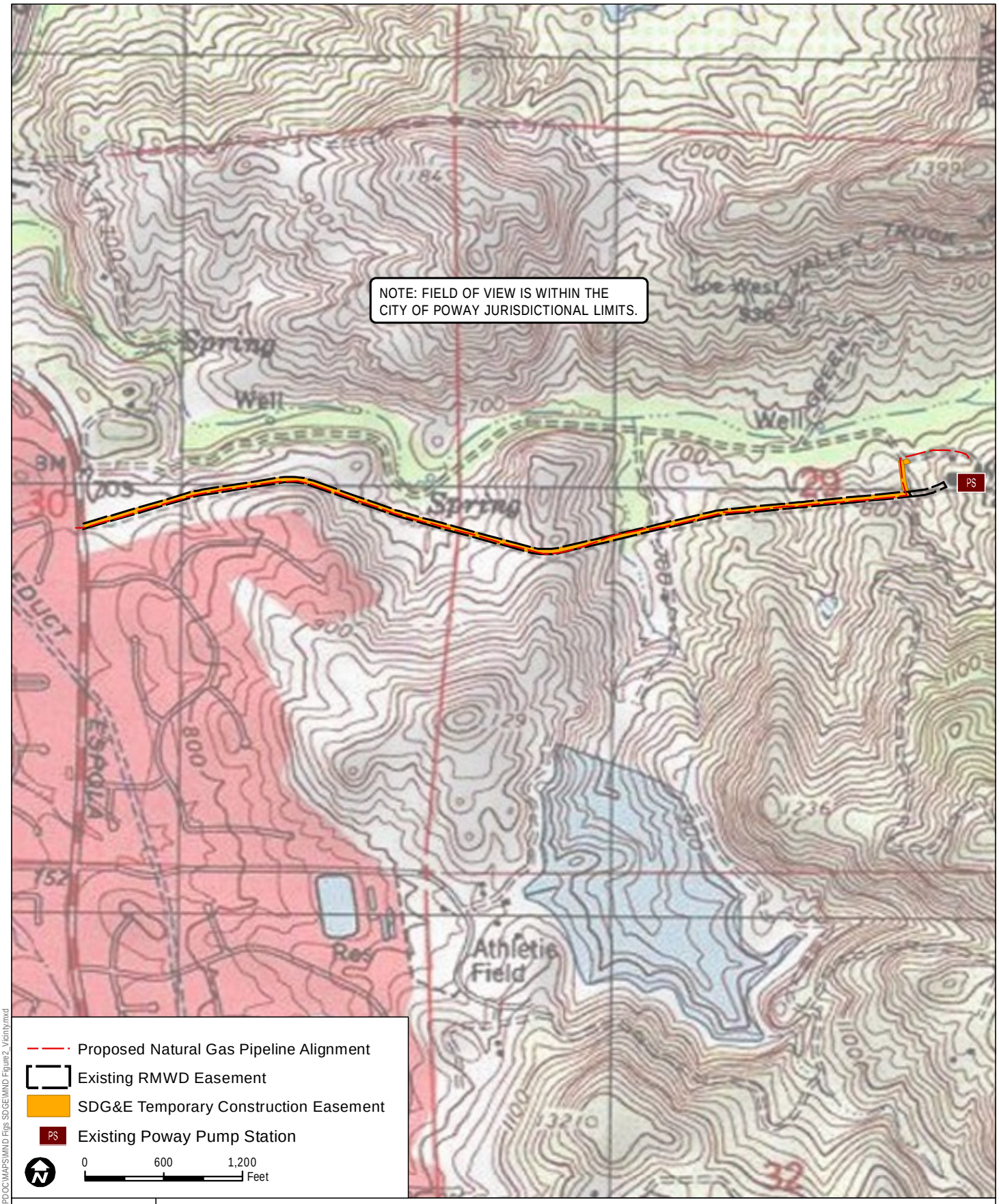

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SOURCE: USGS 7.5-Minute Series Escondido Quadrangle.

FIGURE 2

Vicinity Map

Poway Pump Station Secondary Power Source Project - Mitigated Negative Declaration

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AERIAL SOURCE: BING MAPPING SERVICE

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FIGURE 3

Proposed Project

Poway Pump Station Secondary Power Source Project - Mitigated Negative Declaration

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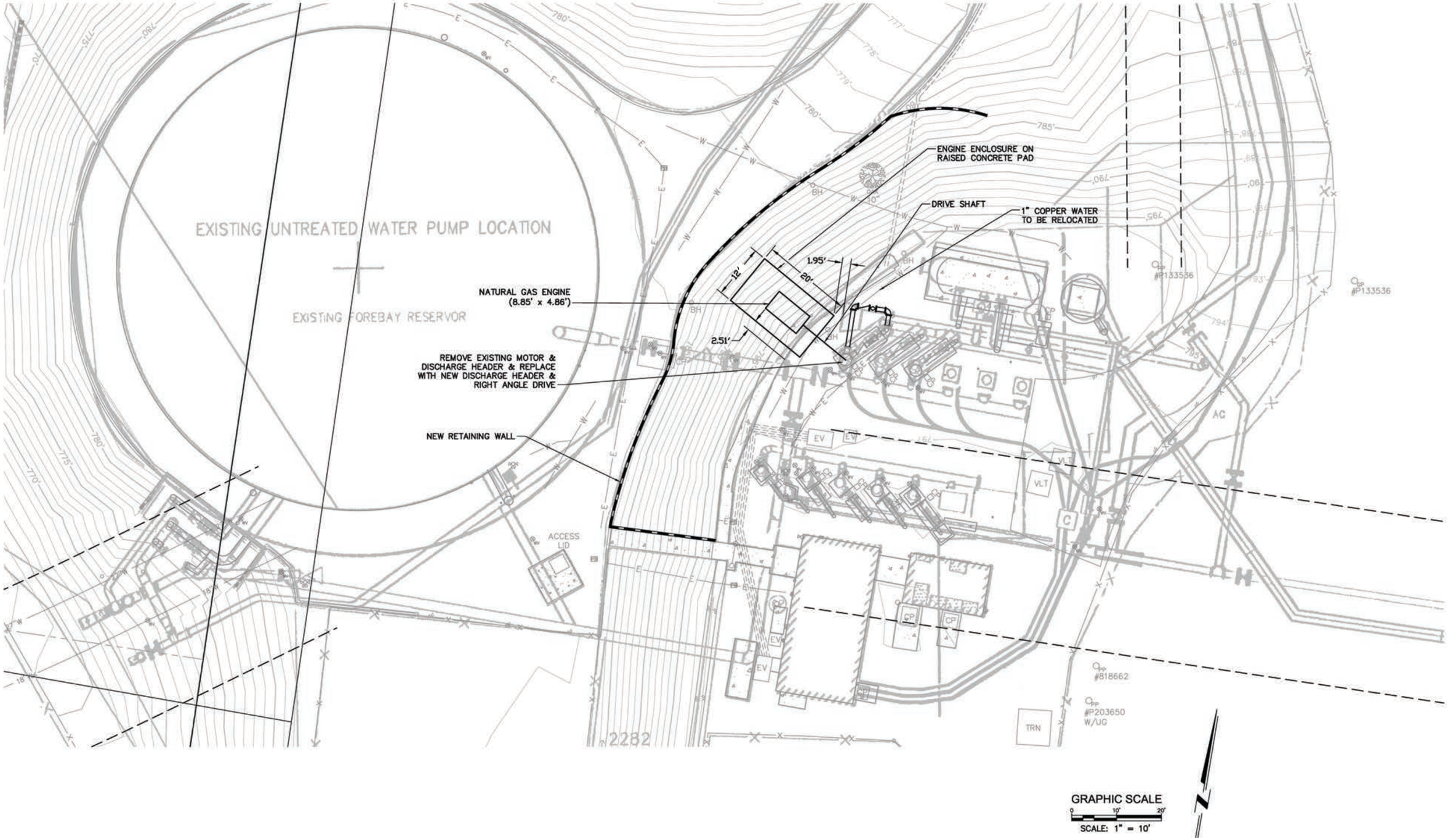

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SOURCE: DUDEK 2013

FIGURE 4
Proposed Pump Station Improvements

Poway Pump Station Secondary Power Source Project - Mitigated Negative Declaration

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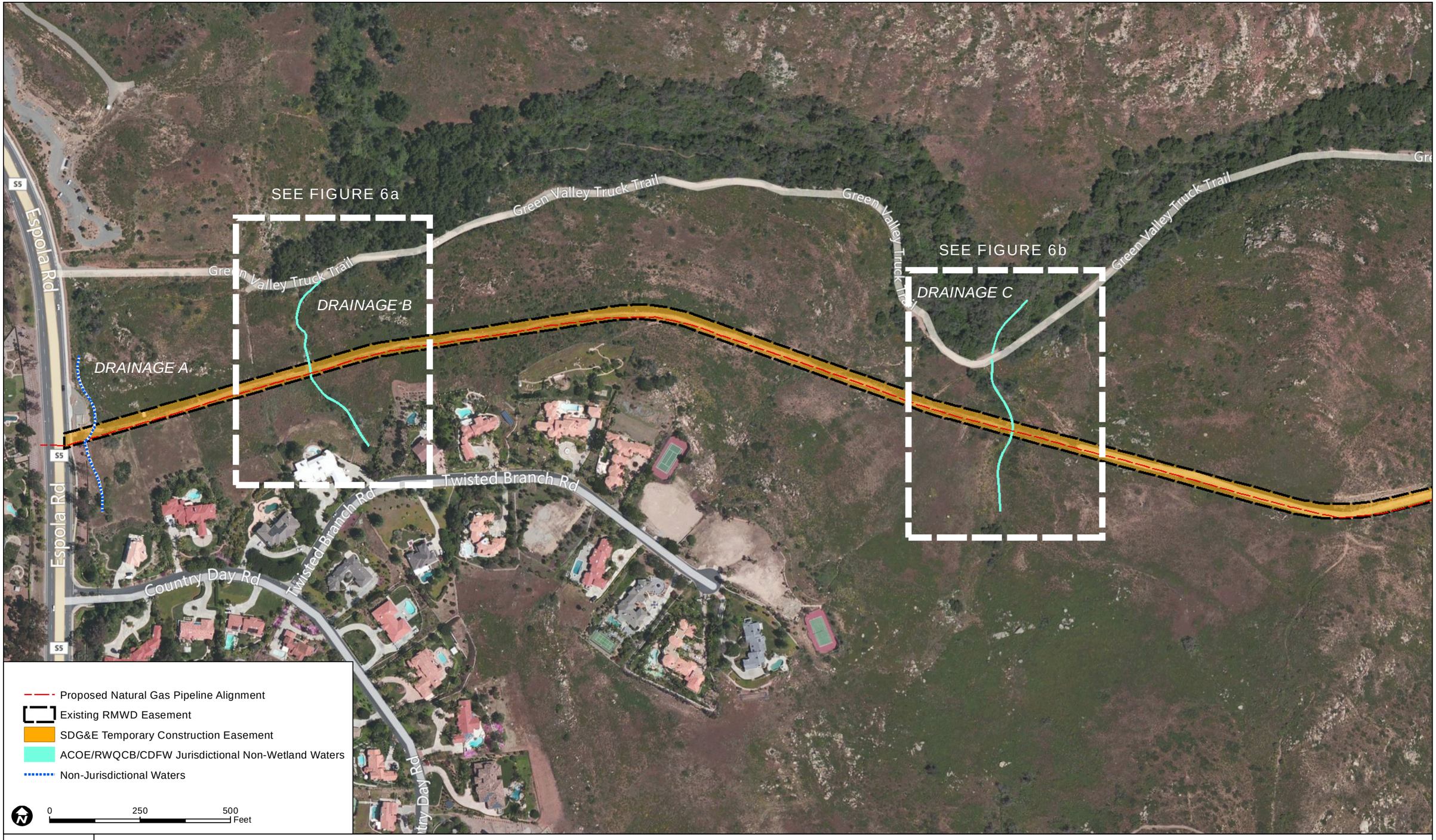

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AERIAL SOURCE: BING MAPPING SERVICE

FIGURE 5a

Proposed Pipeline

Poway Pump Station Secondary Power Source Project - Mitigated Negative Declaration

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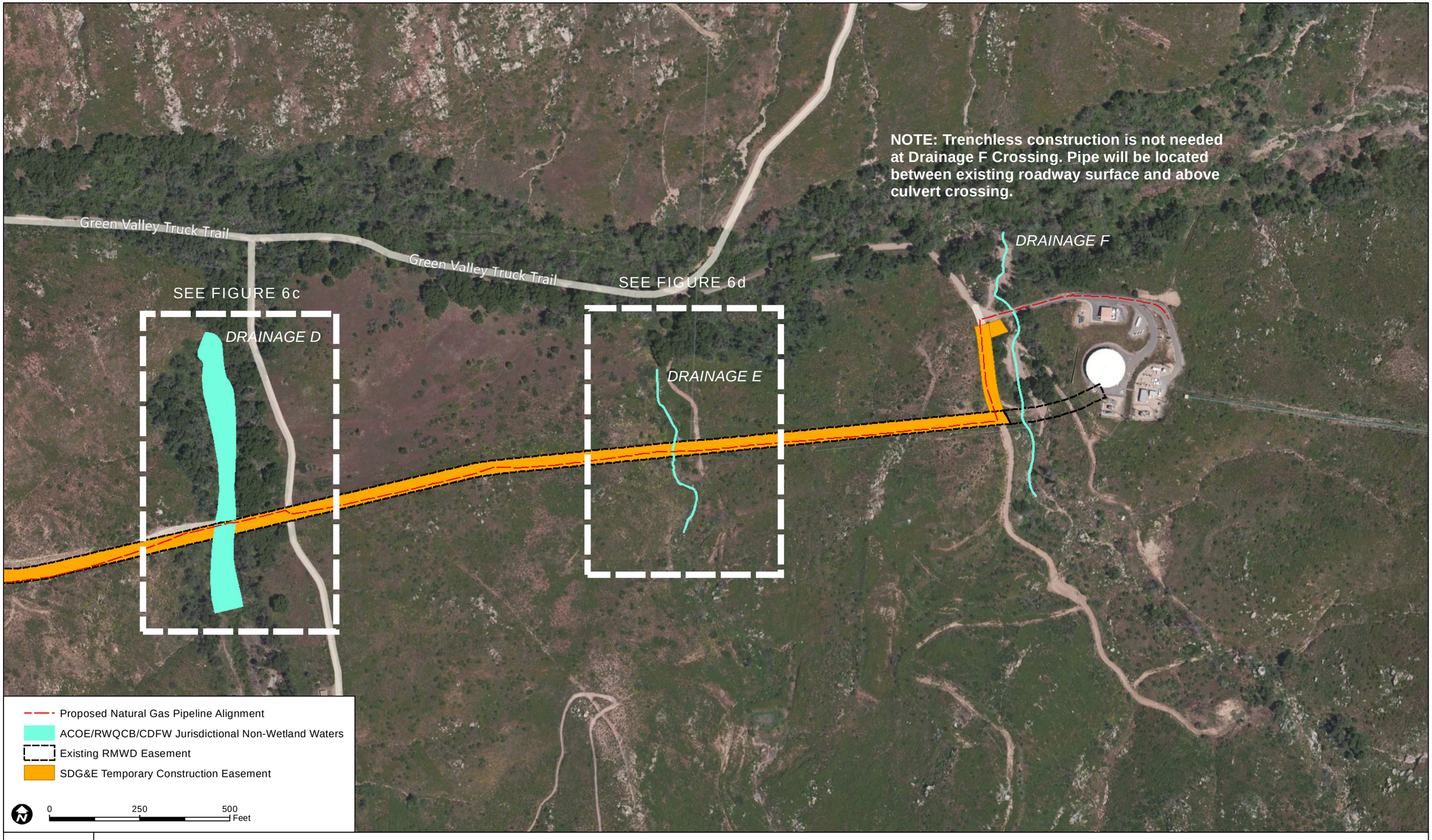

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AERIAL SOURCE: BING MAPPING SERVICE

FIGURE 5b

Proposed Pipeline

Poway Pump Station Secondary Power Source Project - Mitigated Negative Declaration

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SOURCE: BING MAPPING SERVICE

FIGURE 6a

Proposed Drainage Crossing 'B'

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Poway Pump Station Secondary Power Source Project - Mitigated Negative Declaration

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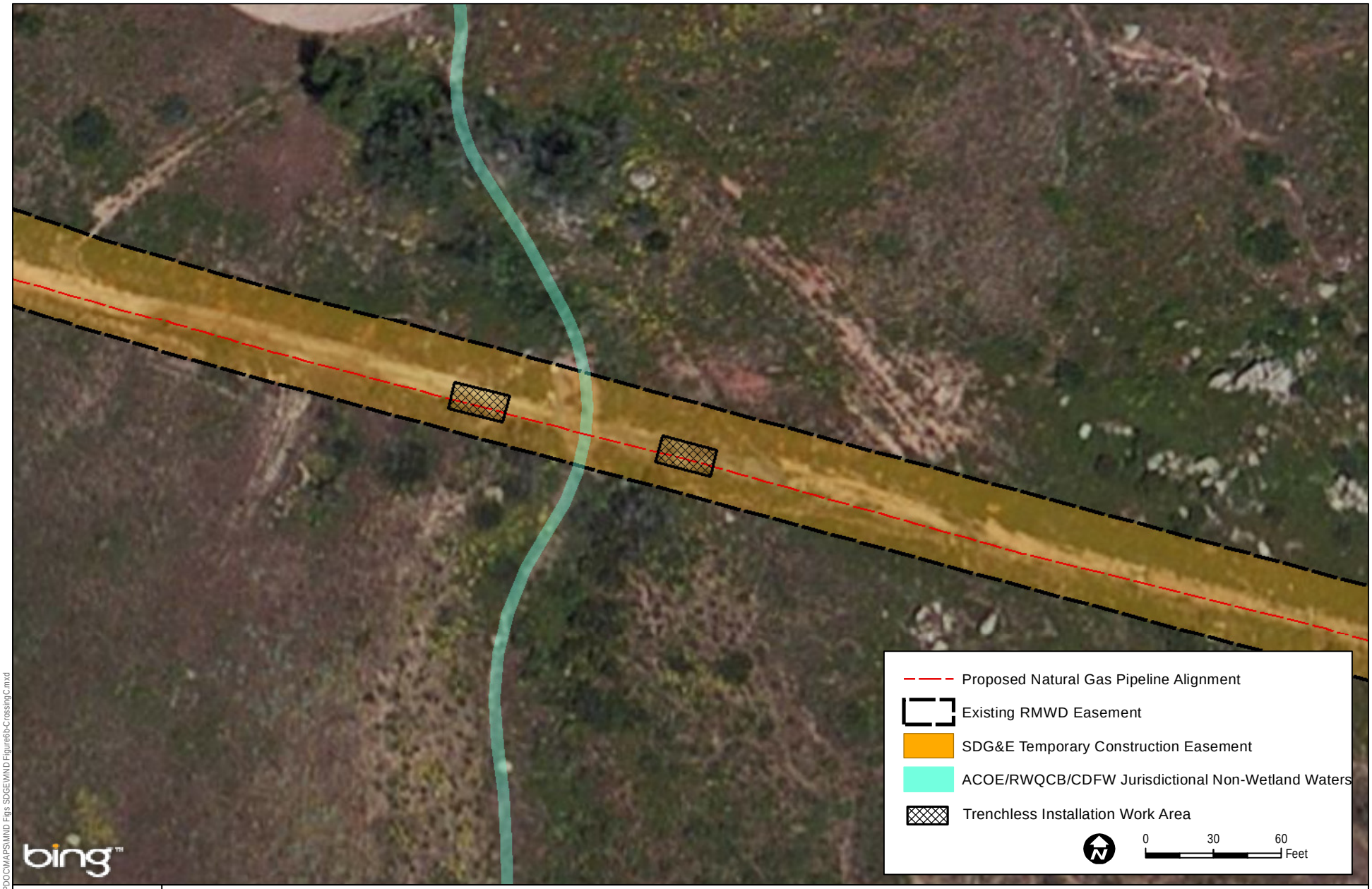

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SOURCE: BING MAPPING SERVICE

FIGURE 6b

Proposed Drainage Crossing 'C'

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Poway Pump Station Secondary Power Source Project - Mitigated Negative Declaration

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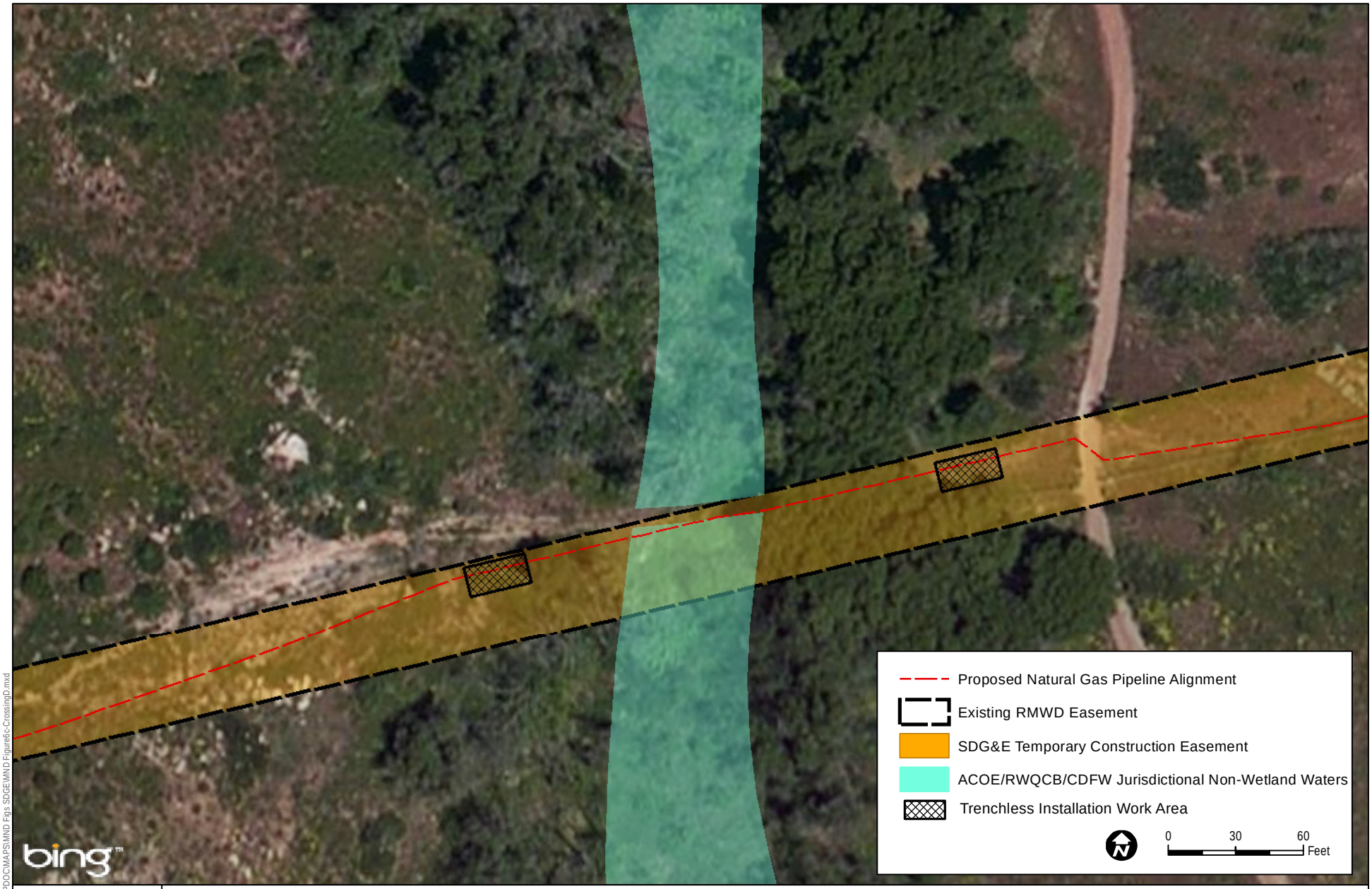

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SOURCE: BING MAPPING SERVICE

FIGURE 6c

Proposed Drainage Crossing 'D'

Poway Pump Station Secondary Power Source Project - Mitigated Negative Declaration

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SOURCE: BING MAPPING SERVICE

FIGURE 6d

Proposed Drainage Crossing 'E'

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Poway Pump Station Secondary Power Source Project - Mitigated Negative Declaration

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3.0 ENVIRONMENTAL CHECKLIST

3.1 Initial Study Checklist

1. **Project title:** Poway Pump Station Secondary Power Source Project
2. **Lead agency name and address:**
   Ramona Municipal Water District
   105 Earlham Street
   Ramona, California 92065
3. **Contact person:**
   Ricardo Soto, Senior Engineer
   760.788.2202
   rsoto@rmwd.org
4. **Project location:** The Poway Pump Station is located at the eastern edge of the City of Poway, in the Blue Sky Ecological Reserve. Lake Ramona is located to the north and Lake Poway is located to the south. The proposed pipeline would be located within an existing dirt access road that is located south of and generally parallels the Green Valley Truck Trail within the Blue Sky Ecological Reserve. The proposed new natural-gas-powered engine would be located at the existing Poway Pump Station. The project site is within Section 30, Township 13 south, and Range 1 west of the U.S. Geological Survey (USGS) 7.5-minute Escondido topographic quadrangle. Latitude and longitude of the center of the alignment is 33°00'57" N and 117°01'02" W (see Figure 2, Vicinity Map).

   The Poway Pump Station is located on land owned by the Ramona Municipal Water District (RMWD). The existing RMWD pipeline easement, which coincides with the dirt access road, traverses land owned by the City of Poway, County of San Diego, and State of California (in association with the Blue Sky Ecological Reserve). Elevation of the site ranges from approximately 715 feet above mean sea level (amsl) along the pipeline route to 800 feet amsl at the Poway Pump Station.
5. **Project sponsor's name and address:**

   Ramona Municipal Water District
   105 Earlham Street
   Ramona, California 92065
6. **General Plan designation:** Open Space–Resource Management (OS-RM)
7. **Zoning:** Open Space–Resource Management (OS-RM)
8. **Description of project:** In an effort to improve the station's operational capabilities and power reliability and to increase energy savings, the RMWD plans to replace one of the

seven existing electric motors that power the Poway Pump Station with one natural-gas-powered engine. To fuel the proposed natural-gas-powered engine, the RMWD, in concert with SDG&E, would install a 4-inch-diameter, 7,390-foot-long polyethylene natural gas pipeline in order to extend existing natural gas service in Espola Road to the Poway Pump Station. The natural gas line would be located within an existing unpaved access road within the RMWD's existing 40-foot-wide easement. A gas meter station would be installed at the end of the lateral within the pump station site to serve as a connection between the pipeline and the engine. The proposed project would create a secondary power source for the Poway Pump Station.

9. **Surrounding land uses and setting:** The Blue Sky Ecological Reserve encompasses approximately 700 acres of natural open space lands and includes the hills, woodlands, and floodplain surrounding Sweamore Creek. Blue Sky Ecological Reserve encompasses the majority of the northern, eastern, and southern portions of the proposed project. Lake Poway is located to the south of the proposed pipeline route. Lake Ramona is located to the east of the existing Poway Pump Station. Single-family residences are located to the southwest and west (along Espola Road) of the proposed pipeline route. The proposed project is within the city limits of the City of Poway.

10. **Other public agencies whose approval is required:** As the designated lead agency, RMWD has assumed responsibility for preparing this document. RMWD will use the information included in this Mitigated Negative Declaration (MND) to consider potential impacts to the physical environment associated with the project when making the decision to approve or deny the project. In addition, other agencies will use the MND and supporting documentation in its decision to issue discretionary permits, including:

    - City of Poway: Granting a 6-foot-wide easement to San Diego Gas & Electric (SDG&E)
    - County of San Diego: Granting a 6-foot-wide easement to SDG&E
    - State of California: Granting a 6-foot-wide easement to SDG&E.

3.2 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.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology and Soils
☐ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials	☐ Hydrology and Water Quality
☐ Land Use and Planning	☐ Mineral Resources	☐ Noise
☐ Population and Housing	☐ Public Services	☐ Recreation
☐ Transportation and Traffic	☐ Utilities and Service Systems	☐ Mandatory Findings of Significance

3.3 CEQA Document 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 the mitigation measures described on an attached sheet have been added to the project. 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 EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature
Mike Metts, District Engineer
Ramona Municipal Water District

August 9, 2013
Date

3.4 Environmental Impacts

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program environmental impact report (EIR), or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
    a. Earlier Analysis Used. Identify and state where they are available for review.
    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures that were incorporated or

refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
   a. The significance criteria or threshold, if any, used to evaluate each question.
   b. The mitigation measure identified, if any, to reduce the impact to less than significant.

3.5 Environmental Checklist

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
5.1. Aesthetics – Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐
5.2. 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 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?	☐	☐	☐	☒

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
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))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
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?	☐	☐	☐	☒
5.3. Air Quality – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐
5.4. 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?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
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 wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
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?	☐	☐	☒	☐
5.5. Cultural Resources – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5?	☐	☐	☒	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐
5.6. Geology and Soils – Would the project:				
a) Expose people or structures to 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?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☐	☒	☐

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
5.7. Greenhouse Gas Emissions – Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐
5.8. 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?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or environment?	☐	☐	☒	☐
e) For a project within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
5.9. Hydrology and Water Quality – Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☒	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐
5.10. Land Use and Planning – Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☒	☐

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
5.11. 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
5.12. Noise – Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
5.13. Population and Housing – Would the project:				
a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
5.14. 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:				
i) Fire Protection?	☐	☐	☒	☐

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
ii) Police Protection?	☐	☐	☒	☐
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒
5.15. 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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
5.16. Transportation/Traffic – Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐
5.17. Utilities and Service Systems – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒
5.18. Mandatory Findings of Significance				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) 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.)	☐	☒	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

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4.0 DISCUSSION OF ENVIRONMENTAL EVALUATION

4.1 Aesthetics

a) Would the project have a substantial adverse effect on a scenic vista?

Less-Than-Significant Impact. The Poway Pump Station Secondary Power Source Project (proposed project) is located within the borders of the Blue Sky Ecological Reserve, which consists of a natural landscape that is accessible to the viewing public. Vista points that afford panoramic views of the reserve, including the project site in the southern end of Blue Sky Ecological Reserve, include varying lookout points along Green Valley Hiking Trail, along Lake Poway Trail, and atop Mount Woodson. The proposed project would involve the construction of linear, underground natural gas pipeline beneath an existing dirt access roadway within the Blue Sky Ecological Reserve. The pipeline would be approximately 34 inches underground and would not be visible from surrounding areas. One natural-gas-powered engine will replace one of the seven existing electrical engines at the Poway Pump Station site. The engine would be installed within a noise enclosure, which would also provide visual shielding for the engine. A gas meter station would also be installed within the pump station site. These new facilities would be consistent with existing facilities on the site and would not represent a discernible new use of the pump station site; therefore, impacts to scenic vistas would be less than significant.

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

Less-Than-Significant Impact. No state scenic highways are located in the vicinity of the proposed project. The project is located adjacent to Espola Road. Per the County of San Diego General Plan Scenic Highway Element, Espola Road is designated as a scenic route. Espola Road is considered a gateway to the City of Poway's most significant park land area, which includes Lake Poway and the Blue Sky Ecological Reserve (City of Poway 2010). Construction activity associated with the proposed project would be visible from this highway; however, any impacts would be temporary and restored to their pre-construction condition as soon as construction has been completed. Upon completion, the proposed project would not be visible from this road, nor would it damage any scenic resources within the viewshed of this highway. No trees, rock outcroppings, or historical buildings would be impacted by the proposed project. Therefore, impacts would be less than significant.

c) Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

Less-Than-Significant Impact. The project site is currently developed with equipment and other infrastructure related to powering the Poway Pump Station. The light colors of the buildings and developed character of the site are compatible with the light colors of the surrounding dirt roads and rock outcroppings. The gas metering station would occupy a small portion of the pump station, while the natural-gas-powered engine would replace one existing electric engine. The gas metering station and natural gas engine would be similar in design and character to the existing pump station facilities and would appear contiguous to other development on the site. Therefore, the project would not substantially change the visual character of the site and its surroundings; impacts would be less than significant.

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

Less-Than-Significant Impact. The proposed pipeline route does not contain roadway lighting. Lighting would not be added to the roadway as a result of the pipeline construction. No portion of the pipeline would be constructed during nighttime hours and therefore temporary nighttime lighting would not be necessary.

The pump station site is currently affixed with nighttime lighting for evening operations and safety. The proposed project would not require any additional lighting sources. Additionally, the new facilities to be installed would be constructed of painted metal and concrete and would not contain glass or other reflective surfaces with the potential to produce glare. The pumps and other associated equipment would be coated with non-reflective paint. Therefore, the proposed project would result in a less-than-significant impact related to the introduction of a new source of light and glare.

4.2 Agriculture and Forestry Resources

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?

No Impact. According to the San Diego County Important Farmland Map, the proposed project site and the areas immediately to the north, east, and south are designated as Other Lands, while the area to the immediate west is designated as Urban and Built Up Land (State of California, Department of Conservation 2012).

The site is not currently used for agriculture, and no existing agricultural uses would be displaced by the project. Therefore, an existing agricultural use would not be converted to a non-agricultural use; no impacts would result.

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

Less-Than-Significant Impact. The proposed project site is zoned Open Space–Resource Management (OS-RM), which can include agricultural lands. Limited agricultural activities may be allowed with approval of the city council; however, no agricultural uses are present on, within, or surrounding the project site. Per the *Williamson Act 2012–2013 San Diego County Map*, the proposed project site is not subject to a Williamson Act contract (State of California 2013). Therefore, impacts would be less than significant.

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))?

No Impact. As described in the response to question (b) in Section 4.2, the proposed project site is zoned OS-RM per the City of Poway's zoning code, which does not allow timberland production. No forestland or timberland is designated on the project site. Therefore, the project would not result in loss of forest land, timberland, or areas of timberland zoned Timberland Production. No impacts would occur.

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

No Impact. As described in the responses to questions (a), (b), and (c) in Section 4.2, the proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. The proposed pipeline and new natural-gas-powered engine would be located within a previously disturbed area that does not support forest land. Therefore, no impacts 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?

No Impact. As described in the responses to questions (a) and (c) in Section 4.2, no portion of the project is located within or adjacent to existing agricultural or forest land areas. Rather, the proposed project site is surrounded by an open space reserve area.

Therefore, the proposed project would not involve a change in the existing environment that could result in the conversion of farmland to non-agricultural use or forest land to a non-forest use; no impacts would occur.

4.3 Air Quality

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

Less-Than-Significant Impact. The emissions that would result from construction and operation of the proposed project are subject to the rules and regulations of the San Diego Air Pollution Control District (SDAPCD). 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 San Diego Air Basin (SDAB). The Regional Air Quality Strategy (RAQS) was initially adopted in 1991, and it is updated on a triennial basis (most recently in 2009). The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for ozone (O_3). The RAQS relies on information from the California Air Resources Board (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 San Diego County and the cities in the county as part of the development of their general plans.

If a project proposes development that is greater than that anticipated in the local plan and SANDAG's growth projections, the project might be in conflict with the RAQS and may contribute to a potentially significant cumulative impact on air quality. The proposed project would not change the designation of the project site, which is currently designated as Open Space–Resource Management (OS-RM) under the City of Poway's General Plan. The project would be consistent with existing uses related to water conveyance on the site and would not conflict with or propose to change existing land uses or conflict with applicable policies in the City of Poway's General Plan. The proposed project would neither increase population nor would it require additional employment. Therefore, the proposed project would not increase development density and would be considered consistent at the regional level with the underlying growth forecasts in the RAQS. Furthermore, as indicated below, the stationary source associated with the proposed project would comply with SDAPCD rules. As a result, impacts from a conflict with an applicable air quality plan or potential obstruction its implementation would be less than significant.

b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less-Than-Significant Impact. The SDAPCD does not provide quantitative thresholds for determining the significance of construction or mobile source-related impacts. However, as part of its air quality permitting process, the SDAPCD has established thresholds in Rule 20.2 requiring the preparation of air quality impact assessments for permitted stationary sources. The SDAPCD sets forth quantitative emission thresholds below which a stationary source would not have a significant impact on ambient air quality. Although these thresholds do not generally apply to mobile sources or general land development projects, for comparative purposes these levels may be used to evaluate the increased emissions that would be discharged to the SDAB from proposed development projects. For California Environmental Quality Act (CEQA) purposes, project-related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table 4.3-1, San Diego Air Pollution Control District Air Quality Significance Thresholds, are exceeded during construction or operation. In the event that emissions exceed these thresholds, modeling would be required to demonstrate that the project's total air quality impacts result in ground-level concentrations that are below the California Ambient Air Quality Standards (CAAQS) and the National Ambient Air Quality Standards (NAAQS), including appropriate background levels.

Table 4.3-1
San Diego Air Pollution Control District Air Quality Significance Thresholds

Construction Emissions	
Pollutant	*Total Emissions (Pounds per Day)*
Respirable particulate matter (PM_{10})	100
Fine particulate matter ($PM_{2.5}$)	55
Oxides of nitrogen (NO_x)	250
Sulfur oxides (SO_x)	250
Carbon monoxide (CO)	550
Volatile organic compounds (VOCs)	75*

Source: County of San Diego 2007.
*Threshold for VOCs based on the threshold of significance for VOCs from the South Coast Air Quality Management District for the Coachella Valley.

Construction Emissions

Construction of the proposed project would result in a temporary addition of pollutants to the local airshed caused by soil disturbance, dust emissions, and combustion pollutants

from on-site construction equipment, as well as from off-site personal vehicles and trucks hauling construction materials. Oxides of nitrogen (NOx) and carbon monoxide (CO) emissions would result primarily from the use of construction equipment and motor vehicles. Fugitive dust (PM10 and PM2.5) emissions would primarily result from grading and site preparation activities. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions.

Emissions from the construction phase of the project were estimated using the California Emissions Estimator Model (CalEEMod) Version 2011.1.1, available online (www.caleemod.com). For the purposes of estimating construction emissions, it was assumed that the construction of the proposed project would commence in October 2013. Construction was assumed to occur 5 days a week over an approximately 120-day period, consisting of two primary phases. Trenching for pipeline installation and constructing the gas meter pad would occur in the first phase and was assumed to last approximately 40 days in total. The second phase of construction would include trenching for pipeline installation between the gas meter pad and the engine, foundation construction for the engine pad, and installation of the natural-gas-powered engine, which would occur over a period of approximately 80 days. Construction using open trenching would involve the operation of tractors/loaders/backhoes, an excavator, a trencher, and a jackhammer as necessary. The portions requiring trenchless pipe installation were assumed to operate a bore-and-drill rig and a water truck. Paving equipment, cement and mortar mixers, and a grader were assumed to be operated during foundation construction. Installation of the natural-gas-powered engine was assumed to include the operation of a construction crane. An average of five to six workers would be on site each day.

To estimate a maximum daily, or worst-case, scenario, it was assumed that the full amount of potential overlap between construction activities would occur for each phase of construction. Details of the construction emission assumptions and calculations are included in Appendix A. Table 4.3-2, Estimated Maximum Daily Construction Emissions, shows the estimated maximum unmitigated daily construction emissions associated with the construction of the proposed project.

Table 4.3-2
Estimated Maximum Daily Construction Emissions (pounds/day)

	VOCs	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Maximum daily emissions	6.67	48.64	31.17	0.06	3.68	2.95
Emission threshold	75	250	550	250	100	55
Threshold exceeded?	No	No	No	No	No	No

Note: See Appendix A for complete results.

As shown in Table 4.3-2, the maximum daily criteria air pollutant emissions during construction of the proposed project would not exceed the SDAPCD significance thresholds. Additionally, the proposed project would comply with SDAPCD Rule 50 (Visible Emissions), Rule 51 (Nuisance), Rule 55 (Fugitive Dust), and Rule 67.0 (Architectural Coatings) during construction through use of best management practices (BMPs) and use of compliance coatings.

Operation Emissions

Operation of the proposed project would include the use of a new 900-horsepower natural-gas-powered engine equipped with nonselective catalytic reduction; specifically, a Miratech three-way catalyst, which would reduce NO_x, VOC, and CO emissions (see Miratech Application & Performance Warranty Data in Appendix A). Fuel to the new natural-gas-powered engine would be supplied by a new 4-inch-diameter natural gas pipeline that would be owned and operated by San Diego Gas & Electric (SDG&E). No substantial maintenance at the pump station is anticipated. As a result, the proposed project is not expected to increase the number of delivery or employee vehicles or cause an increase in emissions from motor vehicles. For the purpose of estimating the maximum daily, or worst-case, scenario, it was assumed that the new natural-gas-powered engine would operate 24 hours per day, year-round. Emissions from the natural-gas-powered engine were estimated using the Miratech performance data (Miratech 2013) and Section 3.2, "Natural Gas-Fired Reciprocating Engines," of the U.S. Environmental Protection Agency's (EPA's) *Compilation of Air Pollutant Emission Factors* (EPA 2000). Table 4.3-3, Estimated Maximum Daily Operational Emissions, shows the estimated maximum daily operational emissions based on this operating schedule.

Table 4.3-3
Estimated Maximum Daily Operational Emissions (pounds/day)

	VOCs	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Maximum daily emissions	6.67	6.67	94.76	0.54	3.34	3.34
Emission threshold	*75*	*250*	*550*	*250*	*100*	*55*
Threshold exceeded?	No	No	No	No	No	No

Notes: See Appendix A for complete results.

As shown in Table 4.3-3 above, operation of the proposed project would not exceed the SDAPCD significance thresholds for criteria air pollutants.

The SDAPCD New Source Review Requirements for Best Available Control Technology (BACT) would apply to the new natural-gas-powered engine if the

emissions of VOCs, NO_x, PM, and SO_x were to exceed 10 pounds per day (BACT for CO is not required by the SDAPCD). To reduce the emissions of VOCs, NO_x, and CO the Ramona Municipal Water District (RMWD) would install a Miratech three-way catalyst on the new natural-gas-powered engine. As shown in Table 4.3-3, the new natural-gas-powered engine would have a potential to emit less than 10 pounds per day for VOCs, NO_x, PM, and SO_x. As a result, the new natural-gas-powered engine would not be required to meet the BACT requirements.

While the engine would not be required to meet BACT requirements, Table 4.3-4, Gas-Fired Engine BACT Emission Rate Limits, shows the emission rates for VOC, NO_x, and PM for rich-burn gas-powered reciprocating internal combustion engines compared to the applicable BACT "achieved-in-practice" emission rates.[1]

Table 4.3-4
Gas-Fired Engine BACT Emission Rate Limits (g/bhp-hr)

	VOC	NO_x	PM
Engine emissions with catalyst	0.14	0.14	0.07
BACT achieved-in-practice emission rate	0.15	0.15	0.1
Threshold exceeded?	No	No	No

Source: County of San Diego 2011a; Appendix A.
g/bhp-hr = grams of pollutant per brake horsepower hour

As shown in Table 4.3-4, the new natural-gas-powered engine would meet the BACT achieved-in-practice emission rates for VOCs, NO_x, and PM. The BACT Guidelines also specify an achieved-in-practice level for sulfur oxides (SO_x) that requires the use of a low-sulfur fuel of 10 grains per 100 cubic feet of natural gas. The new natural-gas-powered engine would be supplied with natural gas from SDG&E that meets California Public Utilities Commission (CPUC) requirements. The use of CPUC-regulated natural gas would comply with the BACT achieved-in-practice emission rate limit for SO_x.

SDAPCD Rule 69.4.1, Stationary Reciprocating Internal Combustion Engines – Best Available Retrofit Control Technology (BARCT) emission concentration limits would also apply to the new natural-gas-powered engine as part of the proposed project. As previously stated, the new natural-gas-powered engine would be equipped with a Miratech three-way catalyst to reduce VOC, NO_x, and CO emissions. The proposed engine emissions as well as the emission concentration limits in Rule 69.4.1 for VOCs, NO_x, and CO are shown in Table 4.3-5, Rule 69.4.1 Emission Limits.

[1] These rates have been achieved or demonstrated in practice for the specific equipment category (e.g., rich-burn reciprocating internal combustion engines).

Table 4.3-5
Rule 69.4.1 Emission Limits
(parts per million by volume, dry, corrected to 15% oxygen)

	VOC	NO_x	CO
Engine emissions with catalyst	30	11	246
Rule 69.4.1 emission limits	250	25	2,500
Threshold exceeded?	No	No	No

Source: County of San Diego 2000; Appendix A.

Table 4.3-5 shows that the controlled engine emissions would not exceed the Rule 69.4.1 BARCT emission limits.

The proposed project would comply with the applicable air quality standards including the SDAPCD criteria pollutant thresholds, the New Source Review Requirements for BACT, and the Rule 69.4.1 BARCT emission limits. Therefore, the proposed project would result in a less-than-significant impact.

c) 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 (including releasing emissions that exceed quantitative thresholds for ozone precursors)?

Less-Than-Significant Impact. The SDAB has been designated by the state as a nonattainment area for PM_{10} and $PM_{2.5}$ and O_3 under the CAAQS. The SDAB has recently been designated by the EPA as an attainment area for the 1997 8-hour NAAQS for O_3 and remains a marginal nonattainment area for the 2008 8-hour NAAQS for O_3. The air quality issues in the SDAB are the result of cumulative emissions from motor vehicles, off-road equipment, commercial and industrial facilities, and other emission sources. Projects that emit these pollutants or their precursors (e.g., VOCs and NO_x for ozone) potentially contribute to poor air quality. As discussed above, the construction and operational emissions from the proposed project would not exceed the SDAPCD significant thresholds. The proposed project would also not conflict with the RAQS, which addresses the cumulative emissions in the SDAB. Accordingly, the proposed project would not result in a cumulatively considerable increase in emissions of nonattainment pollutants. Impacts would be less than significant.

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

Less-Than-Significant Impact. The greatest potential for exposing sensitive receptors to substantial pollutant concentrations would occur during construction, due to diesel

particulate emissions from heavy equipment operations and heavy-duty trucks. Residential homes, which are located within 0.1 mile of the proposed pipeline alignment near Espola Road, are sensitive receptors that could be exposed to substantial diesel particulate concentrations during construction. However, operation of construction equipment would occur for a relatively short duration during construction and would not remain in proximity to these sensitive receptors for the entire construction period due to the proposed pipeline alignment. Construction activities would not generate substantial emissions of toxic air contaminants, specifically diesel exhaust particulate matter. Furthermore, construction of the proposed project would not require the simultaneous operation of large amounts of construction equipment. The diesel construction equipment would also be subject to the Airborne Toxic Control Measure for in-use mobile construction equipment promulgated by CARB, which would minimize diesel particulate matter. Impacts to sensitive receptors in the vicinity of the project construction would be less than significant.

The closest sensitive receptors to the pump station and the natural-gas-powered engine are located more than 0.5 mile away. As shown in Table 4.3-3, the emissions of criteria air pollutants are very low and would be much lower than the Rule 20.2 thresholds that would require ambient air quality modeling to demonstrate compliance with CAAQS and NAAQS. Accordingly, the proposed project is not anticipated to expose sensitive receptors to unacceptable concentrations of these pollutants, and impacts would be less than significant. In addition, the engine would emit toxic air contaminants, such as formaldehyde. However, the three-way catalyst would substantially reduce gaseous toxic air contaminants. Furthermore, the SDAPCD would ensure compliance with Rule 1200, Toxic Air Contaminants – New Source Review, before issuing an Authority to Construct. Therefore, exposure to toxic air contaminants would be less than significant.

e) Would the project create objectionable odors affecting a substantial number of people?

Less-Than-Significant Impact. Odors are a form of air pollution that is most obvious to the public. Odors can present significant problems for both the source and surrounding community. Although offensive odors seldom cause physical harm, they can be annoying and cause concern.

Potential sources that may emit odors during construction activities include diesel equipment and gasoline-powered engines. Odors from these sources would be localized and generally confined to the proposed pipeline alignment. Additionally, odors associated with construction equipment would be temporary. Therefore, proposed project construction would not cause an odor nuisance.

Operation of the proposed project would include the operation of a natural-gas-powered engine that could produce odors. However, the proposed engine is not proposed for location close to any sensitive receptors, and odors are not typically associated with natural gas combustion. Therefore, impacts from creating objectionable odors that affect a substantial number of people would be less than significant.

4.4 Biological Resources

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 California Department of Fish and Game[2] or U.S. Fish and Wildlife Service?

Less-Than-Significant Impact with Mitigation Incorporated. In November 2012, Dudek senior wildlife biologist Brock Ortega evaluated the proposed pipeline alignment for potential to support wildlife species, including those dependent on sage scrub and riparian habitats. In December 2012, Dudek biologist Callie Ford conducted a biological reconnaissance survey and performed vegetation mapping and a jurisdictional wetland delineation and provided a habitat assessment for special-status species. Figure 7 shows the existing biological resources present within the project footprint and surrounding area.

Special-Status Plant Species

No special-status plant species were detected during the site visits. However, there is potential for some special-status plants to occur in adjacent native vegetation. Because the proposed pipeline and new natural-gas-powered engine and all construction work/staging areas will be located within the existing dirt access road or on the existing pump station site, no special-status plant species are expected to be impacted during project construction or operation.[3] However, in order to avoid potential unintentional indirect impacts to special-status plant species located in adjacent areas, mitigation is provided (see Mitigation Measures BIO-1 and BIO-2).

> ***Mitigation Measure BIO-1*:** In order to avoid potential indirect impacts to special-status plant species, sensitive vegetation communities, or jurisdictional

[2] As of September 2012, the California Department of Fish and Game has changed its name to the California Department of Fish and Wildlife. For consistency with the CEQA Guidelines Appendix G environmental checklist, California Department of Fish and Game has been used in this context.

[3] It is important to note that a portion of the existing RMWD easement appears immediately south of the existing access road near the crossing of Drainage D (see Figure 6c). RMWD established a new roadway in this area to match the limits of their easement in the winter of 2013; therefore, while the aerial photo on Figure 6c shows the proposed pipeline route traversing a previously undisturbed area, the aerial is out of date as the existing roadway now follows the RMWD easement.

waters of the United States/state that may be located adjacent to work areas, the following BMPs will be followed throughout construction:

- Work will be limited to within approved work areas (i.e., disturbed and developed areas).
- No debris, bark, slash, sawdust, rubbish, cement, concrete, oil, or petroleum products will be stored where they may be washed by rainfall or surface drainage into native habitat and/or jurisdictional waters of the United States/state. No washing or rinsing of these materials shall occur where they could enter native habitat and/or jurisdictional waters of the United States/state.
- When construction operations are completed, any excess material or debris will be removed from all work areas.
- All equipment maintenance/fueling shall occur on the pump station property, on Espola Road (or associated paved turnouts), or at off-site mechanical yards or garages. No equipment maintenance/fueling shall occur along the pipeline alignment.
- Littering shall be prohibited and this prohibition shall be strictly enforced. All food-related trash and garbage shall be removed from the construction work areas on a daily basis.

Mitigation Measure BIO-2: In order to avoid potential unintentional noxious or invasive weed intrusion, any landscaping or replanting that would occur on the pump station property must not contain any plant or seedling listed on the California Invasive Plant Council's Invasive Plant Inventory.

Special-Status Wildlife Species

Coastal California gnatcatchers (*Polioptila californica californica*) are known to occur in sage scrub habitat within the Blue Sky Ecological Reserve. Construction activities conducted during the breeding season of this species (generally February 15 through August 31) could disrupt breeding activity. Other special-status birds that may nest within the Blue Sky Ecological Reserve and adjacent to the project area in the riparian woodland along Green Valley Truck Trail and the tributaries to the creek include Cooper's hawk (*Accipiter cooperii*), white-tailed kite (*Elanus leucurus*), Nuttall's woodpecker (*Picoides nuttallii*), and yellow warbler (*Setophaga petechia*). Construction during the nesting season of these species (generally February 15 to August 31) also could indirectly disrupt breeding activity as a result of noise and human activity.

Temporary, indirect impacts to nesting special-status birds would result in a significant impact; therefore, mitigation is provided (see Mitigation Measure BIO-3).

> ***Mitigation Measure BIO-3*:** Construction of the pipeline must be started and nearly completed prior to the onset of the coastal California gnatcatcher nesting season (February 15–August 31) as defined by the U.S. Fish and Wildlife Service (USFWS; 1997) and the County of San Diego (2010). It should be noted that this period coincides with the generally accepted bird nesting season. Further, the City of Poway does not stipulate an official breeding season for coastal California gnatcatcher or birds in general in the Poway Subarea Plan; therefore, the USFWS and County of San Diego Multiple Species Conservation Plan (MSCP) guidelines will apply. Provided that construction has started prior to the onset of the nesting season and is at least three-quarters completed by the initiation of the breeding season, monitoring would not be required. Consistent activity (e.g., contractor travel) must continue to occur along unfinished segments of the pipeline and/or in the new engine work area so that birds continue to be deterred from nesting in the vicinity of the construction noise.
>
> If the project was initiated prior to February 15 and more than one-quarter of the project work remains and will not be completed by March 15, then the following must occur:
>
> - Nest surveys along the remaining pipeline construction area, including a 500-foot buffer, shall be conducted, starting at least by March 16 and occurring at even intervals twice weekly until work is completed. These surveys will be conducted by a biologist holding a federal permit to survey for coastal California gnatcatchers. These nesting bird surveys shall also cover other nesting birds within 500 feet of the work area.
> - Locations of nesting birds shall be mapped and appropriate no-work buffers shall be established, including 500-foot buffers for listed species such as coastal California gnatcatcher, 500-foot buffers for special-status raptors, and 50-foot buffers for non-listed passerine species as deemed appropriate by the monitoring biologist.
> - The monitoring biologist may determine whether the activity is causing harm to nesting birds based on behavior, topography, or other factors. If the biologist detects disturbance, then he or she will suggest appropriate buffers to ensure that disturbance stops and normal nesting behavior can continue. Buffers would remain in effect until the nesting activity subsides and the young have fledged.

Several special-status amphibians, reptiles, and mammals have a moderate potential to occur within naturally vegetated areas immediately adjacent to the project area. However, because the proposed project would not directly impact suitable habitat for these species direct impacts are considered minimal and would be less than significant. Potential indirect impacts associated with harassment or harm of wildlife species or their suitable habitat may occur during construction, however, and therefore mitigation is provided (see Mitigation Measures BIO-2, BIO-4, and BIO-5).

> ***Mitigation Measure BIO-4:*** The RMWD and its biologist shall coordinate the procedures for minimizing harm to or harassment of wildlife encountered during construction. These measures include, but are not limited to, the following:
>
> - Environmental education for all workers
> - Prohibition of pets or firearms on site
> - Prohibition of harassment or collection of wildlife species.
>
> ***Mitigation Measure BIO-5:*** All trenches or holes outside of the pump station will be covered at the end of each day using plywood, hard plastic, or similar material in order to prevent wildlife from becoming trapped or unable to travel through the construction site. The edges of the covering material should provide a solid barrier such that no gaps are present that might entice wildlife to use them as shelter.

The proposed project would entail installation of a new gas-powered engine to replace an existing electric motor. The pump station currently operates one to three pumps throughout the day, depending on demand and electricity price constraints. It was determined that the existing noise level of the pump station operation is approximately 74 decibels (dB) at the closest native habitat stand (located approximately 88 feet from the proposed location of the new engine). As described in Section 4.11, Noise, Dudek environmental planner Brian Grover and acoustician Mike Greene modeled the noise associated with the proposed natural-gas-powered engine, combined with the other existing pumps that run throughout the day, and determined that the new equipment plus the existing equipment would equate to less than 74 dB. Because the projected future noise level would be at or below the existing noise level present at the nearest patch of coastal California gnatcatcher suitable habitat, indirect impacts related to operational noise of the new natural-gas-powered engine would be 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, or regulations or by California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less-Than-Significant Impact. Construction of the proposed project is limited to the existing access road and would not result in vegetation removal. Because the pipeline installation would occur within an existing access road, impacts to native habitat would not occur. Additional impacts associated with the second phase of construction would occur from the installation of the meter, the lateral pipeline to the natural gas engine, the new natural-gas-powered engine and enclosure, and associated concrete equipment pad, as well as a new retaining wall. These impacts would occur within disturbed or developed areas in the existing pump station property and along the alignment and would not entail tree removal. As described in Section 2.3, trenchless pipe installation (water jetting or similar) or hydraulic pipe jacking (jack and bore) would be used to install the pipeline beneath the five jurisdictional drainages to avoid impacts to those features. Figures 6a through 6e depict the locations of all drainages and the bore pit locations proposed to facilitate trenchless installation across all crossings so as to avoid impacts to wetlands and waters of the United States/state. In summary, Drainages A through E would not be impacted because the pipeline would be installed beneath the watercourse via a trenchless method. Drainage F would not be impacted because the proposed pipeline would be installed across the top of the existing culvert, avoiding any impact to the culvert structure and associated watercourse. See also discussion under Section 4.4, question (a).

c) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less-Than-Significant Impact. There are six drainages that traverse the proposed pipeline route (see Figure 7). Drainage A is not considered jurisdictional and is therefore not federally protected by Section 404 of the Clean Water Act. Drainages B through F are considered jurisdictional and are therefore protected by Section 404 of the Clean Water Act. Trenchless pipe installation (water jetting or similar) or hydraulic pipe jacking (jack and bore) would be used to install the pipeline beneath Drainages B, C, D, and E and would therefore not result in direct impacts to these jurisdictional resources. Drainage F is transmitted beneath the access roadway via a culvert. Due to the depth of the culvert, the pipeline would be installed in a trench atop the culvert. Because the culvert would not be affected by this activity, impacts to this jurisdictional resource would not occur. The

proposed construction mechanisms would avoid direct impacts to wetlands and waters of the United States/state. Therefore, impacts would be less than significant.

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?

Less-Than-Significant Impact with Mitigation Incorporated. The proposed project is located in the Blue Sky Ecological Reserve, which supports riparian woodland and native upland habitats. The area provides local movement opportunities for a variety of wildlife species between riparian and upland habitats. Several medium- and large-sized mammals have been detected in the project area, including coyote (*Canus latrans*) and mule deer (*Odocoileus hemionus*). The proposed project would include trenching activities for the installation of the pipeline, but these activities would be temporary and no additional fencing would be installed to prevent wildlife movement through the area. There is some potential for movement impacts to small ground-based wildlife to occur; therefore, Mitigation Measure BIO-5 is provided (see response to question (a) in Section 4.4).

Temporary trenching, noise, and human activity could result in short-term disruption of diurnal wildlife species activities, such as bird movement; however, based on the small impact area and the surrounding open space available for use, these impacts would be less than significant. Larger mammals are expected to use the areas prior to the period when construction would occur; therefore, impacts to this subset of species would also 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?

Less-Than-Significant Impact. The project would not directly impact vegetation communities or wetland resources. Due to lack of impacts, the proposed project would be consistent with policies related to biological resources listed in relevant policies and plans. Therefore, impacts would be less than significant.

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?

Less-Than-Significant Impact. The proposed project is located within the Poway Subarea Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP; Subarea Plan hereafter) (City of Poway 1996). While the RMWD is not a participating entity and is not therefore seeking any kind of take as a result of the proposed project, this discussion is narrowly defined by the analysis of conflict with the city's Subarea Plan.

The project is located within the Blue Sky Ecological Reserve (see Figure 5-1, City of Poway 1996), which is part of the Blue Sky–Mount Woodson Cornerstone Preserve identified in the City of Poway Subarea Plan. The Blue Sky–Mount Woodson Cornerstone area is considered high-quality habitat for preservation. As indicated above, the project will not directly impact habitat or biological resources within the cornerstone area. Any potential indirect impacts associated with construction and/or operational activity have been mitigated to avoid such impacts. Therefore, the project would not conflict with the City of Poway's efforts to implement their Subarea Plan.

4.5 Cultural Resources

a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

Less-Than-Significant Impact. Dudek commissioned an archaeological/historical resource records search from the South Coast Information Center (SCIC) located at San Diego State University on July 31, 2013. The SCIC records indicate that a total of 33 previous cultural resources studies have been conducted within this search area, with 14 of these directly including portions of the project. In addition, 23 archaeological sites have been previously identified within 0.5 mile of the proposed project area. None of these resources have been recorded at locations that would be affected by planned project activities. Records search results indicate that the two sites located nearest the project alignment consist of limited-use prehistoric lithic reduction areas, with very limited potential to contain subsurface cultural deposits.

Dudek archaeologist Matthew Maxfeldt conducted an intensive pedestrian survey of the pipeline route on July 31, 2013, to determine the presence of any historical resources. Mr. Maxfeldt did not identify any evidence of historical resources. Given the lack of previously recorded historical resources on file at the SCIC, the absence of observed historical material during the archaeological survey, and the fact that all work will be limited to existing roadways and/or the previously developed pump station property, impacts to historical resources are not expected. Therefore, impacts are less than significant.

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

Less-Than-Significant Impact. The Blue Sky Ecological Reserve was known as a movement corridor for migrant Native American tribes, including the Kumeyaay-Ipai (City of Poway 2007). Dudek commissioned an archaeological/historical resource records search from the SCIC on July 31, 2013. The SCIC records indicate that a total of 33

previous cultural resources studies have been conducted within this search area, with 14 of these directly including portions of the project. In addition, 23 archaeological sites have been previously identified within 0.5 mile of the proposed project area. None of these resources have been recorded at locations that would be affected by planned project activities. Records search results indicate that the two sites located nearest the project alignment consist of limited-use prehistoric lithic reduction areas, with very limited potential to contain subsurface cultural deposits.

Dudek also commissioned a Sacred Lands File request from the Native American Heritage Commission (NAHC) on July 31, 2013, to determine the presence of any Native American sacred sites within the project area. Dudek archaeologist Matthew Maxfeldt walked the pipeline route on July 31, 2013, to determine the presence of archaeological resources. Mr. Maxfeldt did not identify any evidence of archaeological resources. Given the lack of previously recorded archaeological resources within the records provided by the SCIC, the absence of archaeological material observed during the site visit, and the fact that all work will be limited to existing roadways and/or the previously developed pump station property, impacts to archaeological resources are not expected.

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

Less-Than-Significant Impact with Mitigation Incorporated. Construction of the proposed pipeline component of the project would involve excavation to a depth of approximately 34 inches below the existing ground surface. The depth of excavation associated with the bore pits would be approximately 2 to 6 feet, depending on the stream crossing. Minimal excavation is planned for the site intended to support the new natural-gas-powered engine. Because all excavation activity would be located within existing disturbed roadway or pump station areas that have been previously disturbed during previous construction activity, intact paleontological resources are not likely to be discovered. However, if paleontological resources are discovered, impacts may occur; therefore, mitigation is provided (see Mitigation Measure CUL-1).

> ***Mitigation Measure CUL-1:*** In the event that paleontological resources are discovered during construction, excavations within 50 feet of the find shall be temporarily halted or diverted until a qualified paleontologist is retained to evaluate the discovery. The paleontologist shall notify the appropriate agencies to determine procedures that should be followed before construction is allowed to resume at the location of the find. If the RMWD determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the proposed project on the qualities that make the resource important. The plan shall be kept on file at the RMWD office.

d) Would the project disturb any human remains, including those interred outside of formal cemeteries?

Less-Than-Significant Impact with Mitigation Incorporated. Dudek conducted a search of the NAHC Sacred Lands File on July 31, 2013, to determine the presence of any Native American cultural resources within the proposed project area. The NAHC indicated that no Native American cultural resources are located within the proposed project area; however, the NAHC indicated that there were Native American cultural resources in "close proximity" to the proposed project area. The discovery of human remains during construction of the proposed project would result in a potentially significant impact; therefore, mitigation is provided (see Mitigation Measure CUL-2).

> ***Mitigation Measure CUL-2:*** In the event that any sites containing human remains are inadvertently discovered during any phase of project construction, construction will cease in the vicinity of the discovery or any nearby area and the following actions shall be taken:
>
> - The San Diego County Coroner's Office shall be notified immediately per state law (California Health and Safety Code Section 7050.5). If the county coroner determines that the remains are Native American, the NAHC shall be contacted within 24 hours, per California state law (California Public Resources Code Section 5097.98).
> - The NAHC shall designate a Most Likely Descendant who may make recommendations concerning the disposition of the remains and associated grave goods in consultation with RMWD or its designee.
> - If the NAHC is unable to identify a Most Likely Descendant, if the Most Likely Descendant fails to make a recommendation within 24 hours, or if the RMWD or its designee rejects the recommendation of the Most Likely Descendant and mediation efforts fail to provide measures acceptable to the RWMD, then the RMWD or its designee shall rebury the remains and associated grave goods in a nearby location that shall not be disturbed during future construction and/or operational activity.

4.6 Geology and Soils

a) Would the project expose people or structures to 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.

Less-Than-Significant Impact. The project is located within seismically active southern California, an area where several of the faults and fault zones are considered active by the California Department of Conservation, California Geological Survey. Alquist-Priolo earthquake fault zones have been established for the majority of these faults and fault zones. The purpose of the Alquist-Priolo zones is to prohibit the location of structures on the traces of active faults, thereby mitigating potential damage due to fault surface rupture. The proposed project is not within an Alquist-Priolo Special Studies Zone, and fault rupture is not anticipated because there are no known active faults that cross or project into the project site (State of California, California Department of Conservation, California Geological Survey 2008). Therefore, impacts related to rupture of a known earthquake fault would be less than significant.

ii. Strong seismic ground shaking?

Less-Than-Significant Impact. Fault movement from regional faults, including the Rose Canyon, San Jacinto, and Elsinore Faults, could cause secondary seismic effects such as ground shaking at the project site. The Rose Canyon Fault, the nearest of the faults, is located approximately 20 miles from the project site. The project would not include development of any homes or businesses, and the project components would be restricted from public use. The associated pipeline structures shall be designed according to all applicable standards for earthquake resistance using mean peak ground acceleration, duration of shaking, and site amplification criteria. The required design measures, including installation of a retaining wall for the concrete pad that would support the natural-gas-powered engine and enclosure, would ensure safety during maximum ground shaking events. Therefore, it is anticipated that the project would have a less-than-significant impact on people or structures due to seismic ground shaking caused by an earthquake.

iii. Seismic-related ground failure, including liquefaction?

Less-Than-Significant Impact. Subsurface soils of the project site generally consist of Cienaba–Fallbrook rocky sandy loams with a low potential for soil liquefaction. The project would adhere to Uniform Building Code (UBC) standards to reduce liquefaction potential; therefore, impacts would be less than significant.

iv. Landslides?

Less-Than-Significant Impact. The proposed project would not be located in the vicinity of landslide areas as mapped by the USGS Landslide Overview Map of the Conterminous United States (USGS 1982), and no evidence of recent landslide movement has been observed. Approximately 500 cubic yards of fill would be imported and compacted on site to create a level grade for the concrete pad to support the new engine. This fill would be reinforced by a retaining wall that would prevent the possibility of landslide in the project area. Minor trenching for the natural gas pipeline would take place within an existing roadway and would not affect any nearby slopes; therefore, impacts would be less than significant.

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

Less-Than-Significant Impact. The proposed project would be constructed within a previously disturbed site under a utility road and at the Poway Pump Station. Minor trenching of up to 4 feet in depth would be required to prepare the alignment for the underground pipeline. Because of the underground location of the pipeline, any topsoil removed would be reused during backfilling. Five hundred cubic yards of fill would be compacted to create a level grade for the concrete pad; this fill would be reinforced by a retaining wall that would prevent the possibility of soil erosion on site. Due to the temporary nature of the proposed grading activities, coupled with the immediate replacement of disturbed soil after trenching and the implementation of a retaining wall, erosion impacts 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?

Less-Than-Significant Impact. As previously discussed in the response to question (a) in Section 4.6, the proposed project would not be located in the vicinity of any landslide areas or be located on unstable soils that could potentially result in on- or off-site

landslide or liquefaction. No evidence of ground cracks, scarps, seepage, or other signs of recent landslide movement has been observed. The project's structures would be designed according to the UBC and other applicable building regulations, which would reduce potential impacts to geologic units and soils. The proposed project would not result in lateral spreading, subsidence, or liquefaction. Therefore, impacts 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 risks to life or property?

Less-Than-Significant Impact. According to the City of Poway's General Plan Natural Resources Element, Figure VI-2, General Soil Association, on-site soils generally consist of Cineba–Fallbrook soils, which are made up of coarse sandy loam and sandy loam that have a subsoil of sandy clay loam over decomposed granidiorite. These soil types are known to exhibit low to moderate shrink/swell behavior. The proposed project would, therefore, not be located on expansive soils, and impacts would be less than significant.

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

No Impact. No septic tanks or alternative wastewater disposal systems would be constructed for the proposed project. No impacts would occur.

4.7 Greenhouse Gas Emissions

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

Less-Than-Significant Impact. Global climate change is a cumulative impact; a project participates in the potential impact through its incremental contribution combined with the cumulative increase of all other sources of greenhouse gas (GHGs). Thus, GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA 2008).

Neither the State of California nor the SDAPCD has established CEQA significance thresholds for GHG emissions.

The Governor's Office of Planning and Research (OPR) advises, "Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead

agency determines that the project contributes to a significant, cumulative climate change impact" (OPR 2008). Furthermore, the OPR advisory indicates, "In the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice" (OPR 2008).

The South Coast Air Quality Management District (SCAQMD) adopted an interim significance threshold of 10,000 metric tons of carbon dioxide equivalent per year (MT CO_2E/year) for industrial (stationary source) projects in December 2008. The SCAQMD threshold was adopted after rigorous public vetting. The SCAQMD-adopted interim threshold is also reflected as the "stationary source" threshold in the County of San Diego Climate Action Plan adopted June 2012 (County of San Diego 2012). To assess the impacts of the significance of the proposed project's GHG emissions with respect to CEQA, the RMWD will apply the SCAQMD significance threshold/County of San Diego Climate Action Plan stationary source threshold of 10,000 MT CO_2E/year, including all construction and operational emissions. As implemented by the SCAQMD, construction emissions are annualized over the life of the project, defined as 30 years, added to the operational emissions, and compared to the interim GHG significance threshold.

Construction GHG Emissions

Construction of the proposed project would result in GHG emissions that are primarily associated with the use of construction equipment as well as the operation of worker vehicles and haul trucks. As previously stated in Section 4.3, Air Quality, construction would occur 5 days a week over approximately 120 days. As such, construction-related GHG emissions would occur on a short-term basis during this period.

Estimates presented in Table 4.7-1, Estimated Annual Construction Greenhouse Gas Emissions, include emissions from on-site (off-road equipment) and off-site (on-road haul trucks, delivery trucks, and worker vehicles) sources during construction. Details of the construction emission assumptions and calculations are included in Appendix B.

Table 4.7-1
Estimated Annual Construction Greenhouse Gas Emissions

	MT CO_2	MT CH_4	MT N_2O	MT CO_2E
2013 estimated emissions	68.37	0.01	0.00	68.52
2014 estimated emissions	32.61	0.00	0.00	32.68
Total estimated emissions	*100.98*	*0.01*	*0.00*	*101.2*
			Annualized emissions [a]	3.38

Note: See Appendix B for complete results.
a Total construction emissions annualized over 30 years.
MT CO_2 = metric tons carbon dioxide; MT CH_4 = metric tons methane; MT N_2O = metric tons nitrous oxide; MT CO_2E = metric tons carbon dioxide equivalent

As shown in Table 4.7-1, the estimated annualized construction GHG emissions would be approximately 3.38 MT CO_2E per year. However, these GHG emissions generated during construction of the proposed project would be short-term in nature, lasting only for the approximately 120-day duration of construction, and would not represent a long-term source of GHG emissions.

Operational GHG Emissions

The proposed project would involve the operation of a new 900-horsepower natural-gas-powered engine that would produce operational GHG emissions. This new natural-gas-powered engine would generally operate in place of an existing 900-horsepower electric-motor-driven pump. The proposed project is not expected to increase the number of operators at the pump station or delivery vehicles because the fuel would be supplied through the proposed 4-inch-diameter natural gas pipeline. As a result, there would not be an increase in GHG emissions from motor vehicles associated with the proposed project.

The existing electric motor is one of seven motors at the pump station, and it has been historically operated at variable loads and periods as needed. No information is available to determine the typical operating schedule of this motor over a year. As a conservative estimation of the baseline GHG emissions associated with existing electric motor, it was assumed that the motor was operating at 20% of its annual capacity. The GHG emissions associated with electricity generated to run the motor were estimated using the reported CO_2 emissions per kilowatt-hour for SDG&E (SDG&E 2010). The contributions of methane (CH_4) and N_2O for power plants in California were obtained from the California Climate Action Registry (CCAR) General Reporting Protocol (CCAR 2009) and were adjusted for their global warming potentials (i.e., 21 for CH_4 and 310 for N_2O).

Operational GHG emissions from the new natural-gas-powered engine were calculated assuming that the engine would run continuously, 24 hours a day year-

round, at full capacity. Table 4.7-2, Estimated Annual Operational Greenhouse Gas Emissions, shows the total annual estimated emissions from the proposed project (including the new natural-gas-powered engine's operational GHG emissions and the annualized construction GHG emissions), the conservative baseline GHG emissions from the existing electric engine, and the resultant net annual GHG emissions from the proposed project.

Table 4.7-2
Estimated Annual Operational Greenhouse Gas Emissions

	MT CO_2E/yr
Annual estimated operational emissions	3,135.0
Annualized construction emissions	3.4
Total annual estimated emissions	*3,138.4*
Annual estimated baseline emissions	*465.9*
Net annual estimated emissions	2,672.5

Note: See Appendix B for complete results.
MT CO_2E = metric tons carbon dioxide equivalent

Table 4.7-2 shows that the total of the annual GHG emissions from the proposed project and the net annual estimated GHG emissions would not exceed the SCAQMD interim significance threshold of 10,000 MT CO_2E/year for industrial (stationary source) projects. Therefore, the proposed project would not generate GHG emissions that may have a significant impact on the environment. Impacts would be less than significant.

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

Less-Than-Significant Impact. The Climate Change Scoping Plan, approved by CARB on December 12, 2008, provides an outline for actions to reduce California's GHG emissions. The Scoping Plan requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. There are several federal and state regulatory measures aimed at the identification and reduction of GHG emissions; most of these measures focus on area source emissions (e.g., energy usage) and changes to the vehicle fleet (increased use of hybrid, electric, and more fuel-efficient vehicles). While federal and state legislation would ultimately reduce GHG emissions associated with the project, no specific plan, policy, or regulation would be directly applicable to the project.

No local mandatory GHG regulations, plans, or policies would apply to implementation of this project, and no conflict would occur. Additionally, as demonstrated in Table 4.7-2, the proposed project would not exceed the GHG threshold of 10,000 MT CO_2E/year.

Therefore, impacts from a potential conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs would be less than significant.

4.8 Hazards and Hazardous Materials

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

Less-Than-Significant Impact. Construction activities would not include the use of explosives or acutely hazardous materials. No hazardous materials would be used with the exception of fuels, oils, or lubricants commonly used to power construction vehicles and pipeline installation equipment. Any transportation of hazardous substances associated with normal construction equipment would be conducted in accordance with existing federal, state, and local regulations. Therefore, the minimal use of hazardous substances during construction would not result in a significant impact due to the RMWD's intent of following all health and safety requirements governing the use of construction fuels, oils, and lubricants.

According to the California Health and Safety Code Section 25317, "natural gas, natural gas liquids, liquefied natural gas or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas) are not classified as hazardous substances." Once project construction is complete, the project will adhere to current federal, state, and local natural gas pipeline safety regulations, including the U.S. Code of Federal Regulations and California Public Utilities Commission safety standards. Therefore, no part of the project would result in the introduction of a significant hazard to the surrounding area.

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

Less-Than-Significant Impact. As discussed in the response to question (a) in Section 4.8, a relatively small amount of hazardous substances, such as fuels, oils, lubricants, and solvents, would be used on site for construction and maintenance of the proposed engine; however, these materials shall be stored off site and be transported and handled in accordance with all federal, state, and local regulations. Consequently, use of these materials for their intended purpose would not pose a significant risk to the public or the environment, and 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?

No Impact. The proposed project is not located within 0.25 mile of an existing or proposed school. The closest schools to the project site are Chaparral Elementary School and Poway High School, each located approximately 2 miles from the project site. All transport of hazardous materials would be in accordance with state and federal regulations; therefore, impacts would not occur.

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

Less-Than-Significant Impact. The Poway Pump Station is currently included on a list of hazardous materials and substances compiled pursuant to Government Code Section 65962.5. The pump station property supports containers of ammonia and chlorine that are used for water treatment purposes. No part of the proposed project would involve alteration or movement of the on-site ammonia and/or chlorine containers. Any petroleum product needed for existing pump station operation is brought to the pump station site from the RMWD's main office/storage yard in Ramona. A review of the Department of Toxic Substance Control's Hazardous Waste and Substances List – Site Cleanup (Cortese List) indicates that identified hazardous material sites are not located at the Poway Pump Station (DTSC 2013).

There are no known hazards located along the proposed pipeline route. Prior to construction of both components of the project, a "dig alert" will be conducted by the project contractor. The "dig alert" will provide a summary of any underground utilities or other features that may need to be avoided during construction. The lack of existing known hazards coupled with the precautionary measure of performing a "dig alert" prior to construction would reduce any potential impacts related to the contractor's, the public's, and the environment's exposure to hazardous materials or substances.

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

No Impact. The proposed project is not located near a public airport. The nearest public airport is the Ramona Airport, which is approximately 13 miles northeast of the project site. Therefore, no airport safety hazard impacts would occur.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The proposed project is not located within the vicinity of a private airstrip. The closest private airstrip to the proposed project is the Lake Wohlford Resort Airport, approximately 17 miles northeast of the Poway Pump Station. Therefore, the proposed project would not result in a safety hazard for people residing or working in the project area. Therefore, no impact would occur.

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

Less-Than-Significant Impact with Mitigation Incorporated. The City of Poway's Emergency Operations Plan was implemented in January 2007. This plan notes that in the case of an emergency (e.g., dam break, wildland fire) the Blue Sky Ecological Reserve may need to be evacuated. If such an emergency were to occur during construction of the project, the existing RMWD easement roadway may be partially closed to vehicular traffic, thereby creating a potentially significant impact. In order to avoid potential conflicts with an evacuation operation, mitigation is provided (see Mitigation Measure HAZ-1).

> ***Mitigation Measure HAZ-1:*** When equipment and construction workers are working along the pipeline route, the work area shall be secured to ensure that the traveling public does not accidentally access the work area. Signs indicating the closure of the road/trail shall be posted at both ends of the construction work area indicating the direction of alternate routes of travel.

Once construction is completed, operations at the Poway Pump Station would return to typical conditions and would not interfere with emergency access or evacuation. Therefore, operational impacts would be less than significant.

h) Would the project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Less-Than-Significant Impact. The proposed project is located in a "Very High Fire Hazard Zone Area" as mapped on the City of Poway's 2010 "Very High Fire Hazard Zone Area Map" (City of Poway 2010b). At the Poway Pump Station, the project would entail construction of a retaining wall and concrete pad and replacement of one electric engine with a natural-gas-powered engine; all components would be constructed of fire-resistant materials, including concrete, mechanical steel, carbon steel, and cast iron. New structures and facilities would be consistent with those already existing at the Poway

Pump Station. The addition of the proposed pump station improvements would not result in an increased risk of wildland fire.

The natural gas pipeline would not pose an increased fire risk due to the fact that it would be buried in approximately 3 feet of soil. If a wildland fire were to affect the area, the pipeline would be insulated from the detrimental effects of the fire due to the earthen cover.

Finally, one of the primary purposes of the project is to ensure that the east Poway area has access to water during a fire. Currently, the Poway Pump Station's energy source comes from electricity. During a fire, electricity is often the first utility to cease operation. If the flow of electricity to the Poway Pump Station stops, the water pumps become inoperable and the RMWD's service area quickly runs out of water for both potable and firefighting uses. Implementation of the project would help ensure that a continual power source remains available so that water can continue to flow to residences and city fire water lines for use during a fire emergency.

4.9 Hydrology and Water Quality

a) Would the project violate any water quality standards or waste discharge requirements?

Less-Than-Significant Impact with Mitigation Incorporated. Minor grading and excavation during project construction would potentially result in sediment runoff during wet weather events. If sediment-laden runoff were to enter nearby wetlands or drainage features, significant impacts would occur; therefore, mitigation is provided (see Mitigation Measure HYD-1).

> ***Mitigation Measure HYD-1:*** BMPs to prevent off-site water quality impacts shall be implemented by the RMWD and/or its construction contractor to prevent exposed soil from leaving work areas. Erosion- and sediment-control measures may include, but are not limited to, (1) installation of perimeter silt fencing, (2) temporary erosion control with sand or gravel bags, and (3) immediate removal of all BMPs or other project wastes from the project site. BMPs will be inspected to ensure proper working order prior to a forecasted storm, after a rain event that causes runoff from the construction site, at 24-hour intervals during extended rain events, weekly during the rainy season, every 2 weeks during the non-rainy season, and at any other times or intervals of time specified by the project manager.

Installation of the proposed pipeline will generally entail excavation to a depth of approximately 3 feet to establish the pipeline trench. In areas near stream crossings, bore pits may necessitate excavation to approximately 6 feet below ground level. Although

groundwater is not expected to be encountered during bore pit excavation/work, in case groundwater resources are encountered, mitigation is provided to avoid potential impacts to groundwater and surface water quality (see Mitigation Measure HYD-2).

> ***Mitigation Measure HYD-2:*** In order to ensure proper handling of bore pit groundwater, one of the following shall occur if groundwater is encountered during construction:
>
> - Groundwater can be pumped into a nearby sewer inlet. This option is only likely available near the far western portion of the pipeline alignment near Espola Road, where existing sewer infrastructure is located. This option would require permission from the local wastewater utility provider.
> - Groundwater can be pumped into a tank and/or truck and hauled off site.
> - Groundwater can be discharged to the nearby surface water if the RMWD obtains a General Waste Discharge Requirement to surface waters from the Regional Water Quality Control Board.

b) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Less-Than-Significant Impact. Implementation of the proposed project would involve paving of a small area on the pump station property that is currently unpaved. However, the amount of surface area that would become impervious as a result of the proposed project is minimal and would not interfere substantially with groundwater recharge; 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, in a manner that would result in substantial erosion or siltation on or off site?

Less-Than-Significant Impact. Due to the underground nature of the pipeline coupled with its small size, the proposed project would not result in a long-term alteration of drainage patterns on or within the vicinity of the site. Excavation of the pipeline trench is anticipated to include a relatively shallow depth of less than 3 feet and would occur within previously disturbed areas. Temporary bore pits would be constructed to allow for the installation of the pipeline beneath existing water crossings; these bore pits would be placed to avoid impacting these drainage features (see Figures 6a–6d). Before completing the pipeline

installation work, the RMWD will restore the pipeline alignment area to its pre-construction condition to avoid altering the natural drainage pattern of the project area.

The proposed pump station improvements would necessitate minor site grading to establish a new support pad for the proposed natural-gas-powered engine. The new pad would be affixed with appropriate drainage features to ensure that an increase in runoff does not occur. Therefore, impacts would be less than significant.

d) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the flow rate or amount of surface runoff in a manner that would result in flooding on or off site?

Less-Than-Significant Impact. As discussed in the response to question (c) in Section 4.9, upon completion of the pipeline work RMWD will restore the pipeline alignment area to its pre-construction condition; therefore, no alteration of the existing drainage pattern would occur. Further, the pump station improvements would necessitate minor grading and site recontouring to develop a pad for the proposed natural-gas-powered engine. The regraded pump station area would contain drainage features that would appropriately direct any runoff to site drainage facilities to ensure that increased flow does not leave the pump station site. Therefore, impacts would be less than significant.

e) Would the project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less-Than-Significant Impact. See the response to question (d) in Section 4.9. Implementation of the proposed project would result in the conversion of approximately 425 square feet of the pump station from pervious to impervious surface. This would not constitute a substantial increase in impervious surface area; therefore, the capacity of existing drainage systems would not be impacted. The project would not include elements that would generate a new source of water pollution. Therefore, impacts would be less than significant.

f) Would the project otherwise substantially degrade water quality?

Less-Than-Significant Impact with Mitigation Incorporated. See response to question (a) in Section 4.9.

g) Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood delineation map?

No Impact. The proposed project does not involve the construction of housing; therefore, there would be no impacts related to the placement of housing within a 100-year flood hazard area.

h) Would the project place within 100-year flood hazard area structures that would impede or redirect flood flows?

Less-Than-Significant Impact. A portion of the proposed pipeline route is located within the 100-year flood zone. The small size of the pipeline coupled with the fact that it would be placed underground would prevent any substantial alteration of flood flows. The proposed natural-gas-powered engine at the Poway Pump Station is not located within a 100-year flood zone. Impacts would therefore be less than significant.

i) Would the project expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

Less-Than-Significant Impact. The proposed pipeline and planned installation of a new natural-gas-powered engine on the Poway Pump Station site would result in the introduction of structures in a flood zone and dam inundation zones of both Lake Ramona and Lake Poway. No part of the project would result in alteration of the existing floodway nor would the project weaken the existing Lake Ramona Dam and/or Lake Poway Dam. Because the project would improve the functionality of the Poway Pump Station, which has been in existence within these flood and dam inundation zones for over 60 years, the project would not result in a new, unplanned use within these hazard areas. Therefore, although the project would result in the introduction of new facilities in flood and dam inundation zones, given the compatibility and complement to the existing water conveyance uses, impacts would be less than significant.

j) Would the project cause or be affected by inundation by seiche, tsunami, or mudflow?

Less-Than-Significant Impact. The proposed project is located in inland San Diego County; therefore, tsunamis (seismic sea waves associated with the Pacific Ocean) are not considered a hazard at the Poway Pump Station or within the Blue Sky Ecological Reserve. Further, the project would not prompt any sort of tsunami. Impacts related to tsunamis would therefore be considered less than significant.

The proposed project is located downgradient from two large bodies of water: Lake Poway and Lake Ramona. Seiches (seismically induced wave oscillations in an enclosed or semi-enclosed body of water) may occur in either of these bodies of water during a seismic event. Project construction would not necessitate ground-borne vibration or blasting, two activities that can prompt movement and/or weakening of dam structures, which can in turn result in seiche events. If a seiche in either Lake Ramona or Lake Poway occurred as a result of natural causes (i.e., seismic movement), the proposed facilities, along with the existing Poway Pump Station and associated water pipelines, may be affected. However, the slim likelihood of such an event occurring coupled with the slim likelihood that such an event would result in substantive damage to the existing and proposed RMWD Poway Pump Station facilities and associated pipelines render this potential impact less than significant.

Given the hilly terrain of the project area, mudflows may occur during or immediately following wet-weather events. In Southern California, mudflows typically occur in areas that have been cleared of vegetation as a result of land development or associated activity and/or in areas recently affected by wildfire. The proposed pipeline route would be contained entirely within an existing roadway, which is currently devoid of vegetation. The construction of the pipeline would not alter the vegetative cover of the area; therefore, the project would not exacerbate a potential mudflow risk. Similarly, the installation of the natural-gas-powered engine at the existing Poway Pump Station would not result in vegetation clearing that could increase the potential for mudslide activity after wet-weather or wildfire events. If a mudslide were to occur, the proposed facilities, along with the existing Poway Pump Station and associated water pipelines, may be affected. However, the slim likelihood of such an event occurring coupled with the slim likelihood that such an event would result in substantive damage to the existing and proposed RMWD Poway Pump Station facilities and associated pipelines render this potential impact less than significant.

4.10 Land Use and Planning

a) Would the project physically divide an established community?

No Impact. The proposed project would entail installation of a subterranean natural gas pipeline and a new natural-gas-powered engine at the existing Poway Pump Station. No part of the project would result in the construction of a new barrier or enclosed area or alter the public's access to the surrounding Blue Sky Ecological Reserve. Therefore, the proposed project would not physically divide an established community or community resource.

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Less-Than-Significant Impact. RMWD facilities and operations are not subject to regulation by the City of Poway or County of San Diego land use planning documents, policies, guidelines, or ordinances. Although not enforceable on RMWD facilities or operations, local plans, policies, and regulations are applicable to the Blue Sky Ecological Reserve; therefore, the project's relationship to such plans, policies, and/or regulations is provided for informational purposes.

The proposed project is located in the Blue Sky Ecological Reserve within the jurisdictional limits of the City of Poway. The City of Poway's General Plan Planned Land Use map designates the Blue Sky Ecological Reserve as Open Space–Resource Management. The Open Space–Resource Management designation is intended for lands where valuable natural resources are located. The General Plan indicates that limited activity may be allowed on lands carrying this designation with the approval of the Poway City Council. As indicated above, RMWD facilities and operations are not subject to regulation by the Poway City Council. Further, the Poway Pump Station and existing pipelines within the existing pipeline easement planned to house the proposed natural-gas-powered engine and natural gas pipeline, respectively, are existing uses that predate the establishment of the Blue Sky Ecological Reserve and incorporation of the City of Poway. Therefore, inconsistencies with local plans, policies, and/or regulations would not occur.

See also the response to question (f) in Section 4.4 for a discussion of the project's relationship to the Poway Subarea Plan.

c) Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

Less-Than-Significant Impact. See the response to question (f) in Section 4.4.

4.11 Mineral Resources

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

No Impact. The proposed project is not located in an area of known mineral resources, either of regional or local value (City of Poway 1991b). Additionally, no mineral resources have been identified on the project site. Therefore, the proposed project would

not result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the state, and no impact would result.

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

No Impact. See the response to question (a) in Section 4.11. The proposed project site is not designated as an important mineral resource recovery site in applicable local land use documents. As such, no impact would result.

4.12 Noise

a) Would the project result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?

Less-Than-Significant Impact. The proposed project is not located in the immediate vicinity of any sensitive human receptors, and would therefore not result in the exposure of persons to noise levels in excess of established standards. However, the project is located adjacent to sensitive biological habitat that supports the coastal California gnatcatcher; therefore, indirect impacts to sensitive species must be addressed.

The RMWD currently operates three pumps throughout a majority of the day, depending on demand and electricity price constraints. In order to determine the noise level associated with existing pump operations, noise measurements were conducted at the adjacent habitat area (refer to Figure 8). The noise measurements were conducted on May 23, 2013, between the hours of 10:35 a.m. and 11:20 a.m. The noise measurements were made with a calibrated Soft dB Piccolo Sound Level Meter. This instrument is categorized as a Type 2 (General Purpose) device. The sound level meter was positioned at a height of approximately 5 feet above the ground.

Noise measurements were conducted for two scenarios: one with just Pump 8 running (the engine to be replaced), and one with three pumps/electric motors running (including Pump 8).

The measured daytime average sound level with one pump running was 61 dB at the adjacent habitat area, and 74 dB with all three pumps running, as depicted in Table 4.12-1. The measurement results are in terms of the time-averaged sound level (L_{eq}).

Table 4.12-1
Existing Measured Noise Levels

Site	Location	Sound Level (dB L_{eq})	Noise Sources
1	Habitat area at east property line	61	One pump running
1	Habitat area at east property line	74	Three pumps running

As indicated in Table 4.12-1, the eastern habitat area is currently exposed to noise levels of 74 dB from the existing three pumps. As such, future noise levels would need to be at or below these existing levels in order to avoid significant impacts.

The proposed project would entail installation of a new natural-gas-powered engine to replace an existing electric motor (Pump 8). The new natural-gas-powered engine would be installed within a noise enclosure at the location identified on Figure 4. This engine location is approximately 88 feet west of measurement location 1. The engine would be installed within a noise enclosure, and based on the sound estimate (Enercon 2013; refer to Appendix C), noise levels resulting from the new engine (within its sound enclosure) would be approximately 62 dB at 50 feet (15 meters), or approximately 56 dB at 88 feet (27 meters) (using the 6 dB reduction for every doubling of distance rule). This noise level is lower than the existing 61 dB noise level produced by Pump 8 at the eastern habitat area which is located approximately 88 feet away. As such, the new natural-gas-powered engine would result in lower noise levels at the habitat area than the existing electric motor (Pump 8), and the cumulative noise level from all three future pumps (two with existing electric motors and one with new natural-gas-powered engine) would remain below the existing noise level of 74 dB. Impacts on sensitive biological habitat resulting from operation of the proposed project would therefore be less than significant.

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

Less-Than-Significant Impact. Excavation during pipeline construction and grading associated with the establishment of the concrete pad to support the new natural-gas-powered engine may result in a small amount of localized ground-borne vibration and/or noise associated with heavy equipment use. However, neither construction effort would necessitate the use of blasting; therefore, any ground-borne vibration and/or ground-borne noise would be minimal and highly localized. The project site is approximately 250 feet from the nearest residence, located along the north side of Twisted Branch Road, and with the exception of the westernmost reach of the proposed pipeline near Espola Road and Twisted Branch Road, the site is separated from residences by natural ridgelines and

undulating topography, which would ensure that minor levels of vibration and/or ground-borne noise from construction would dissipate before reaching residents.

Operation of the natural-gas-fired engine may generate minimal, highly localized ground-borne vibration and/or noise. The Poway Pump Station is over a mile from the nearest residence and is separated from residences by natural ridgelines and undulating topography. Therefore, any operation-related ground-borne vibration and/or ground-borne noise would not affect residents and impacts would be less than significant.

c) Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less-Than-Significant Impact. As discussed in the response to question (a) in Section 4.12, the new natural-gas-powered engine would result in lower noise levels at the adjacent habitat area than those from the existing electric motor (Pump 8), and the cumulative noise level from all three future pumps would remain below the existing noise level of 74 dB. Impacts to sensitive biological resources, including the coastal California gnatcatcher, resulting from operation of the proposed project would therefore be less than significant.

d) Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less-Than-Significant Impact. Specific project construction details and equipment fleet specifications are not available at this time. However, the following are typical examples of construction equipment that would be expected to be used on site:

- Tractor/backhoes
- Dozers
- Loaders
- Scrapers
- Graders
- Off-highway water trucks
- Roller
- Cranes
- Forklifts
- Trenchers
- Paving equipment
- Excavators
- Materials delivery trucks
- Concrete trucks
- Asphalt trucks
- Pneumatic tools
- Air compressors

As demonstrated by the summary above, construction equipment anticipated for project development includes standard equipment that would be employed for any routine construction project of this scale; the use of construction equipment with substantially higher noise and vibration generation characteristics (such as pile drivers, rock drills, blasting equipment, etc.) is not anticipated for development of the project. Construction noise is difficult to quantify because of the many variables involved, including the size of equipment used, percentage of time, and number of pieces of equipment that will actually operate on the site. However, maximum construction noise levels at 50 feet would typically range from approximately 75 to 85 dB for the type of equipment anticipated to be used for construction of the project. The range of maximum noise levels associated with various pieces of construction equipment is depicted in Table 4.12-2.

Table 4.12-2
Construction Equipment Noise Emission Levels

Equipment	Typical Sound Level (dB) 50 Feet from Source
Air compressor	81
Backhoe	80
Compactor	82
Concrete mixer	85
Concrete pump	82
Concrete vibrator	76
Crane, derrick	88
Crane, mobile	83
Dozer	85
Generator	81
Grader	85
Impact wrench	85
Jackhammer	88
Loader	85
Paver	89
Pile-driver (impact)	101
Pile-driver (sonic)	96
Pneumatic tool	85
Pump	76
Rail saw	90
Rock drill	98
Roller	74
Saw	76
Scraper	89
Truck	88

Source: FTA 2006.

Residences along the north side of Twisted Branch Road are located approximately 250 feet from the proposed natural gas pipeline route. Aside from these residences, the majority of the pipeline route and the Poway Pump Station are located hundreds of feet from residences. Based on the construction equipment and distance to the closest residences, the construction noise is anticipated to generate maximum noise levels of up to approximately 70 dB at the nearest adjacent residences. This noise level could intermittently occur for a few days when construction equipment is operating immediately adjacent to the residential properties. The remainder of the time the construction noise level would be much lower because the equipment would be working farther away from the existing residences. When the construction equipment is operating, the existing residences could be disturbed by the activities. The project would limit construction to the allowable timeframes outlined in the city's municipal code, and would not exceed the 75 dB threshold for construction noise outlined in the municipal code. In addition, construction noise would be temporary. Therefore, since construction noise is not subject to the noise standards that other stationary sources are subject to and the project would comply with the allowable construction timeframes and noise level limits per the municipal code, construction activities associated with the proposed project would not constitute a significant impact.

As mentioned previously, temporary construction noise could result in short-term disruption of diurnal wildlife species activities, such as bird movement; however, based on the small impact area and the surrounding open space available for use, these impacts would be less than significant. Larger mammals are expected to use the areas prior to the period when construction would occur; therefore, impacts to this subset of species would also be less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The project is not located within 2 miles of a public airport or a public use airport. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels and no impact would occur.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The proposed project is not located within the vicinity of a private airstrip and therefore would not expose people residing or working in the project area to excessive noise levels; no impact would occur.

4.13 Population and Housing

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

Less-Than-Significant Impact. The proposed project would add an additional energy source to ensure operation of the Poway Pump Station. The project would not result in an expansion of the Poway Pump Station nor would it allow the facility to pump and distribute additional water supplies beyond existing conditions. Therefore, the project would not indirectly induce growth in the project area. Additionally, the project does not include any new homes or businesses. Therefore, impacts would be less than significant.

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

No Impact. The project site does not currently support housing, nor would any adjacent existing housing be displaced. No impact would result.

c) Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. The proposed project would not displace substantial numbers of people. The site is currently used as an RMWD maintenance road and water facility pump station; no change in use is proposed. No impact would result.

4.14 Public Services

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

i. Fire protection?

Less-Than-Significant Impact. RMWD facilities are provided fire protection services through mutual aid agreements between the RMWD and Barona Fire, Intermountain Volunteers, San Pasqual Volunteers, the California Department of Forestry and Fire Protection (CAL FIRE), and the San Diego County Fire Authority. The nearest fire station (SDF-RD Fire Station No. 33) is located at

16966 Bernardo Center Drive in the City of San Diego, approximately 4 miles from the project site. The proposed project would not introduce any new uses within the existing pipeline easement or at the Poway Pump Station that would increase emergency calls, nor would it require more employees who could require emergency service. No additional fire protection services would be required; therefore, impacts would be less than significant.

It should be noted that one of the main purposes of the project is to establish a redundant power source for the Poway Pump Station. By establishing a second power source, function of the Poway Pump Station immediately following a natural disaster (e.g., earthquake or wildfire) would ensure that water continues to flow to residential customers, including fire flow supplies within local streets. The project would therefore help the existing fire protection entities respond better to fire emergencies throughout the east Poway area.

ii. Police protection?

Less-Than-Significant Impact. The project site is serviced by the San Diego County Sherriff's Department. The nearest San Diego County Sherriff Substation is at 13100 Bowron Road in the City of Poway, approximately 6 miles from the project site. Because the project would entail installation of a subterranean pipeline next to existing pipelines and installation of a replacement engine at the Poway Pump Station, no part of the project would result in additional demand on local law enforcement services. Therefore, impacts would be less than significant.

iii. Schools?

No Impact. The proposed project entails the construction of a natural gas pipeline and a new natural-gas-powered engine at the existing Poway Pump Station. The installation of these new facilities would not result in increased population growth in the area that may affect existing school facilities. Therefore, no impacts would result.

iv. Parks?

No Impact. As described above, the proposed project would not prompt any housing or population growth; therefore, no new park facilities would be required, and no impacts would result.

v. Other public facilities?

No Impact. The proposed project would not result in an increase in the local population or housing; therefore, public facilities, such as libraries, would not be impacted as a result of the proposed project.

4.15 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?

Less-Than-Significant Impact. The proposed project involves the construction of a natural gas pipeline and installation of a new natural-gas-powered engine at the existing Poway Pump Station site. The proposed project would not change the existing pattern of recreational resources and/or uses, including the Blue Sky Ecological Reserve, nor necessitate expansion or construction of new facilities. Therefore, impacts would be less than significant.

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

Less-Than-Significant Impact. As discussed in the response to question (a) in Section 4.15, the proposed project would not include the construction of recreational facilities, nor would it require the construction of new recreational facilities. Therefore, impacts would be less than significant.

4.16 Transportation/Traffic

a) Would the project conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Less-Than-Significant Impact. Regional access to the project site is provided via Interstate 15. Local access to the Poway Pump Station and RMWD access roadway is provided from County Highway S5/Espola Road.

The RMWD access roadway traverses the Blue Sky Ecological Reserve. Construction of the proposed project would result in additional trips by construction workers along local roadways. However, a maximum of six workers are expected to be on site on any given day; therefore, additional trips would not increase congestion or reduce the performance of the local circulation system. Operation of the proposed project would generate no additional trips beyond those currently required for pump station operation. Impacts would be less than significant.

b) Would the project conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Less-Than-Significant Impact. As previously discussed in the answer to question (a) in Section 5.16, construction of the proposed project would generate minimal trips by construction workers accessing the site and would not increase congestion on local roadways. Additionally, operation of the proposed project would generate no additional trips beyond those currently required for operation of the pump station. Impacts would be less than significant.

c) Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. The proposed project does not include any aviation components. It would not, therefore, result in a change of air traffic patterns or result in substantial safety risks. The project is not located within the vicinity of a public or private airport.

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

Less-Than-Significant Impact with Mitigation Incorporated. As previously noted in the response to question (a) in Section 4.8, the proposed project would comply with the U.S. Code of Federal Regulations and California Public Utilities Commission safety standards. However, the project would result in a temporary hazard associated with construction of the proposed pipeline within the existing access road. In order to avoid potential conflicts with the needs of the traveling public in the Blue Sky Ecological Reserve, mitigation is provided (see Mitigation Measure HAZ-1).

e) Would the project result in inadequate emergency access?

Less-Than-Significant Impact. During construction, workers would use local roadways to access the project site. A maximum of six construction workers would be at the site on a given day; therefore, only minimal additional trips would be generated within the project area and the Blue Sky Ecological Reserve during construction. Impacts related to emergency access would be less than significant.

f) Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Less-Than-Significant Impact. During construction, vehicles would traverse the existing pipeline access road, which is used by recreationists for hiking and running. Construction would be temporary and would result in minimal trips that are consistent with existing operational trips. In addition, the Green Valley Truck Trail to the north is the primary travel route used in the project area; therefore, the proposed project would not substantially decrease the performance or safety of such facilities and impacts would be less than significant.

4.17 Utilities and Service Systems

a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less-Than-Significant Impact. The installation of the proposed natural-gas-powered engine and associated natural gas pipeline would provide a secondary power source for the Poway Pump Station, which would then ensure that water treatment services and facilities would be operational in the event of an electrical power outage. The proposed project would not result in a need for additional wastewater treatment capacity; therefore, impacts would be less than significant.

b) Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects?

Less-Than-Significant Impact. The project involves the installation of a natural gas pipeline and a new natural-gas-powered engine at the Poway Pump Station to provide a redundant power source for RMWD operations in this area. No portion of the project would necessitate improvements to or expansion of existing water and/or wastewater treatment facilities. Therefore, impacts would be less than significant.

c) Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less-Than-Significant Impact. Adequate storm drainage facilities exist to accommodate any minimal change in runoff that would be generated during construction of the proposed Poway Pump Station improvements. Installation of the proposed pipeline would not alter the existing topography/absorption of the alignment such that new stormwater drainage facilities would be necessary. The proposed project would not require the construction of new stormwater drainage facilities; therefore, impacts would be less than significant.

d) Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

No Impact. The operation of the proposed project would not require additional amounts of water; therefore, no impact would occur.

e) Would the project result in a determination by the wastewater treatment provider that 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?

No Impact. The proposed project would not involve improvements that would affect or generate additional demand on existing wastewater treatment facilities. Therefore, impacts would be less than significant.

f) Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

No Impact. The proposed project would not create additional solid waste; therefore, the project would not result in an impact to landfill facilities.

g) Would the project comply with federal, state, and local statutes and regulations related to solid waste?

No Impact. As stated in the response to question (f) in Section 4.17, the proposed project would not create additional demand for solid waste disposal facilities; therefore, no impact would result.

4.18 Mandatory Findings of Significance

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

Less-Than-Significant Impact with Mitigation Incorporated. As discussed in Sections 4.4 and 4.5, all biological resource and cultural resource impacts would be mitigated to below a level of significance. Further, potential water quality and public safety hazard impacts would be mitigated to a level below significance and would therefore not degrade the quality of the environment. With mitigation, impacts from implementation of the project would be less than significant.

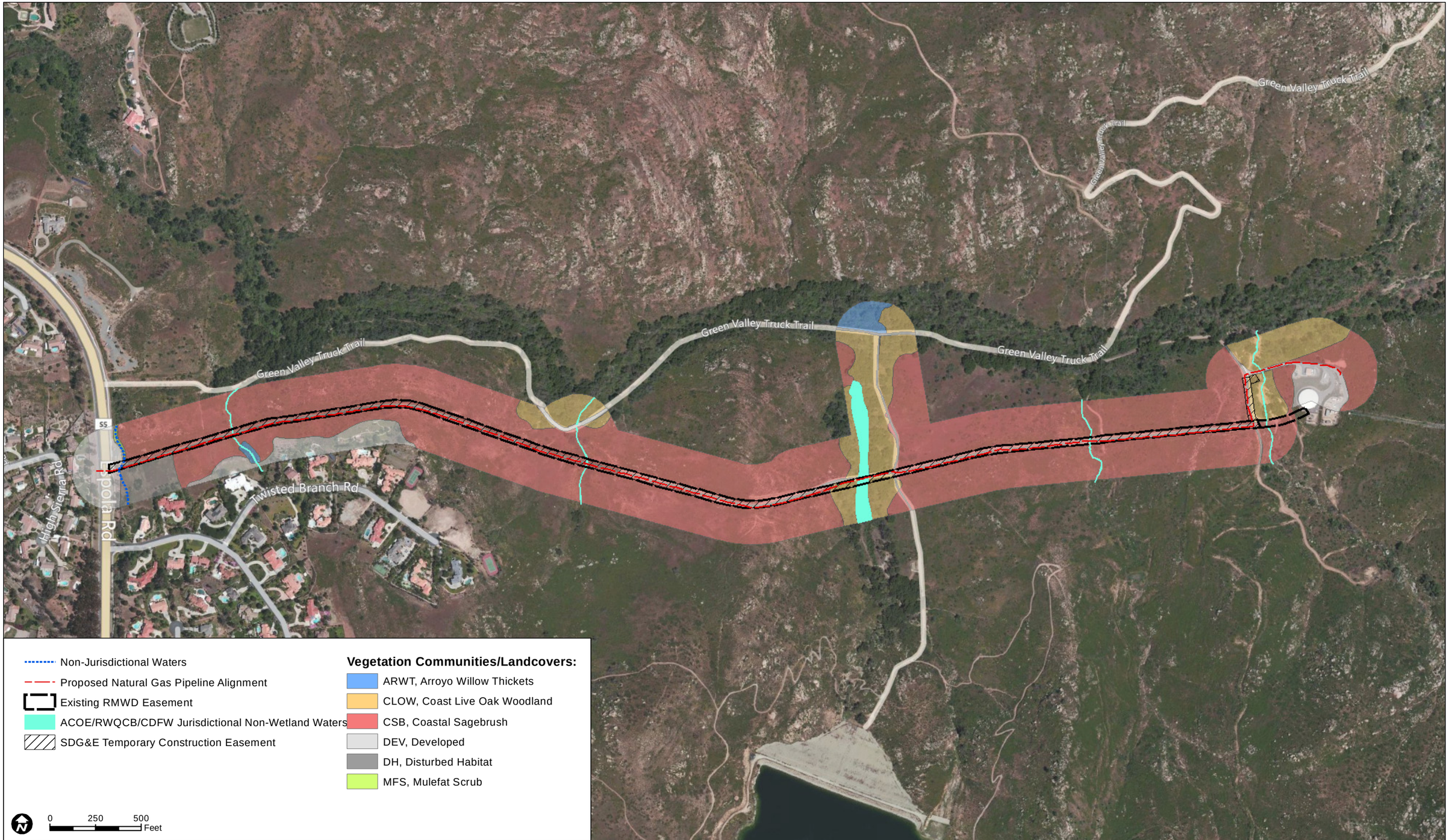
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects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

Less-Than-Significant Impact with Mitigation Incorporated. Cumulative projects would include other projects occurring within the Blue Sky Ecological Reserve, other projects being constructed or contemplated by the RMWD, and projects being proposed in or by the City of Poway such as the expansion of Espola Road.

The proposed project would not increase the capacity of the RMWD water conveyance system. Potentially significant impacts would be limited to biological and cultural resources, hazards, and water quality as a result of construction activities. However, given that these potential impacts would be reduced to less than significant with mitigation incorporated (i.e., BIO-1 through BIO-5, CUL-1 and CUL-2, HAZ-1, and HYD-1), the proposed project is not anticipated to contribute to an environmental impact that is individually limited, but cumulatively considerable. Therefore, cumulative impacts would be less than significant.

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

Less-Than-Significant Impact. Based on the above analysis, all impacts related to the proposed project can be mitigated to a level below significance; therefore, substantial adverse effects on human beings would not occur as a result of the project.



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AERIAL SOURCE: BING MAPPING SERVICE

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FIGURE 7

Biological Resources map

Poway Pump Station Secondary Power Source Project - Mitigated Negative Declaration

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DUDEK

SOURCE: BING MAPPING SERVICE

FIGURE 8

Noise Measurement Location

7635

Poway Pump Station Secondary Power Source Project - Mitigated Negative Declaration

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5.0 REFERENCES

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6.0 FINDINGS

The Ramona Municipal Water District (RMWD) finds that the proposed Poway Pump Station Secondary Power Source Project (proposed project) would not have a significant adverse effect on the environment based on the Environmental Checklist (see Chapter 3.0) and the Discussion of Environmental Evaluation (see Chapter 4.0). Some potentially significant effects have been identified and mitigation measures have been incorporated into the project to ensure that these effects remain at less-than-significant levels. A Mitigated Negative Declaration (MND) is therefore proposed to satisfy the requirements of the California Environmental Quality Act (CEQA). This conclusion is supported by the following findings.

6.1 No Significant Effect Finding

1. **Aesthetics.** The project would not significantly affect scenic vistas, scenic resources, the visual quality of the site, or its surrounding or day- or nighttime views (see Section 4.1, Aesthetics).
2. **Agriculture and Forestry Resources.** Project implementation would not significantly affect agricultural resources (see Section 4.2, Agriculture and Forest Resources).
3. **Air Quality.** Project implementation would not significantly affect air quality (see Section 4.3, Air Quality)
4. **Biological Resources.** Mitigation measures have been incorporated into the project to reduce potential impacts to biological resources to below a level of significance (see Section 4.4, Biological Resources, and Chapter 7.0, Mitigation Monitoring and Reporting Program).
5. **Cultural Resources.** Mitigation measures have been incorporated into the project to reduce potential impacts to cultural resources to below a level of significance (see Section 4.5, Cultural Resources, and Chapter 7.0, Mitigation Monitoring and Reporting Program).
6. **Geology and Soils.** The proposed project would not be significantly affected by geotechnical hazards (see Section 4.6, Geology and Soils).
7. **Greenhouse Gas Emissions.** The proposed project would not have a significant impact on the generation of greenhouse gas emissions, nor would it conflict with plans, policies, or regulations intended to reduce greenhouse gases (see Section 4.7, Greenhouse Gas Emissions).
8. **Hazards and Hazardous Materials.** The proposed project would not be significantly affected by hazards and hazardous materials. The project may result in hazards to the traveling public during construction; however, mitigation measures have been

incorporated into the project to reduce potential hazards (see Section 4.8, Hazards and Hazardous Materials).

9. **Hydrology and Water Quality.** Mitigation measures have been incorporated into the project to reduce potential impacts to water quality to below a level of significance (See Section 4.9, Hydrology and Water Quality).
10. **Land Use and Planning.** The proposed project would be compatible with existing and planned land uses in the project vicinity and no significant impacts are anticipated (see Section 4.10, Land Use and Planning).
11. **Mineral Resources.** Project implementation would not affect mineral resources (see Section 4.11, Mineral Resources).
12. **Noise.** Project implementation would not result in significant noise impacts (see Section 4.12, Noise).
13. **Population and Housing.** The project would not affect local housing availability or population trends. The project would serve existing RMWD customers and would not expand water availability or have consequent growth-inducing effects (see Section 4.13, Population and Housing).
14. **Public Services.** The project would have less than significant impacts to public services (see Section 4.14, Public Services).
15. **Recreation.** The project would not result in increased demand for parks, nor would proposed construction activities result in significant disturbance to existing recreational resources. Less-than-significant impacts would occur (see Section 4.15, Recreation).
16. **Transportation/Traffic.** Project implementation would not significantly affect transportation and traffic (see Section 4.16, Transportation/Traffic).
17. **Utilities and Service Systems.** Project implementation would not adversely affect utilities and service systems; therefore, less-than-significant impacts would occur (see Section 5.17, Utilities and Service Systems).
18. **Mandatory Findings of Significance.** The project has limited potential to degrade the quality of the environment and would not result in the numbers of a threatened, endangered, rare, or otherwise sensitive plant or wildlife species dropping below population-sustaining levels, nor would it eliminate an important cultural resource. The project would also not result in substantial effects to the quality of the environment. Project impacts would not be cumulatively considerable. Finally, no feature of the project would result in substantial adverse effects on human beings, either directly or indirectly (see Section 4.18, Mandatory Findings of Significance).

7.0 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure	Time Frame of Mitigation				Monitoring Reporting Agency	Date(s) of Verification	Date of Completion
	Planning	*Pre-Const.*	*During Const.*	*Post-Const.*			
Biological Resources							
BIO-1: In order to avoid potential indirect impacts to special-status plant species, sensitive vegetation communities, or jurisdictional waters of the United States/state that may be located adjacent to work areas, the following BMPs will be followed throughout construction: - Work will be limited to within approved work areas (i.e., disturbed and developed areas). - No debris, bark, slash, sawdust, rubbish, cement, concrete, oil, or petroleum products will be stored where they may be washed by rainfall or surface drainage into native habitat and/or jurisdictional waters of the United States/state. No washing or rinsing of these materials shall occur where they could enter native habitat and/or jurisdictional waters of the United States/state. - When construction operations are completed, any excess material or debris will be removed from all work areas. - All equipment maintenance/fueling shall occur on the pump station property, on Espola Road (or associated paved turnouts), or at off-site mechanical yards or garages. No equipment maintenance/fueling shall occur along the pipeline alignment. - Littering shall be prohibited and this prohibition shall be strictly enforced. All food-related trash and garbage shall be removed from the construction work areas on a daily basis.			X		Ramona Municipal Water District		
BIO-2: In order to avoid potential unintentional noxious or invasive weed intrusion, any landscaping or replanting that would occur on the pump station property must not contain any plant or seedling listed on the California Invasive Plant Council's Invasive Plant Inventory.	X			X	Ramona Municipal Water District		
BIO-3: Construction of the pipeline must be started and nearly completed prior to the onset of the coastal California gnatcatcher nesting season (February 15–August 31) as defined by the U.S. Fish and Wildlife Service (USFWS; 1997) and the County of San Diego (2010). It should be noted that	X	X	X		Ramona Municipal Water District		

Mitigation Measure	Time Frame of Mitigation				Monitoring Reporting Agency	Date(s) of Verification	Date of Completion
	Planning	*Pre-Const.*	*During Const.*	*Post-Const.*			
this period coincides with the generally accepted bird nesting season. Further, the City of Poway does not stipulate an official breeding season for coastal California gnatcatcher or birds in general in the Poway Subarea Plan; therefore, the USFWS and County of San Diego Multiple Species Conservation Plan (MSCP) guidelines will apply. Provided that construction has started prior to the onset of the nesting season and is at least three-quarters completed by the initiation of the breeding season, monitoring would not be required. Consistent activity (e.g., contractor travel) must continue to occur along unfinished segments of the pipeline and/or in the new engine work area so that birds continue to be deterred from nesting in the vicinity of the construction noise. If the project was initiated prior to February 15 and more than one-quarter of the project work remains and will not be completed by March 15, then the following must occur: - Nest surveys along the remaining pipeline construction area, including a 500-foot buffer, shall be conducted, starting at least by March 16 and occurring at even intervals twice weekly until work is completed. These surveys will be conducted by a biologist holding a federal permit to survey for coastal California gnatcatchers. These nesting bird surveys shall also cover other nesting birds within 500 feet of the work area. - Locations of nesting birds shall be mapped and appropriate no-work buffers shall be established, including 500-foot buffers for listed species such as coastal California gnatcatcher, 500-foot buffers for special-status raptors, and 50-foot buffers for non-listed passerine species as deemed appropriate by the monitoring biologist. The monitoring biologist may determine whether the activity is causing harm to nesting birds based on behavior, topography, or other factors. If the biologist detects disturbance, then he or she will suggest appropriate buffers to ensure that disturbance stops and normal nesting behavior can continue. Buffers would remain in effect until the nesting activity subsides and the young have fledged. Several special-status amphibians, reptiles, and mammals have a moderate potential to occur within naturally vegetated areas immediately adjacent to							

Mitigation Measure	Time Frame of Mitigation				Monitoring Reporting Agency	Date(s) of Verification	Date of Completion
	Planning	*Pre-Const.*	*During Const.*	*Post-Const.*			
the project area. However, because the proposed project would not directly impact suitable habitat for these species direct impacts are considered minimal and would be less than significant. Potential indirect impacts associated with harassment or harm of wildlife species or their suitable habitat may occur during construction, however, and therefore mitigation is provided (see Mitigation Measures BIO-2, BIO-4, and BIO-5).							
BIO-4: The RMWD and its biologist shall coordinate the procedures for minimizing harm to or harassment of wildlife encountered during construction. These measures include, but are not limited to, the following: - Environmental education for all workers - Prohibition of pets or firearms on site - Prohibition of harassment or collection of wildlife species.		X			Ramona Municipal Water District		
BIO-5: All trenches or holes outside of the pump station will be covered at the end of each day using plywood, hard plastic, or similar material in order to prevent wildlife from becoming trapped or unable to travel through the construction site. The edges of the covering material should provide a solid barrier such that no gaps are present that might entice wildlife to use them as shelter.			X		Ramona Municipal Water District		
CUL-1: In the event that paleontological resources are discovered during construction, excavations within 50 feet of the find shall be temporarily halted or diverted until a qualified paleontologist is retained to evaluate the discovery. The paleontologist shall notify the appropriate agencies to determine procedures that should be followed before construction is allowed to resume at the location of the find. If the RMWD determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the proposed project on the qualities that make the resource important. The plan shall be kept on file at the RMWD office.			X		Ramona Municipal Water District		
CUL-2: In the event that any sites containing human remains are inadvertently discovered during any phase of project construction, construction will cease in the vicinity of the discovery or any nearby area and the following actions shall be taken: - The San Diego County Coroner's Office shall be notified immediately per state law (California Health and Safety Code Section 7050.5). If the county coroner determines that the remains are Native American,			X		Ramona Municipal Water District		

Mitigation Measure	Time Frame of Mitigation				Monitoring Reporting Agency	Date(s) of Verification	Date of Completion
	Planning	*Pre-Const.*	*During Const.*	*Post-Const.*			
the NAHC shall be contacted within 24 hours, per California state law (California Public Resources Code Section 5097.98). - The NAHC shall designate a Most Likely Descendant who may make recommendations concerning the disposition of the remains and associated grave goods in consultation with RMWD or its designee. If the NAHC is unable to identify a Most Likely Descendant, if the Most Likely Descendant fails to make a recommendation within 24 hours, or if the RMWD or its designee rejects the recommendation of the Most Likely Descendant and mediation efforts fail to provide measures acceptable to the RWMD, then the RMWD or its designee shall rebury the remains and associated grave goods in a nearby location that shall not be disturbed during future construction and/or operational activity.							
Hazards and Hazardous Materials							
HAZ-1: When equipment and construction workers are working along the pipeline route, the work area shall be secured to ensure that the traveling public does not accidentally access the work area. Signs indicating the closure of the road/trail shall be posted at both ends of the construction work area indicating the direction of alternate routes of travel.			X		Ramona Municipal Water District		
Hydrology and Water Quality							
HYD-1: BMPs to prevent off-site water quality impacts shall be implemented by the RMWD and/or its construction contractor to prevent exposed soil from leaving work areas. Erosion- and sediment-control measures may include, but are not limited to, (1) installation of perimeter silt fencing, (2) temporary erosion control with sand or gravel bags, and (3) immediate removal of all BMPs or other project wastes from the project site. BMPs will be inspected to ensure proper working order prior to a forecasted storm, after a rain event that causes runoff from the construction site, at 24-hour intervals during extended rain events, weekly during the rainy season, every 2 weeks during the non-rainy season, and at any other times or intervals of time specified by the project manager.			X		Ramona Municipal Water District		
HYD-2: In order to ensure proper handling of bore pit groundwater, one of the following shall occur if groundwater is encountered during construction: - Groundwater can be pumped into a nearby sewer inlet. This option is only likely available near the far western portion of the pipeline			X		Ramona Municipal Water District		

Mitigation Measure	Time Frame of Mitigation				Monitoring Reporting Agency	Date(s) of Verification	Date of Completion
	Planning	*Pre-Const.*	*During Const.*	*Post-Const.*			
alignment near Espola Road, where existing sewer infrastructure is located. This option would require permission from the local wastewater utility provider. - Groundwater can be pumped into a tank and/or truck and hauled off site. Groundwater can be discharged to the nearby surface water if the RMWD obtains a General Waste Discharge Requirement to surface waters from the Regional Water Quality Control Board.							
Transportation and Traffic							
TRN-1: In order to avoid potential conflicts with the needs of the traveling public in the Blue Sky Ecological Reserve, mitigation is provided (see Mitigation Measure HAZ-1).			X		Ramona Municipal Water District, City of Poway, County of San Diego, Blue Sky Ecological Reserve		

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8.0 LIST OF PREPARERS

Engineering Staff (Dudek serving as As-Needed Engineering Staff to the Ramona Municipal Water District)

Mike Metts, PE, District Engineer
Ricardo Soto, PE, Senior Engineer
Russ Bergholz, PE, Senior Engineer
Kate Palmer, PE, Project Manager

Environmental Staff (Dudek serving as As-Needed Environmental Compliance Staff to the Ramona Municipal Water District)

Sarah Lozano, AICP, Project Manager
Brian Grover, AICP, Environmental Planner
Melanie Tylke, Environmental Planner
Dave Deckman, Environmental Planner
Jennifer Pace, Environmental Planner
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Callie Ford, Biologist
Micah Hale, PhD, Principal Archaeologist
Adam Giacinto, Archaeologist
Laurel Porter, Editor
Lesley Terry, GIS Analyst
Devin Brookhart, Publications Production Assistant
Lindsey Messner, Publications Production Assistant

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APPENDIX A

Air Quality and Greenhouse Gases

Ramona MWD - Poway Pump Station
Natural Gas Engine Emissions

Engine Rating	900	HP
BSFC	7,970	Btu/HP-hr
Fuel Input (1)	7.17	MMBtu/hr
Operating Schedule	24	hr/day
	8,760	hr/yr

	NOx	ROG	CO	SOx	PM10	PM2.5	CO2E (4)
Uncontrolled							
gm/BHP-hr (2)	16.0	0.25	8.0				
lb/MMBtu (3)				3.13E-03	1.94E-02	1.94E-02	1.10E+02
lb/hr	31.75	0.50	15.87	0.022	0.139	0.139	789.0
lb/day	761.9	11.9	381.0	0.54	3.34	3.34	18,935.5
ton/yr	139.0	2.2	69.5	0.1	0.6	0.6	3,455.7
metric ton/yr							3,135
Controlled							
gm/BHP-hr (2)	0.14	0.14	1.99				
lb/MMBtu (3)				3.13E-03	1.94E-02	1.94E-02	1.10E+02
lb/hr	0.28	0.28	3.95	0.022	0.139	0.139	788.981
lb/day	6.67	6.67	94.76	0.54	3.34	3.34	18,935.5
ton/yr	1.2	1.2	17.3	0.1	0.6	0.6	3,455.7
metric ton/yr							3,135

Notes:
(1) Dresser Waukesha specifications for P48GSI natural gas engine.
(2) Miratech emissions data sheet
(3) Based on EPA *Compilation of Air Pollutant Emission Factors* , Table 3.2-3 (July 2000).
(4) GHG includes CO2 and methane per Table 3.2-3.

Ramona MWD - Poway Pump Station
Existing Motor - Electricity GHG Emissions

Motor Rating	900	HP
Motor Efficiency	85%	
	790	kW
Operating Schedule	24	hr/day
Percent of Capacity	20%	
	1,752	hr/yr
Annual Electricity Use	1,383,874	kWh/yr
	1383.87	MWh/yr
CO2 Factor	739.05	lb/MWh
Annual CO2 Emissions	1,022,752	lb CO2/yr
	463.9	MT CO2/yr
	465.9	MT CO2E/yr

Poway Pump Station
Natural Gas Engine
Rule 69.4.1 Limits

		NOx	Proposed	Limit
Fuel Usage			ppmvd	ppmvd
Btu/BHP-hr	g/BHP-hr	lb/MMBtu	@ 15% O2	@ 15% O2
7,970	0.14	0.039	11	25

		CO	Proposed	Limit
Fuel Usage			ppmvd	ppmvd
Btu/BHP-hr	g/BHP-hr	lb/MMBtu	@ 15% O2	@ 15% O2
7,970	1.99	0.550	246	2,500

		VOC	Proposed	Limit
Fuel Usage			ppmvd	ppmvd
Btu/BHP-hr	g/BHP-hr	lb/MMBtu	@ 15% O2	@ 15% O2
7,970	0.14	0.039	30	250

Standard Temperature (SJVUAPCD)
68 deg F
Molar Volume
385.3 scf/mole
F-Factor
8710 scf/MMBtu @ 0% O2, 68 deg F

RMWD Pump Station

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
User Defined Industrial	1	User Defined Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**		**Utility Company**	User Defined
Climate Zone	13		2.6		
		Precipitation Freq (Days)			
			40		

1.3 User Entered Comments

Project Characteristics -

Land Use - 0.278 acres is the estimated square footage for pipeline installation as well as gas meter and engine installation

Construction Phase - Assumes maximum feasible overlap of construction activities for Phase I and in Phase II.

Off-road Equipment - Generator set assumed as handheld electric jack hammer if rock is encountered

Off-road Equipment - Off-Highway Truck used as a water truck

Off-road Equipment - Only one cement and mortar mixer necessary for 5 x 10 ft. gas meter pad

Off-road Equipment - Gas meter installation captured in vendor and worker trips

Off-road Equipment - paving equipment modeled for backhoe

Off-road Equipment - Assume only one crane needed for engine installation

Off-road Equipment - Assuming no heavy duty equipment required during engine testing

Trips and VMT - Vendor trips include water (for water jet and dust suppression), pipe, and cement delivery.

Off-road Equipment - 2 cement and mortar mixers for retaining wall; grader modeled as backhoe

Grading - acres disturbed is conservative estimate of total pipeline and pump station improvements

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2013	0.09	0.63	0.45	0.00	0.02	0.04	0.06	0.00	0.04	0.04			68.37	0.01	0.00	68.52
2014	0.04	0.28	0.20	0.00	0.03	0.02	0.04	0.00	0.02	0.02			32.61	0.00	0.00	32.68
Total	**0.13**	**0.91**	**0.65**	**0.00**	**0.05**	**0.06**	**0.10**	**0.00**	**0.06**	**0.06**			**100.98**	**0.01**	**0.00**	**101.20**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2013	0.09	0.63	0.45	0.00	0.00	0.04	0.04	0.00	0.04	0.04			68.37	0.01	0.00	68.52
2014	0.04	0.28	0.20	0.00	0.00	0.02	0.02	0.00	0.02	0.02			32.61	0.00	0.00	32.68
Total	**0.13**	**0.91**	**0.65**	**0.00**	**0.00**	**0.06**	**0.06**	**0.00**	**0.06**	**0.06**			**100.98**	**0.01**	**0.00**	**101.20**

3.0 Construction Detail

3.1 Mitigation Measures Construction

3.2 Phase I - Open Trenching - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.06	0.43	0.30	0.00		0.03	0.03		0.03	0.03			42.05	0.01	0.00	42.16
Total	**0.06**	**0.43**	**0.30**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**			**42.05**	**0.01**	**0.00**	**42.16**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Vendor	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00			3.94	0.00	0.00	3.95
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00			2.32	0.00	0.00	2.32
Total	**0.00**	**0.03**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**			**6.26**	**0.00**	**0.00**	**6.27**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.06	0.43	0.30	0.00		0.03	0.03		0.03	0.03			42.05	0.01	0.00	42.16
Total	**0.06**	**0.43**	**0.30**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**			**42.05**	**0.01**	**0.00**	**42.16**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Vendor	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00			3.94	0.00	0.00	3.95
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00			2.32	0.00	0.00	2.32
Total	**0.00**	**0.03**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**			**6.26**	**0.00**	**0.00**	**6.27**

3.3 Phase I - Trenchless Drilling - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.00	0.03	0.01	0.00		0.00	0.00		0.00	0.00			3.80	0.00	0.00	3.80
Total	**0.00**	**0.03**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**			**3.80**	**0.00**	**0.00**	**3.80**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.30	0.00	0.00	0.30
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.07	0.00	0.00	0.07
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**			**0.37**	**0.00**	**0.00**	**0.37**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.00	0.03	0.01	0.00		0.00	0.00		0.00	0.00			3.80	0.00	0.00	3.80
Total	**0.00**	**0.03**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**			**3.80**	**0.00**	**0.00**	**3.80**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.30	0.00	0.00	0.30
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.07	0.00	0.00	0.07
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**			**0.37**	**0.00**	**0.00**	**0.37**

3.4 Phase I - Gas Meter Pad - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00			0.22	0.00	0.00	0.22
Paving	0.00					0.00	0.00		0.00	0.00			0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**			**0.22**	**0.00**	**0.00**	**0.22**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.05	0.00	0.00	0.05
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.02	0.00	0.00	0.02
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**			**0.07**	**0.00**	**0.00**	**0.07**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00			0.22	0.00	0.00	0.22
Paving	0.00					0.00	0.00		0.00	0.00			0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**			**0.22**	**0.00**	**0.00**	**0.22**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.05	0.00	0.00	0.05
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.02	0.00	0.00	0.02
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**			**0.07**	**0.00**	**0.00**	**0.07**

3.5 Phase II - Open Trenching and Gas Meter Installation - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00			0.83	0.00	0.00	0.83
Total	**0.00**	**0.01**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**			**0.83**	**0.00**	**0.00**	**0.83**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.05	0.00	0.00	0.05
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.04	0.00	0.00	0.04
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**			**0.09**	**0.00**	**0.00**	**0.09**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00			0.83	0.00	0.00	0.83
Total	**0.00**	**0.01**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**			**0.83**	**0.00**	**0.00**	**0.83**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.05	0.00	0.00	0.05
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.04	0.00	0.00	0.04
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**			**0.09**	**0.00**	**0.00**	**0.09**

3.6 Phase II - Grading and Retaining Wall - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Off-Road	0.01	0.11	0.07	0.00		0.01	0.01		0.01	0.01			10.88	0.00	0.00	10.90
Total	**0.01**	**0.11**	**0.07**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**			**10.88**	**0.00**	**0.00**	**10.90**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.01	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00			0.86	0.00	0.00	0.86
Vendor	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00			2.17	0.00	0.00	2.17
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.78	0.00	0.00	0.79
Total	**0.00**	**0.02**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**			**3.81**	**0.00**	**0.00**	**3.82**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Off-Road	0.01	0.11	0.07	0.00		0.01	0.01		0.01	0.01			10.88	0.00	0.00	10.90
Total	**0.01**	**0.11**	**0.07**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**			**10.88**	**0.00**	**0.00**	**10.90**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.86	0.00	0.00	0.86
Vendor	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00			2.17	0.00	0.00	2.17
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.78	0.00	0.00	0.79
Total	**0.00**	**0.02**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**			**3.81**	**0.00**	**0.00**	**3.82**

3.6 Phase II - Grading and Retaining Wall - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Off-Road	0.02	0.17	0.12	0.00		0.01	0.01		0.01	0.01			18.79	0.00	0.00	18.83
Total	**0.02**	**0.17**	**0.12**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**			**18.79**	**0.00**	**0.00**	**18.83**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.01	0.01	0.00	0.02	0.00	0.02	0.00	0.00	0.00			1.50	0.00	0.00	1.50
Vendor	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00			3.75	0.00	0.00	3.75
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00			1.33	0.00	0.00	1.33
Total	**0.00**	**0.03**	**0.03**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**			**6.58**	**0.00**	**0.00**	**6.58**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Off-Road	0.02	0.17	0.12	0.00		0.01	0.01		0.01	0.01			18.79	0.00	0.00	18.83
Total	**0.02**	**0.17**	**0.12**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**			**18.79**	**0.00**	**0.00**	**18.83**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00			1.50	0.00	0.00	1.50
Vendor	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00			3.75	0.00	0.00	3.75
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00			1.33	0.00	0.00	1.33
Total	**0.00**	**0.03**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**			**6.58**	**0.00**	**0.00**	**6.58**

3.7 Phase II - Foundation Establishment - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.01	0.05	0.03	0.00		0.00	0.00		0.00	0.00			4.40	0.00	0.00	4.42
Paving	0.00					0.00	0.00		0.00	0.00			0.00	0.00	0.00	0.00
Total	**0.01**	**0.05**	**0.03**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**			**4.40**	**0.00**	**0.00**	**4.42**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00			1.97	0.00	0.00	1.98
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.44	0.00	0.00	0.44
Total	**0.00**	**0.01**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**			**2.41**	**0.00**	**0.00**	**2.42**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.01	0.05	0.03	0.00		0.00	0.00		0.00	0.00			4.40	0.00	0.00	4.42
Paving	0.00					0.00	0.00		0.00	0.00			0.00	0.00	0.00	0.00
Total	**0.01**	**0.05**	**0.03**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**			**4.40**	**0.00**	**0.00**	**4.42**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00			1.97	0.00	0.00	1.98
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.44	0.00	0.00	0.44
Total	**0.00**	**0.01**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**			**2.41**	**0.00**	**0.00**	**2.42**

3.8 Phase II - Engine Installation - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00			0.41	0.00	0.00	0.41
Total	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**			**0.41**	**0.00**	**0.00**	**0.41**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.03	0.00	0.00	0.03
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**			**0.03**	**0.00**	**0.00**	**0.03**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00			0.41	0.00	0.00	0.41
Total	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**			**0.41**	**0.00**	**0.00**	**0.41**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.03	0.00	0.00	0.03
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**			**0.03**	**0.00**	**0.00**	**0.03**

RMWD Pump Station

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
User Defined Industrial	1	User Defined Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**		**Utility Company**	User Defined
Climate Zone	13		2.6		
		Precipitation Freq (Days)			
			40		

1.3 User Entered Comments

Project Characteristics -

Land Use - 0.278 acres is the estimated square footage for pipeline installation as well as gas meter and engine installation

Construction Phase - Assumes maximum feasible overlap of construction activities for Phase I and in Phase II.

Off-road Equipment - Generator set assumed as handheld electric jack hammer if rock is encountered

Off-road Equipment - Off-Highway Truck used as a water truck

Off-road Equipment - Only one cement and mortar mixer necessary for 5 x 10 ft. gas meter pad

Off-road Equipment - Gas meter installation captured in vendor and worker trips

Off-road Equipment - paving equipment modeled for backhoe

Off-road Equipment - Assume only one crane needed for engine installation

Off-road Equipment - Assuming no heavy duty equipment required during engine testing

Trips and VMT - Vendor trips include water (for water jet and dust suppression), pipe, and cement delivery.

Off-road Equipment - 2 cement and mortar mixers for retaining wall; grader modeled as backhoe

Grading - acres disturbed is conservative estimate of total pipeline and pump station improvements

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2013	6.67	48.64	31.17	0.06	1.79	2.92	3.68	0.03	2.92	2.95			0.00	0.59	0.00	6,369.88
2014	1.84	13.97	8.04	0.02	1.65	0.74	2.21	0.01	0.74	0.76			0.00	0.16	0.00	1,705.36
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2013	6.67	48.64	31.17	0.06	0.03	2.92	2.95	0.03	2.92	2.95			0.00	0.59	0.00	6,369.88
2014	1.84	13.97	8.04	0.02	0.02	0.74	0.76	0.01	0.74	0.76			0.00	0.16	0.00	1,705.36
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00				0.00		0.00
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00				0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**				**0.00**	**0.00**	**0.00**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00				0.00		0.00
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00				0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**				**0.00**	**0.00**	**0.00**

3.0 Construction Detail

3.1 Mitigation Measures Construction

3.2 Phase I - Open Trenching - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.20	21.45	15.19	0.02		1.61	1.61		1.61	1.61				0.29		2,324.35
Total	**3.20**	**21.45**	**15.19**	**0.02**		**1.61**	**1.61**		**1.61**	**1.61**				**0.29**		**2,324.35**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.12	1.39	0.88	0.00	0.07	0.05	0.12	0.01	0.05	0.05				0.01		216.48
Worker	0.08	0.10	0.84	0.00	0.17	0.01	0.18	0.01	0.01	0.01				0.01		125.74
Total	**0.20**	**1.49**	**1.72**	**0.00**	**0.24**	**0.06**	**0.30**	**0.02**	**0.06**	**0.06**				**0.02**		**342.22**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.20	21.45	15.19	0.02		1.61	1.61		1.61	1.61				0.29		2,324.35
Total	**3.20**	**21.45**	**15.19**	**0.02**		**1.61**	**1.61**		**1.61**	**1.61**				**0.29**		**2,324.35**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.12	1.39	0.88	0.00	0.01	0.05	0.05	0.01	0.05	0.05				0.01		216.48
Worker	0.08	0.10	0.84	0.00	0.01	0.01	0.01	0.01	0.01	0.01				0.01		125.74
Total	**0.20**	**1.49**	**1.72**	**0.00**	**0.02**	**0.06**	**0.06**	**0.02**	**0.06**	**0.06**				**0.02**		**342.22**

3.3 Phase I - Trenchless Drilling - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.09	17.93	8.83	0.03		0.71	0.71		0.71	0.71				0.18		2,794.44
Total	**2.09**	**17.93**	**8.83**	**0.03**		**0.71**	**0.71**		**0.71**	**0.71**				**0.18**		**2,794.44**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.12	1.39	0.88	0.00	0.07	0.05	0.12	0.01	0.05	0.05				0.01		216.48
Worker	0.03	0.04	0.32	0.00	0.07	0.00	0.07	0.00	0.00	0.00				0.00		48.36
Total	**0.15**	**1.43**	**1.20**	**0.00**	**0.14**	**0.05**	**0.19**	**0.01**	**0.05**	**0.05**				**0.01**		**264.84**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.09	17.93	8.83	0.03		0.71	0.71		0.71	0.71				0.18		2,794.44
Total	**2.09**	**17.93**	**8.83**	**0.03**		**0.71**	**0.71**		**0.71**	**0.71**				**0.18**		**2,794.44**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.12	1.39	0.88	0.00	0.01	0.05	0.05	0.01	0.05	0.05				0.01		216.48
Worker	0.03	0.04	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		48.36
Total	**0.15**	**1.43**	**1.20**	**0.00**	**0.01**	**0.05**	**0.05**	**0.01**	**0.05**	**0.05**				**0.01**		**264.84**

3.4 Phase I - Gas Meter Pad - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.93	5.61	3.47	0.01		0.47	0.47		0.47	0.47				0.08		487.43
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**0.93**	**5.61**	**3.47**	**0.01**		**0.47**	**0.47**		**0.47**	**0.47**				**0.08**		**487.43**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.06	0.70	0.44	0.00	0.04	0.02	0.06	0.00	0.02	0.03				0.00		108.24
Worker	0.03	0.04	0.32	0.00	0.07	0.00	0.07	0.00	0.00	0.00				0.00		48.36
Total	**0.09**	**0.74**	**0.76**	**0.00**	**0.11**	**0.02**	**0.13**	**0.00**	**0.02**	**0.03**				**0.00**		**156.60**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.93	5.61	3.47	0.01		0.47	0.47		0.47	0.47				0.08		487.43
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**0.93**	**5.61**	**3.47**	**0.01**		**0.47**	**0.47**		**0.47**	**0.47**				**0.08**		**487.43**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.06	0.70	0.44	0.00	0.00	0.02	0.03	0.00	0.02	0.03				0.00		108.24
Worker	0.03	0.04	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		48.36
Total	**0.09**	**0.74**	**0.76**	**0.00**	**0.00**	**0.02**	**0.03**	**0.00**	**0.02**	**0.03**				**0.00**		**156.60**

3.5 Phase II - Open Trenching and Gas Meter Installation - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.54	17.06	11.88	0.02		1.25	1.25		1.25	1.25				0.23		1,832.23
Total	**2.54**	**17.06**	**11.88**	**0.02**		**1.25**	**1.25**		**1.25**	**1.25**				**0.23**		**1,832.23**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.06	0.70	0.44	0.00	0.04	0.02	0.06	0.00	0.02	0.03				0.00		108.24
Worker	0.05	0.06	0.52	0.00	0.10	0.00	0.11	0.00	0.00	0.01				0.01		77.38
Total	**0.11**	**0.76**	**0.96**	**0.00**	**0.14**	**0.02**	**0.17**	**0.00**	**0.02**	**0.04**				**0.01**		**185.62**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.54	17.06	11.88	0.02		1.25	1.25		1.25	1.25				0.23		1,832.23
Total	**2.54**	**17.06**	**11.88**	**0.02**		**1.25**	**1.25**		**1.25**	**1.25**				**0.23**		**1,832.23**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.06	0.70	0.44	0.00	0.00	0.02	0.03	0.00	0.02	0.03				0.00		108.24
Worker	0.05	0.06	0.52	0.00	0.00	0.00	0.01	0.00	0.00	0.01				0.01		77.38
Total	**0.11**	**0.76**	**0.96**	**0.00**	**0.00**	**0.02**	**0.04**	**0.00**	**0.02**	**0.04**				**0.01**		**185.62**

3.6 Phase II - Grading and Retaining Wall - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00						0.00
Off-Road	1.29	9.69	6.48	0.01		0.54	0.54		0.54	0.54				0.12		1,092.93
Total	**1.29**	**9.69**	**6.48**	**0.01**	**0.01**	**0.54**	**0.55**	**0.00**	**0.54**	**0.54**				**0.12**		**1,092.93**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.05	0.61	0.30	0.00	1.47	0.02	1.49	0.00	0.02	0.03				0.00		86.31
Vendor	0.12	1.39	0.88	0.00	0.07	0.05	0.12	0.01	0.05	0.05				0.01		216.48
Worker	0.05	0.06	0.52	0.00	0.10	0.00	0.11	0.00	0.00	0.01				0.01		77.38
Total	**0.22**	**2.06**	**1.70**	**0.00**	**1.64**	**0.07**	**1.72**	**0.01**	**0.07**	**0.09**				**0.02**		**380.17**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00						0.00
Off-Road	1.29	9.69	6.48	0.01		0.54	0.54		0.54	0.54				0.12		1,092.93
Total	**1.29**	**9.69**	**6.48**	**0.01**	**0.01**	**0.54**	**0.55**	**0.00**	**0.54**	**0.54**				**0.12**		**1,092.93**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.05	0.61	0.30	0.00	0.00	0.02	0.03	0.00	0.02	0.03				0.00		86.31
Vendor	0.12	1.39	0.88	0.00	0.01	0.05	0.05	0.01	0.05	0.05				0.01		216.48
Worker	0.05	0.06	0.52	0.00	0.00	0.00	0.01	0.00	0.00	0.01				0.01		77.38
Total	**0.22**	**2.06**	**1.70**	**0.00**	**0.01**	**0.07**	**0.09**	**0.01**	**0.07**	**0.09**				**0.02**		**380.17**

3.6 Phase II - Grading and Retaining Wall - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00						0.00
Off-Road	1.22	9.14	6.47	0.01		0.49	0.49		0.49	0.49				0.11		1,092.82
Total	**1.22**	**9.14**	**6.47**	**0.01**	**0.01**	**0.49**	**0.50**	**0.00**	**0.49**	**0.49**				**0.11**		**1,092.82**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.05	0.55	0.28	0.00	1.47	0.02	1.49	0.00	0.02	0.02				0.00		86.52
Vendor	0.11	1.29	0.82	0.00	0.07	0.04	0.12	0.01	0.04	0.05				0.01		216.79
Worker	0.05	0.05	0.47	0.00	0.10	0.00	0.11	0.00	0.00	0.01				0.00		75.74
Total	**0.21**	**1.89**	**1.57**	**0.00**	**1.64**	**0.06**	**1.72**	**0.01**	**0.06**	**0.08**				**0.01**		**379.05**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00						0.00
Off-Road	1.22	9.14	6.47	0.01		0.49	0.49		0.49	0.49				0.11		1,092.82
Total	**1.22**	**9.14**	**6.47**	**0.01**	**0.01**	**0.49**	**0.50**	**0.00**	**0.49**	**0.49**				**0.11**		**1,092.82**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.05	0.55	0.28	0.00	0.00	0.02	0.02	0.00	0.02	0.02				0.00		86.52
Vendor	0.11	1.29	0.82	0.00	0.01	0.04	0.05	0.01	0.04	0.05				0.01		216.79
Worker	0.05	0.05	0.47	0.00	0.00	0.00	0.01	0.00	0.00	0.01				0.00		75.74
Total	**0.21**	**1.89**	**1.57**	**0.00**	**0.01**	**0.06**	**0.08**	**0.01**	**0.06**	**0.08**				**0.01**		**379.05**

3.7 Phase II - Foundation Establishment - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.88	5.36	3.44	0.01		0.45	0.45		0.45	0.45				0.08		487.33
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**0.88**	**5.36**	**3.44**	**0.01**		**0.45**	**0.45**		**0.45**	**0.45**				**0.08**		**487.33**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.11	1.29	0.82	0.00	0.07	0.04	0.12	0.01	0.04	0.05				0.01		216.79
Worker	0.03	0.03	0.30	0.00	0.07	0.00	0.07	0.00	0.00	0.00				0.00		47.34
Total	**0.14**	**1.32**	**1.12**	**0.00**	**0.14**	**0.04**	**0.19**	**0.01**	**0.04**	**0.05**				**0.01**		**264.13**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.88	5.36	3.44	0.01		0.45	0.45		0.45	0.45				0.08		487.33
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**0.88**	**5.36**	**3.44**	**0.01**		**0.45**	**0.45**		**0.45**	**0.45**				**0.08**		**487.33**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.11	1.29	0.82	0.00	0.01	0.04	0.05	0.01	0.04	0.05				0.01		216.79
Worker	0.03	0.03	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		47.34
Total	**0.14**	**1.32**	**1.12**	**0.00**	**0.01**	**0.04**	**0.05**	**0.01**	**0.04**	**0.05**				**0.01**		**264.13**

3.8 Phase II - Engine Installation - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.78	7.26	2.25	0.01		0.25	0.25		0.25	0.25				0.07		897.10
Total	**0.78**	**7.26**	**2.25**	**0.01**		**0.25**	**0.25**		**0.25**	**0.25**				**0.07**		**897.10**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Worker	0.04	0.04	0.36	0.00	0.08	0.00	0.08	0.00	0.00	0.01				0.00		56.80
Total	**0.04**	**0.04**	**0.36**	**0.00**	**0.08**	**0.00**	**0.08**	**0.00**	**0.00**	**0.01**				**0.00**		**56.80**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.78	7.26	2.25	0.01		0.25	0.25		0.25	0.25				0.07		897.10
Total	**0.78**	**7.26**	**2.25**	**0.01**		**0.25**	**0.25**		**0.25**	**0.25**				**0.07**		**897.10**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00		0.00
Worker	0.04	0.04	0.36	0.00	0.00	0.00	0.01	0.00	0.00	0.01				0.00		56.80
Total	**0.04**	**0.04**	**0.36**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.01**				**0.00**		**56.80**

APPENDIX B

Noise

No. 1 Altorfer Lane • East Peoria, IL 61611
Phone: 309-694-1418 • Fax: 309-694-3703
Email: sales@enercon-eng.com

SOUND ESTIMATE
Waukesha P-48

	63 HZ	125 HZ	250 HZ	500 HZ	1000 HZ	2000 HZ	4000 HZ	8000 HZ	OVERALL
ENGINE-MECH									
AT 1 METER	95.00	95.00	95.00	100.00	94.00	95.00	92.00	87.00	
DB(A)	68.80	78.90	86.40	96.80	94.00	96.20	93.00	85.90	101.58
ENGINE-EXH									
AT 1 METER	104.00	121.00	118.00	108.00	104.00	98.00	87.00	75.00	
DB(A)	77.80	104.90	109.40	104.80	104.00	99.20	88.00	73.90	112.61
MP-24 REVERSE (IN)	4.00	9.00	13.00	21.00	31.00	23.00	14.00	10.00	
TURNING VANE	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	
TOTAL ATTEN	14.00	19.00	23.00	31.00	41.00	33.00	24.00	20.00	
AT 1 METER	54.80	59.90	63.40	65.80	53.00	63.20	69.00	65.90	73.30
202-6100	30.00	36.00	36.00	34.00	32.00	32.00	32.00	34.00	
MUFFLER									
TOTAL ATTEN	30.00	36.00	36.00	34.00	32.00	32.00	32.00	34.00	
AT 1 METER	47.80	68.90	73.40	70.80	72.00	67.20	56.00	39.90	78.01
2" STEEL WALL	17.00	20.00	22.00	32.00	42.00	50.00	57.00	58.00	
MECH 1 M	51.80	58.90	64.40	64.80	52.00	46.20	36.00	27.90	68.39
TOTAL SOUND									
AT 1 METER	57.11	69.78	74.28	72.75	72.10	68.68	69.21	65.91	

DB(A) TOTAL	
1 METER	79.62
7 METERS	67.62
15 METERS	61.62

NOTE: THESE CALCULATIONS ARE BASED ON SOUND LEVEL DATA PROVIDED BY THE ENGINE / GENERATOR MANUFACTURER, AND SOUND ATTENUATION CHARACTERISTICS SUPPLIED BY THE EXHAUST SILENCER, PANEL WALL AND LOUVER MANUFACTURERS. ACTUAL SOUND LEVELS MAY VARY BASED ON INTERACTION OF COMPONENTS AND SITE CONDITIONS.

1 METER DISTANCE IS A CALCULATED VALUE BASED OF PROVIDED ENGINE MANUFACTURER DATA. THE 7 AND 15 METER VALUES HAVE BEEN FOUND USING THE INVERSE SQUARE LAW WHICH STATES THAT FOR EVERY DOUBLING OF THE DISTANCE YOU DECREASE THE NOISE LEVEL BY 6 Db.