

Lahontan Regional Water Quality Control Board

November 9, 2012

State Clearing House
P.O. Box 3044
Sacramento, CA 95812-3044

TRANSMITTAL OF DRAFT MITIGATED NEGATIVE DECLARATION FOR THE CLASS II SURFACE IMPOUNDMENTS PROJECT, PG&E COMPRESSOR STATION, HINKLEY, SAN BERNARDINO COUNTY

Please accept and distribute the enclosed Draft Mitigated Negative Declaration (MND) for the Class II Surface Impoundments Project at the PG&E Compressor Station in Hinkley. The document has been prepared by Water Board staff and our consultant, ICF International Inc., to evaluate potential environmental impacts from the proposed project involving the addition of two surface impoundments on site.

The Draft MND will be considered for adoption by the Water Board at a public hearing on January 16, 2013 in Barstow with waste discharge requirements. A tentative Water Board resolution adopting the Draft MND is enclosed. We have also enclosed a Notice of Intent form for your office.

If you have any questions, please contact me at (530) 542-5424.



Lisa Dernbach
Senior Engineering Geologist (Specialist)

Enclosure: Draft Mitigated Negative Declaration (6 copies)
Water Board Resolution No. R6V-2013-TENTATIVE (6 copies)
Notice of Intent
Agencies Mailing List

LSD/clmT: SCH PG&E Class II Ponds MND 11-12.let
Send to file: WDID No. 6B369107001(VVL)

DRAFT

**CLASS II SURFACE IMPOUNDMENTS 6R AND 7R PG&E
HINKLEY COMPRESSOR STATION, HINKLEY, CA
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION**

PREPARED FOR:

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November 2012

ICF International. 2012. Class II Surface Impoundments 6R and 7R PG&E Hinkley Compressor Station Hinkley, California Initial Study/Mitigated Negative Declaration. Draft. November. (ICF 00569.12) San Francisco, CA. Prepared for Lahontan Regional Water Quality Control Board, Victorville, CA.

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Acronyms and Abbreviations

µg/m ₃	micrograms per cubic meter
AADT	average annual daily traffic
AB 32	Assembly Bill 32
ADT	average daily traffic
AQMPs	air quality management plans
Basin Plans	Water Quality Control Plans
bgs	below ground surface
BLM	U.S. Bureau of Land Management
BMPs	best management practices
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCAs	community choice aggregators
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CGP	Construction General Permit
CNDDB	California Natural Diversity Database
CNG	compressed natural gas
CNPS	California Native Plant Society
CO	carbon monoxide
COCs	Constituents of Concern
Cr[VI]	hexavalent chromium
dB	decibel
DPM	Diesel particulate matter
ECSZ	Eastern California Shear Zone
EPA	U.S. Environmental Protection Agency
ESPs	energy service providers
FMMP	Farmland Mapping and Monitoring Program
GCL	geosynthetic clay liner
GHGs	greenhouse gases
gpd	gallons per day
GPS	global positioning system
HCP	habitat conservation plan

HDPE	high density polyethylene
HDPE	high-density polyethylene
HMBP	Hazardous Materials Business Plan
HRA	Health Risk Assessment
I-15	Interstate 15
IOUs	investor-owned utilities
Lahontan Water Board	California Regional Water Quality Control Board—Lahontan Region
LCFS	Low Carbon Fuel Standard
LCRS	leachate collection and removal system
LOS	level of service
MBTA	Migratory Bird Treaty Act
MCE	maximum credible earthquake
MCL	maximum contaminant level
MDAQMD	Mojave Desert Air Quality Management District
mg/L	milligram per liter
mpg	miles per gallon
MRP	Monitoring and Reporting Program
MRZs	Mineral Resource Zones
MTCO _{2e}	metric tons of carbon dioxide equivalent
MWA	Mojave Water Agency
NAAQS	National Ambient Air Quality Standards
NO ₂	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
NRCS	National Resource Conservation Service
O ₃	ozone
Pb	lead
PG&E	Pacific Gas and Electric Company
PGA	peak ground acceleration
PM10 and PM2.5	particulate matter
ppm	parts per million
ppmv	parts per million by volume
Regional Water Boards	Regional Water Quality Control Boards
RWD	Report of Waste Discharge
SCAQMD,	South Coast Air Quality Management District
SMCLs	secondary maximum contaminant levels
SO ₂	sulfur dioxide
SPT	standard penetration test
State Water Board	State Water Resources Control Board

SWPPP	Storm Water Pollution Prevention Plan
TACs	toxic air contaminants
TDS	Total Dissolved Solids
UCMP	University of California Museum of Paleontology
WDRs	Waste Discharge Requirements
WQPS	Water Quality Protection Standard

1.1 Project Location and Background

The Pacific Gas and Electric Company (PG&E) Hinkley Compressor Station is located in San Bernardino County, California, approximately 9 miles west of Barstow and 3 miles southeast of the community of Hinkley, California (Figure 2-1). As part of its natural gas compression operation at the Compressor Station, PG&E currently maintains and operates three double-lined surface impoundments for the evaporation of wastewater generated from facility operation and maintenance activities (Ponds 4, 5 and 8 on Figure 2-2).

The existing surface impoundments (Ponds 4, 5, and 8) do not provide sufficient evaporative capacity for proper operation of the Compressor Station. The average design wastewater flow rate for optimal Compressor Station operation is 30,000 gallons per day (gpd). If the impoundments are near capacity, the station must reduce cooling tower boiler blowdown¹ rates to approximately 15,000 gpd to ensure the freeboard requirements (2 feet) are met. To reduce blowdown rates, cooling water must be used longer, creating higher levels of brine. This reduction has resulted in damage and reduced life of equipment, and could cause future impacts to the continued transmission of gas along Line 300.

To allow for optimum blowdown rates and return to the design flow rate of 30,000 gpd, two new surface impoundments, Ponds 6R and 7R, are proposed (Project). These surface impoundments would be constructed in the footprints of the former Ponds 6 and 7, which were clean-closed in 1996 by removing all contents and liners (Cardno ENTRIX 2012a; Lahontan Water Board 1996). The former footprints of Ponds 6 and 7 were not backfilled.

Additionally, the existing facilities do not provide sufficient capacity to remove a surface impoundment from service for maintenance or in the event of a leak. With the addition of Ponds 6R and 7R, the existing impoundments may be maintained; and, in the unlikely event of a leak, the water may be transferred to the other surface impoundments while repairs are performed.

PG&E has submitted a Report of Waste Discharge (RWD), dated March 15, 2012, and an Addendum to the RWD, dated June 27, 2012, in accordance with the requirements of CCR Title 27 of the California Code of Regulations (CCR), Environmental Protection--Division 2, Solid Waste, to the California Regional Water Quality Control Board—Lahontan Region (Lahontan Water Board). The RWD was submitted to request Revised Waste Discharge Requirements (WDRs) that include construction and operation of two additional Class II surface impoundments for evaporation of wastewater generated at the PG&E Hinkley Compressor Station in Hinkley, California. Revised WDRs are still being developed and, thus, past WDRs (Board Order 6-97-82) are still in place by the Lahontan Water Board for the operation of three existing surface impoundments. The Project includes the addition of two surface impoundments in the footprint of former surface

¹ Blowdown is a term used to describe the water released from cooling towers. The compression of natural gas increases its temperature, and thus the cooling towers use water to reduce the temperature before transmission. When the cooling supply water becomes briny, the towers are “blown down” and the cooling water is replaced with a fresh supply.

impoundments. The proposed Project is designed to allow for maintenance of the existing surface impoundments and to improve operation of the Compressor Station.

1.2 CEQA Requirements

The California Environmental Quality Act (CEQA) applies to all discretionary activities proposed to be implemented or approved by a California public agency, in this case, the Lahontan Water Board is Lead Agency who would approve and issue the WDR for the proposed two additional impoundments at the Compressor Station. CEQA requires an agency to review the effects of its actions on numerous environmental resources. The State CEQA Guidelines are the primary rules and source of interpretation of CEQA (Pub. Res. Code sec. 21083).

An initial study is used to determine whether the action may have a significant environmental effect. It is a preliminary analysis prepared by the Lead Agency. The Initial Study may use a checklist format but fact-based explanations must be used to support the checklist. If the initial study concludes that the project may have a significant effect on the environment, an EIR should be prepared; otherwise, the Lead Agency may prepare a Negative Declaration or Mitigated Negative Declaration (Guidelines sec. 15063).

CEQA requires Initial Studies to include the project, environmental setting, potential environmental impacts, and mitigation measures for any significant effects. When describing potential environmental effects in an Initial Study, the Lead Agency may use a checklist, matrix or other form as long as the entries are briefly explained to support the entries. The checklist includes four possible levels of environmental effects: potentially significant, less than significant with mitigation incorporated, less than significant, and no impact. (Guidelines sec. 15063[d][3], [f]).

2.1 Proposed Project

The proposed project (Project) consists of the construction of two additional Class II surface impoundments, Ponds 6R and 7R. The Project area (Figures 2-1 and 2-2) is the Compressor Station facility, which is approximately 55 acres and consists of the Compressor Station, parking area, five surface impoundments (three existing ponds and two proposed ponds), office area, and associated related piping and appurtenances. The two new surface impoundments would increase the existing surface impoundment area (4.53 acres) by an additional 2.48 acres (1.22 acres for Pond 6R and 1.26 acres for Pond 7R) for a total surface impoundment area of approximately 7.00 acres. With the completion of the Project, the five surface impoundments would be able to manage design rate blowdown water from the Compressor Station without possible exceedance of freeboard requirements, and there would be sufficient capacity to perform surface impoundment maintenance in the future.

New Ponds 6R and 7R would be designed to meet all requirements for Class II surface impoundments with an engineered alternative liner system to the prescriptive standards that are appropriate in the arid desert environment of the Hinkley Valley. The new surface impoundments would employ an engineered alternative liner system that would include two layers of 60-mil high density polyethylene (HDPE) geomembrane with an integral drainage layer overlying a low permeability geosynthetic clay liner (GCL) to provide protection against leakage. A drainage layer and leak detection system is proposed between the two liners with a leachate collection and removal system (LCRS). As required by CCR Title 27, Division 2, Subdivision 1, Article 1 requirements for Class II Surface Impoundments, the new impoundments are designed to contain the additional volume of water from the 1,000-year, 24-hour storm event while maintaining 2 feet of freeboard; to withstand the seismic shaking from the maximum credible earthquake; and to be installed, tested, and inspected in accordance with an approved Construction Quality Assurance plan.

Project Construction

Construction activities would include excavation for sumps, pan lysimeters, and trenches to connect pipelines and electrical lines from the existing facilities to new Ponds 6R and 7R. A sump is an underground drain or pan that collects any leaked liquids such as water or chemicals. The LCRS sump will be equipped with perforated pipe and a pump connected to a solid riser to extract accumulated fluid (Cardno ENTRIX 2012a). A pan lysimeter (pore water sampler) is a device for taking samples in conditions of partial soil saturation and subsequent drainage conditions. The pan lysimeter would monitor for the presence of fluid that may have leaked from the LCRS sump (Cardno ENTRIX 2012a). The former surface impoundments (Ponds 6 and 7) were not backfilled; therefore, only minor earthwork would be required. Construction is expected to remove approximately 3,000 cubic yards of soil which would be spread across the facility. The excavated soil would be spread over approximately two acres (less than one foot deep) in the area east of the existing surface impoundments near former Ponds 1, 2, and 3 (Figure 2-2) (Schoemann pers.

comm.). All soil disturbance activities, including preparation of subgrade, would be performed in accordance with geotechnical specifications and local grading codes, and the soil would be compacted and graded to facilitate site drainage and prevent soil erosion. All cleared vegetation would be hauled offsite and disposed at an appropriate permitted landfill facility.

Construction activities would be conducted in accordance with the State Water Resources Control Board General Permit for Discharges of Storm Water Associated with Construction Activities (CGP Order 2009-0009-DWQ), which requires development and implementation of a Storm Water Pollution Prevention Plan (SWPPP), and in accordance with the Mojave Desert Air Quality Management District's requirements for dust control. The SWPPP and construction specifications would include, but not be limited to, the following best management practices (BMPs) to minimize dust and protect stormwater runoff.

- During excavation and grading activities, spray water shall be used to control fugitive dust.
- Non-essential earthmoving operations shall be reduced or suspended when wind speed is 25 miles per hour or greater.
- Dust control measures shall be documented as required under CGP Order 2009-0009-DWQ.
- A chemical monitoring program for any "non-visible" pollutants shall be implemented if there is a failure of BMPs.

Construction of new Ponds 6R and 7R would occur in the fall or spring due to temperature requirements for constructing the liner. The construction would be conducted over a six to eight week period. Approximately six to ten additional site workers would be present during the construction period. Workers would be from the local community, with the exception of the specialized geomembrane installation crew (approximately 4 people) from outside the area. See Table 2-1 for the schedule breakdown. Equipment staging would occur within the 55-acre Project area (see Figure 2-2).

Table 2-1. Approximate Construction Schedule

Phase	Equipment	Duration	Daily Working Hours
Materials and Mobilization	Tractor trailer(s)	5 days	8
Excavation	Backhoe, Motor Grader, Smooth Drum Roller	10 days	8
Installation	End Dump, Backhoe, portable generators	5 days	8
Integration	Backhoe	10 days	8
Vegetation	Backhoe	3 days	8

The Compressor Station fencing currently has gaps that would be repaired, as part of the Project, prior to the completion of Project construction.

Project Operation and Maintenance

Once constructed and in operation, no additional facility staff would be required for operation and maintenance. Operation of the facility involves pumping water from onsite PG&E supply wells to the

cooling towers to cool hot compressed natural gas and compressor engine lube oil, and an induced draft cooling tower to cool the combustion air on the compressor turbocharger aftercoolers. Small quantities of acid, biocides and corrosion inhibitors are added to the water to prevent biological growth, scale build-up, and corrosion of the heat exchangers in the cooling water systems. The blowdown from cooling towers is then pumped to a wastewater holding tank, where it is combined with other wastewater sources within the facility that are processed through an oil-water separator, tank before being discharged to the surface impoundments. Intermittent waste streams include wastewater from degreasing, descaling, and closed cooling system operations. The collected waste oil that comes from the oil sump skimmer and oil-water separator is collected for disposal or recycling at an offsite facility. The generated wastewater is subjected to evaporation within the surface impoundments, resulting in an accumulation of sludge. The chemical constituents in wastewater and pond sludge and any leaks through the liner systems are monitored as part of the operation and maintenance procedures. An Operation, Maintenance, and Contingency Plan for day to day operation of the Compressor Station is included in the RWD (Cardno ENTRIX 2012a).

2.2 Monitoring and Reporting Program

A Monitoring and Reporting Program (MRP) is in place under Board Order 6-97-82 for the surface impoundments currently in operation (Ponds 4, 5 and 8). Reports of the MRP are submitted semi-annually to the Lahontan Water Board.

A revised MRP is proposed to include the two new surface impoundments. The revised MRP (proposed as MRP No. R6V-2012-TENT) is designed to document the chemical constituents in wastewater and pond sludge and to provide early warning of any leaks through the liner systems. A Water Quality Protection Standard (WQPS) is presented in the Tentative WDRs and includes Monitoring Parameters, Constituents of Concern (COCs), concentration limits, Monitoring Points and the Point of Compliance, defined as required by CCR Title 27, Section 20405, to ensure the earliest possible detection of a release from the surface impoundments to the underlying soil, groundwater, and/or surface water.

The monitoring system for the uppermost sheet of the liner is the LCRS, a drainage layer between the high-density polyethylene (HDPE) liners that is sloped to a collection sump. Each sump will be inspected weekly to monitor for leaks. Below the surface impoundments, unsaturated (vadose) zone monitoring systems would continue to be monitored at Ponds 4, 5, and 8; and the unsaturated zone pan lysimeters proposed at Ponds 6R and 7R would be added to the program. Lastly, 15 existing wells are proposed to be monitored quarterly for depth to groundwater, and 12 of these wells also would be sampled quarterly for groundwater quality. Semi-annual monitoring reports would continue to be prepared and include all inspections, maintenance logs, field and laboratory data, as well as calculations of groundwater flow rate and direction and graphical and statistical analysis of data to determine compliance with the WQPS. Data packages would be posted quarterly on GeoTracker.

If a leak is suspected, the Discharger (PG&E) would implement an Evaluation Monitoring Program and, if necessary, a Corrective Action Program to cease and correct any potential leaks in the pond liners. A Corrective Action Plan is presented in the RWD (Cardno ENTRIX 2012a, 2012b).

Chapter 3

Environmental Checklist and Discussion

- 1. Project Title:** Class II Surface Impoundments 6R and 7R, PG&E Hinkley Compressor Station
- 2. Lead Agency Name and Address:** Lahontan Regional Water Quality Control Board
14440 Civic Drive, Suite 200
Victorville, CA 92392
- 3. Contact Person and Phone Number:** Lisa Dernbach
(530) 542-5424
- 4. Project Location:** 35863 Fairview Road
Hinkley, CA 92347
- 5. Project Sponsor's Name and Address:** Pacific Gas and Electric Company (PG&E)
3401 Crow Canyon Road
San Ramon, CA 94583
- 6. General Plan Designation:** Public Facilities
- 7. Zoning:** Industrial

8. Description of Project:

The Project consists of adding two new Class II surface impoundments (Ponds 6R and 7R) at the PG&E natural gas Compressor Station next to the three existing surface impoundments (Ponds 4, 5, and 8) because the existing impoundments do not provide sufficient evaporative capacity for proper operation of the Compressor Station. The additional surface impoundments would enable better management of design rate blowdown water from the Compressor Station without possible exceedance of freeboard requirements and provide sufficient capacity to perform surface impoundment maintenance in the future. Refer to Chapter 2, Project Description.

9. Surrounding Land Uses and Setting:

The predominant surrounding land uses are undeveloped open space and rural residential. Refer to Section 3.10 Land Use/Planning.

10. Other Public Agencies Whose Approval is Required:

Agency	Permit	Activity Requiring Permit
Regional Water Quality Control Board – Lahontan Region	Waste Discharge Requirements	Construction, operation and maintenance of surface impoundments
San Bernardino County Planning Department	Temporary Use Permit	Temporary trailers, if any, placed onsite during construction or for periods less than 2 years
State Water Resources Control Board	Coverage under the General Permit for Discharges of Storm Water Associated with Construction Activities	Construction disturbance of 1 acre or more

Environmental Factors Potentially Affected

The environmental factors checked below would potentially be affected by this Project (i.e., the Project would involve at least one impact that is a “Potentially Significant Impact”), as indicated by the checklist on the following pages.

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

Determination

On the basis of this initial evaluation:

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

Signature

Date

Printed Name

For

I. Aesthetics	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.1 Aesthetics

The Project area is an existing industrial facility, Hinkley Compressor Station, located north of the Mojave River and southwest of Mount General off of Highway 58 (Figure 3-1). The surrounding parcels are 5 to 20 acres with single family dwellings on agricultural land. There are no scenic vistas or designated scenic resources or scenic highways in or adjacent to the Project area, and the Project area is not within the view of any such scenic resources (San Bernardino County 2007). The only public views would be from the surrounding roadways, Community Boulevard and Fairway Road.

The new Project features include two additional surface impoundments within the Compressor Station and would not be visible to the public. Highway 58 is approximately 1 mile north of the Compressor Station and approximately 20 feet in elevation below the facility. Community Boulevard and Fairway Road (which extend north and west of the Project area, respectively) provide the closest view of the existing facility. Due to the gentle slope and the Title 27 freeboard requirement (2-foot minimum), the water surfaces of the existing impoundments (Ponds 4, 5 and 8 on Figure 2-2) are not visible from nearby roadways. Similarly, the proposed surface impoundments (Ponds 6R and 7R) would be below grade with at least 2-foot freeboard and, therefore, would not be visible from surrounding public roadways.

- a. **No Impact.** The Project is not located within, or in the vicinity of a scenic vista or any designated scenic resources (San Bernardino County 2007). The two additional surface impoundments would not be visible from any scenic vistas.
- b. **No Impact.** The Highway 58 corridor north of the facility is not a designated scenic highway. The Project is not located within or in the vicinity of a scenic highway or any designated scenic resources as described in the San Bernardino County General Plan (San Bernardino County 2007).

- c. **No Impact.** The Project is located within an industrial facility, and the proposed surface impoundments would be located within the footprint of two former surface impoundments. Changes to the existing facility would visually blend in and would not be noticeable. The Project would not alter the existing character or quality of the site or its surroundings.
- d. **Less than Significant Impact.** Construction of the new surface impoundments would result in approximately 2.2 additional acres of water surface that could be a potential source for glare. However, the surface impoundments would be below grade and have at least a 2-foot freeboard, would not be visible from motorists on surrounding roadways (which are not considered sensitive viewers). Therefore, potential glare from the additional water surface is considered less than significant.

II. Agricultural and Forestry Resources	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
<p>In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts on 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 the Forest Protocols adopted by the California Air Resources Board.</p> <p>Would the project:</p>				
<p>a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>b. Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>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))?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>d. Result in the loss of forest land or conversion of forest land to non-forest use?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>e. Involve other changes in the existing environment that, 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?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.2 Agricultural and Forestry Resources

The Project area is an existing industrial facility with a County zoning designation of Public Facilities (Figures 2-2 and 3-2). The Project area does not include any agricultural land, land under Williamson Act contract, or forest land (San Bernardino County 2007). Surrounding land uses are rural with the following County zoning designations: RL (Rural Living), RL-5 (Rural Living 5-acre minimum), and RL-10-AP (Rural Living 10-acre minimum, Agricultural Preserve) (San Bernardino County 2007). The surrounding area has historically been limited to single family houses on 5 to 10 acre lots with one mercantile gas station north of the facility (Figure 3-2).

The Project area is located in Hinkley Valley, which was dominated by agricultural uses from the 1930s to the early 1990s. The agricultural types have varied, but consisted primarily of dairy farming and fodder crops such as alfalfa and barley. Some parcels have included orchard crops, such as a pistachio orchard location less than one mile west of the Project area (Cardno ENTRIX 2012a). The number of parcels under active crop cultivation has declined over the last two decades. As shown in Figures 3-1 and 3-2, land uses adjacent to the Project area are no longer used agriculturally and can be classified as undeveloped (Cardno ENTRIX 2012a). Agriculture continues to play a major role in land use management for the Hinkley area and is an important economic element for its residents. The California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) has designated prime farmlands and farmlands of statewide importance to agricultural lands located north of SR 58 and east of the Compressor Station. Williamson Act lands are associated with agricultural areas directly north of SR 58, located north of the Project Area.

- a. **No Impact.** No farmland would be converted as a result of project implementation. The Project area is within the existing industrial facility and does not include any lands designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.
- b. **No Impact.** The Project would not conflict with existing zoning for agricultural use because the Project area is zoned Public Facilities. The Project would not affect Williamson Act contracts because there are no Williamson Act farmlands in the Project area.
- c. **No Impact.** The Project would not conflict with existing zoning or cause rezoning of forest land or timberland because there is no forest land, timberland, or timberland-zoned lands within or adjacent to the Project area.
- d. **No Impact.** The Project would not result in the loss of forest land or conversion of forest land to non-forest use because there is no forest land within or adjacent to the Project area.
- e. **Less than Significant.** The Project would not result in changes to the existing environment that could result in the conversion of forest land to non-forest use because there is no forest land in the vicinity that could be affected by the Project. Potential effects of vegetation removal are addressed in Section 3.4, Biological Resources.

The Project would not result in changes to the existing environment that would directly result in the future conversion of farmland to non-agricultural use. The proposed surface impoundments are designed to manage non-hazardous (designated) wastewater and would be built with state-of-the-art multiply-redundant containment systems that minimize the risk of releases to groundwater supplies. Not only are the surface impoundments engineered with double liners and a LCRS, but also, as part of the Project, a revised Monitoring and Reporting Program would be established to document the chemical constituents in wastewater and pond sludge and would provide early

warning of any leaks through the liner systems. With early detection, any leaks from the new surface impoundments would result in immediate remedial actions. Within a one-mile radius of the Project area, groundwater is used for agricultural purposes. If groundwater drawdown were to affect agricultural wells, it could substantially disrupt existing agricultural activities. Since the Project would not increase pumping from the groundwater aquifer over historic pumping rates, groundwater drawdown is not expected to occur, and therefore additional pumping would not affect agricultural uses. Therefore, the potential for conversion of farmland to non-agricultural use is considered to be a less than significant impact.

III. Air Quality	Potentially Significant Impact	Less-than- Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
When 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.3 Air Quality

Regulatory Setting

The Clean Air Act (CAA), enacted in 1963 and amended several times thereafter (including the 1990 amendments), establishes the framework for modern air pollution control. The CAA directs the U.S. Environmental Protection Agency (EPA) to establish ambient air standards for six pollutants: carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), particulate matter (PM₁₀ and PM_{2.5}), ozone (O₃), and lead (Pb). The California Air Resources Board (CARB) administers the CAA, administers the California Clean Air Act (CCAA), and establishes the California Ambient Air Quality Standards (CAAQS), which in most cases are stricter than the National Ambient Air Quality Standards (NAAQS).

The Project area is located in San Bernardino County and is within the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD). As such, according to the state and federal CAA's, the MDAQMD, in concert with the county, is required to develop plans and rules for attaining NAAQS and CAAQS, shown in Table 3-1 (California Air Resources Board 2012; U.S. Environmental Protection Agency 2011a). Further, the MDAQMD is responsible for developing and implementing rules and regulations to attain the NAAQS and CAAQS, as well as permitting new or modified stationary sources and developing of air quality management plans.

Table 3-1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards		National Standards	
		ppmv	$\mu\text{g}/\text{m}^3$	ppmv	$\mu\text{g}/\text{m}^3$
Ozone (O_3)	1-hour	0.09	177	—	—
	8-hour	0.07	137	0.075	147
Nitrogen Dioxide (NO_2)	1-hour	0.18	338	0.100	188
	Annual	0.03	56	0.053	100
Sulfur Dioxide (SO_2)	1-hour	0.25	655	0.075	196
	3-hour (secondary)	—	—	0.50	1,309
	24-hour	0.04	105	—	—
	Annual	—	—	0.03	79
Carbon Monoxide (CO)	1-hour	20	22,898	35	40,071
	8-hour	9	10,304	9	10,304
	Lake Tahoe (8-hr)	6	6,869	—	—
Particulates (as PM ₁₀)	24-hour	—	50	—	150
	Annual	—	20	—	—
Particulates (as PM _{2.5})	24-hour	—	—	—	35
	Annual	—	12	—	15
Lead (Pb)	30-day	—	1.5	—	—
	3-month (rolling)*	—	—	—	0.15
Sulfates (as SO_4)	24-hour	—	25	—	—
Hydrogen Sulfide (H_2S)	1-hour	0.03	42	—	—
Vinyl Chloride ($\text{C}_2\text{H}_3\text{Cl}$)	24-hour	0.01	26	—	—
Visibility Reducing Particles	8-hour	Extinction coefficient of 0.23 per km; visibility of 10 miles or more (0.07 to 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70%.		—	—

Sources: California Air Resources Board 2012; U.S. Environmental Protection Agency 2011a

Standard Temperature: 25°C

Standard Molar Volume: 24.465 liter/g-mole

Notes:

ppmv = parts per million by volume

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

*The 1.5 $\mu\text{g}/\text{m}^3$ federal quarterly lead standard applied until 2008; 0.15 $\mu\text{g}/\text{m}^3$ rolling 3-month average thereafter

For gases, $\mu\text{g}/\text{m}^3$ calculated from ppmv based on molecular weight and standard conditions

Local monitoring data is used to designate areas as nonattainment, maintenance, attainment, or unclassified for the NAAQS and CAAQS. The San Bernardino County portion of the Mojave Desert is a State “moderate” nonattainment area for O_3 and a State nonattainment area for PM₁₀ and PM_{2.5}. For

all other CAAQS, San Bernardino County is in attainment or unclassified. San Bernardino County is a Federal “moderate” nonattainment area for ozone, a Federal “moderate” nonattainment area for PM₁₀, and a federal “maintenance” area for CO. For all other NAAQS, San Bernardino County is unclassified. The MDAQMD receives data from ambient air monitoring stations at Barstow (O₃, NO₂, CO), Hesperia (O₃), Lancaster (O₃, NO₂, CO, PM₁₀), Phelan (O₃), Trona (O₃, NO₂, SO₂, PM₁₀), Twenty-nine Palms (O₃, NO₂, SO₂, CO, PM₁₀), and Victorville (O₃, NO₂, SO₂, CO, PM₁₀). (California Air Resources Board 2011; U.S. Environmental Protection Agency 2012a; Mojave Desert Air Quality Management District 2011, 2012b).

The conservation/air quality element of the San Bernardino County General Plan (San Bernardino County 2007) contains control measures aimed at avoiding and reducing emissions of air contaminants into the local environment. At the District level, air quality plan development requirements vary dependent upon the type of plan and the underlying Federal or State planning guidelines. The MDAQMD has developed the following state- and federally-approved air quality management plans (AQMPs) which address the air quality issues of ozone and particulate matter: 1995 Mojave Desert Planning Area Federal PM₁₀ Attainment Plan; 2004 MDAQMD Ozone Attainment Plan; 2005 List and Implementation Schedule for District Measures to Reduce PM; and 2008 MDAQMD Federal 8-Hour Ozone Attainment Plan. District rule development is generally governed by Chapter 6.5 of Part 3 of Division 26 of the California Health & Safety Code, Sections 40725-40731. All Rules and Regulations adopted by the MDAQMD are required to undergo a public notice of no less than 30 days (§40725), a public hearing (§40726), and require certain findings to be made prior to adoption (§40727). Special analysis are required in certain situations (§40727.2–40728.5) (Mojave Desert Air Quality Management District 2012a). The project may be subject to various MDAQMD rules, including but not limited to, the following.

- **MDAQMD Rule 402—Nuisance:** Forbids the discharge of such quantities of air contaminants or other material that cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health or safety of any such persons or the public; or that cause, or have a natural tendency to cause, injury or damage to business or property.
- **MDAQMD Rule 403.2—Fugitive Dust Control for the Mojave Desert Planning Area:** Restricts fugitive dust from construction/demolition and other activities in the Mojave Desert Planning Area (which includes the Project area). Specifies numerous restrictions to operators of construction/demolition for all projects greater than a half-acre in size (e.g., periodic watering, covering loaded haul vehicles, stabilize graded surfaces, cleanup project dust/debris on paved surfaces, reduce non-essential earth moving), and specifies additional rules for projects disturbing more than 100 acres per day (e.g., dust control plan, stabilized access routes). The project area would not disturb more than 100 acres per day, but would be nonetheless required to implement fugitive dust control.
- **MDAQMD Rule 404—Particulate Matter Concentration:** A person shall not discharge into the atmosphere from any source particulate matter, except liquid sulfur compounds, in excess of the concentration at standard conditions.

The MDAQMD also regulates a large variety of stationary sources of air pollution through the permitting process. The Project would not require a permit from the MDAQMD because it does not involve construction or installation of equipment. The Hinkley facility is a Federal Operating Permit (Title V of the Federal Clean Air Act 42 U.S.C. §§7661-7661f) source subject to MDAQMD Regulation

XII, including Rule 1201—Definitions, Rule 1211—Greenhouse Gas Provisions, and Rule 1205—Modifications.

The Project would occur at the facility which Rule 1201 defines as any permit unit, group of permit units, non-permitted equipment, or any combination thereof which emits or may emit an air pollutant [including greenhouse gases as defined in Rule 1211]; and belongs to a single major industrial group in the Standard Industrial Classification Manual; and is located on a single parcel of land or on contiguous property within the District; and which is owned or operated by the same person or by persons under common control. However, the Project would not involve changes to any equipment which is required to have a permit to operate under District Rule 203. Therefore, no Title V permit modification would be required pursuant to Rule 1205 for the Project to proceed.

Pursuant to District Rule 1104, any repair-related solvent cleaning of construction equipment by contractors would entail the use of exempt consumer products such as aerosol cans or small containers (1 quart or smaller) unless the total accumulative use is greater than 160 ounces (5 quarts) of solvent per day.

Sensitive Receptors

Certain population groups are considered more sensitive to air pollution and odors than others. In particular, these population groups include children and elderly, acutely ill and chronically ill persons, especially those with cardio respiratory diseases such as asthma and bronchitis. Sensitive receptors (land uses) indicate locations where such individuals are typically found, and thus include schools, daycare centers, hospitals, convalescent homes, residences of sensitive persons, and parks with active recreational uses, such as youth sports.

A project with the potential to expose sensitive receptors (including residential areas) or the general public to substantial levels of toxic air contaminants, as designated by CARB under 17 CCR Subchapter 7, Sections 93000 and 93001, would be deemed to have a significant impact. The MDAQMD indicates that the following project types and specified distances must be evaluated to identify pollutant concentrations for nearby receptors:

- Any industrial project within 1000 feet.
- A distribution center (40 or more trucks per day) within 1000 feet.
- A major transportation project (50,000 or more vehicles per day) within 1000 feet.
- A dry cleaner using perchloroethylene within 500 feet.
- A gasoline dispensing facility within 300 feet.

Receptors near the Project area include sporadic residential receptors west of the Project area, with the closest residence approximately 1,000 feet away. In addition, a senior center with a children's playground is located less than one mile to the west.

Significance Criteria

Appendix G in the CEQA Guidelines states that the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to determine the Project's level of impact.

The MDAQMD recommends that its quantitative air pollution thresholds be used to determine the significance of project emissions, as shown in Table 3-2. The MDAQMD considers direct impacts to be those that result directly from a proposed project. In this case, the direct impacts would be construction emissions from both on- and off-road vehicle and equipment sources during construction activities. Indirect impacts would be impacts that result from changes that would occur as a result of the project. An example would be new roadway infrastructure to support a new subdivision. Cumulative impacts are the combination of direct and indirect impacts. Therefore, the same thresholds are used to determine a project-level impact and a “cumulatively considerable” net increase in criteria pollutants (Mojave Desert Air Quality Management District 2011). Pursuant to MDAQMD guidelines, the project’s construction and operational criteria pollutant emissions are summed daily and compared to the daily thresholds in Table 3-2. Additionally, for purposes of disclosure, total emissions are summed and compared to the annual thresholds in Table 3-2.

Table 3-2. Mojave Desert Air Quality Management District Significance Thresholds for Construction and Operations

Threshold	ROG	NO _x	CO	SO _x	PM10	PM2.5	CO _{2e} *
Daily Threshold (pounds)	137	137	548	137	82	82	548,000
Annual Threshold (tons)	25	25	100	25	15	15	100,000

Source: Mojave Desert Air Quality Management District 2011.

Notes:

The MDAQMD also includes thresholds for H₂S and lead, but those are not included in this analysis, as none of the project alternatives would result in H₂S or lead emissions.

CO_{2e} = Carbon dioxide equivalent

MTCO_{2e} = Metric tons of carbon dioxide equivalent

*Although MDAQMD has adopted this CO_{2e} threshold, the analysis herein uses San Bernardino County’s 3,000 MTCO_{2e} threshold. See Section 3.7 for a discussion of GHG emissions.

With respects to pollutant concentrations at nearby sensitive receptors, the MDAQMD recommends using the following thresholds: total cancer risk of 10 in a million and a noncancerous hazard index greater than or equal to 1. Diesel particulate matter (DPM) is considered a toxic (carcinogenic) air contaminant in California (Section 93000). A screening-level Health Risk Assessment (HRA) for DPM was performed using conservative methodology for maximum and average activity levels and timeframes.

- a. **Less than Significant.** The Project would not conflict with or obstruct implementation of applicable air quality plans as described under *Regulatory Setting*. The MDAQMD attainment and maintenance plans were crafted to bring the MDAB into attainment status for all criteria pollutants. Pursuant to MDAQMD guidelines, a project is considered to be consistent with applicable air quality plans if it complies with all applicable rules and regulations, complies with proposed control measures of the plan to be adopted, and is consistent with growth forecasts in the applicable air quality plan or plan that was used as the basis of growth forecasts (i.e., relevant land use plans or general plans). The Project would not result in population or employment growth that exceeds the projections in the most recent ozone or PM10 plans described above. As such, Project-related emissions are accounted for in the applicable air

quality plans as general construction emissions. The Project would not create a permanent stationary source of emissions and would comply with MDAQMD rules and regulations. Further, temporary construction-related emissions of criteria pollutants would not exceed MDAQMD significance thresholds, as discussed for “b” below and as shown in Table 3-3.

- b. **Less than Significant.** The Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Operation and maintenance activities associated with the two additional surface impoundments would not result in stationary source emissions or long-term source emissions, as no additional facility staff would be required. However, construction activities would result in short-term emissions.

Construction activities would result in fugitive dust from site disturbance, emissions from off-road equipment, and dust and exhaust emissions from on-road and off-road vehicle travel (heavy duty haul trucks, material delivery trucks, and construction employee commutes). Table 3-3 summarizes the equipment that would be used during Project construction. Emissions were estimated consistent with the methodology described in Appendix A. As shown in Table 3-4, Project-related construction emissions would not exceed daily or annual MDAQMD thresholds. Incremental impacts would be small, temporary, and would permanently cease upon Project completion.

Table 3-3. Planned Construction Equipment for Project

Phase—Activity	Equipment Needed	Category	Planned Quantity
Phase 1—Earthwork & Contouring	Backhoe/Loader (CAT 450)	Off-road	1
	Motor Grader (CAT 140)	Off-road	1
	Roller (CAT CB34)	Off-road	1
	Pickup Truck/SUV	On-road LD	4
	Semi Truck w/Flatbed Trailer (equipment)	On-road HHD	3
	Water Truck	On-road HHD	1
Phase 2—Liner & Membrane Installation	Backhoe/Loader (CAT 450)	Off-road	1
	Generator (10 kW)	Off-road	2
	Pickup Truck/SUV	On-road LD	8
	Dump Truck (rock)	On-road HHD	1
	Semi Truck w/Flatbed Trailer (GCL)	On-road HHD	5
	Semi Truck w/Flatbed Trailer (HDPE)	On-road HHD	4
	Semi Truck w/Flatbed Trailer (equipment)	On-road HHD	1
Phase 3—Miscellaneous Piping & Electrical Installation	Backhoe/Loader (CAT 450)	Off-road	1
	Pickup Truck/SUV	On-road LD	4
	Haul Truck (waste materials)	On-road HHD	1
	Semi Truck w/Box Trailer (piping)	On-road HHD	1
	Semi Truck w/Flatbed Trailer (equipment)	On-road HHD	1
	Water Truck	On-road HHD	1

Source: Applicant (PG&E)

Notes:

LD = light duty, MD = medium duty, HHD = heavy heavy duty

Table 3-4. Estimated Construction Criteria Emissions—CEQA Thresholds

Criteria Emissions	Maximum lbs/day	Threshold lbs/day	Daily Significance	Total Project tons	Threshold tons/yr	Annual Significance
Volatile Organic Compounds (VOC)	8.5	137	Less	0.030	25	Less
Carbon Monoxide (CO)	41.6	548	Less	0.163	100	Less
Oxides of Nitrogen (NO _x)	134.4	137	Less	0.316	25	Less
Sulfur Dioxide (SO ₂)	0.2	137	Less	0.000	25	Less
Respirable Particulates (PM ₁₀)	19.6	82	Less	0.111	15	Less
<i>Combustion Particulates (C- PM₁₀)</i>	7.9	--	--	0.020	--	--
<i>Fugitive Dust (F-PM₁₀)</i>	11.7	--	--	0.091	--	--
Fine Particulates (PM _{2.5})	8.3	82	Less	0.030	15	Less
<i>Combustion Particulates (C- PM_{2.5})</i>	6.6	--	--	0.017	--	--
<i>Fugitive Dust (F-PM_{2.5})</i>	1.7	--	--	0.013	--	--

Sources: U.S. Environmental Protection Agency 2011b; National Oceanic and Atmospheric Administration 2008; Mohave Desert Air Quality Management District 2011; EMFAC2011 web-tool.

Note: The calculations are shown in Appendix A (as revised by ICF).

The Project is required to comply with dust control requirements of MDAQMD Rule 403.2, but a dust control plan is not required because the Project area is less than 100 acres. As stated under *Project Construction* in Section 2.1 Proposed Project, construction activities would be conducted in accordance with CGP Order 2009-0009-DWQ, which requires development and implementation of a SWPPP, and with MDAQMD requirements for dust control. The SWPPP and construction specifications would include, but not be limited to, the following BMPs to minimize dust.

- During excavation and grading activities, spray water shall be used to control fugitive dust.
 - Non-essential earthmoving operations shall be reduced or suspended when wind speed is 25 miles per hour or greater.
 - Dust control measures shall be documented as required under CGP Order 2009-0009-DWQ.
 - A chemical monitoring program for any "non-visible" pollutants shall be implemented if there is a failure of BMPs.
- c. **Less than Significant.** The MDAB is currently in nonattainment for ozone under NAAQS as well as ozone, PM₁₀, and PM_{2.5} under CAAQS, which is a result of past and present projects and will be further impeded by reasonably foreseeable future projects. In addressing cumulative effects for air quality, the MDAQMD's attainment and maintenance plans set forth comprehensive programs to bring the MDAB into compliance with state and federal air quality standards for ozone, PM₁₀, and PM_{2.5} and uses control measures and related emission reduction estimates based on emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. As

discussed above, the Project is in conformance with the AQMPs, Project-related construction emissions would be below MDAQMD thresholds and operations would be minimal and not result in long-term sources of emissions. Therefore, the Project's incremental contribution to criteria pollutant emissions is not cumulatively considerable, and this impact would be less than significant.

- d. **Less than Significant.** The Project would not expose sensitive receptors to substantial pollutant concentration during construction or operation.

Operation and maintenance activities associated with the three existing impoundments (i.e., holding ponds for the evaporation of wastewater generated from the facility) do not create air pollutant concentrations, except a minor amount associated with employee vehicle emissions commuting to the facility. The two additional impoundments would not require additional facility staff so there would be no increase in these air pollutants. Further, as described above, the nearest sensitive receptors to the Project area include sporadic residential receptors and a senior center with a children's playground west of the Project area.

Construction activities would result in short-term emissions from the use of diesel-powered equipment and vehicles. Diesel exhaust, particularly DPM, is considered a toxic air contaminant by CARB; and exposure of sensitive receptors (e.g., residences, schools) to toxic air contaminants should be limited. Potential health risk associated with diesel exhaust was estimated using EPA's AERSCREEN model. As shown in Table 3-5, emissions of DPM during construction would not be sufficient to pose a significant risk to the nearest sensitive receptors from construction equipment operations (U.S. Environmental Protection Agency 1992; U.S. Environmental Protection Agency 2011c; National Oceanic and Atmospheric Administration 2008; California Environmental Protection Agency 2009; World Climate 2012).

Table 3-5. Screening Health Risk Assessment for Construction Period—Onsite

DPM Screen Parameter	Units	Maximum	Average
Onsite Total PM10 Exhaust	pounds	1.2	17
Onsite Emission Rate	g/sec	6.24E-03	3.57E-03
Receptor Distance	meters	425	425
Annual Concentration	µg/m ³	0.4651	0.2661
Unit Risk Value (70-year MEI)	(µg/m ³) ⁻¹	3.00E-04	3.00E-04
Activity Duration	days	5	25
Annual MEI Correction	fraction	0.0002	0.0010
Cancer Risk	probability	2.7E-08	7.8E-08
	per million	0.03	0.08
CEQA Threshold	per million	10	10
	significance	Less	Less

Sources: NOAA 2008, EPA 1992, EPA 2011c, OEHHA 2009, WC 2012, MDAQMD 2011

Notes:

DPM = diesel particulate matter (PM₁₀)

Maximum is for most intensive activity (Phase 1); Average is for entire project

70-year Maximally Exposed Individual = 25,550 days = 613,200 hours

(Cardno ENTRIX screening-level analysis)

- e. **Less than Significant.** The Project could create a small amount of odor from vehicle exhaust and dust during construction, but it would not be noticeable to the nearest residents with implementation of mitigation measures, nor affect a substantial number of people due to the sparsely populated area and distance of the work site from sensitive receptors. Further, during construction, all diesel-powered equipment would use California ultra-low sulfur diesel fuel with a maximum sulfur content of 15 parts per million (ppm) by weight, minimizing emissions of sulfurous gases (sulfur dioxide, hydrogen sulfide, carbon disulfide, and carbonyl sulfide).

IV. Biological Resources	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.4 Biological Resources

Several biological surveys have been conducted at the Compressor Station (McClenahan & Hopkins Associates 1990; Pacific Gas and Electric 1990; Kiva Biological Consulting 1992; Transcon Environmental 2011; Phoenix Biological Consulting 2012). Following the closure of the former surface impoundments (Ponds 6 and 7) in the mid-1990s, vegetation re-established, as shown on Figure 3-3. The sloped sides of the former surface impoundments are sparsely covered with non-native Russian thistle (*Salsola tragus*). Saltbush shrub species (*Atriplex*) and non-native grasses

dominate the bottom of the former surface impoundments, and small mammal burrows are present (Transcon Environmental 2011; Phoenix Biological Consulting 2012).



Figure 3-3. Photograph of Current Biological Habitat in Pond 6/7 Area

Although the Project area is fenced, gaps at the base of the chain link fencing have allowed wildlife to move within and across the Project area (Transcon Environmental 2011). The Project area is surrounded by a mosaic of habitat types. A mix of low density development and native habitat is located north/northwest, and agricultural land is present east of the Project area. Saltbush scrub habitat occurs immediately outside of the Compressor Station, and is connected with additional native shrub habitat extending north of the facility and south to the Mojave River.

A search of the California Natural Diversity Database (CNDDB) and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants, conducted by Cardno ENTRIX in 2012, indicates that eight listed or sensitive species have been recorded within 5 miles of the Project area (Table 3-6). Additionally, the desert kit fox is known to occur in the desert area. Most of these plant and wildlife species are not expected to occur in the Project area given the lack of high quality habitat at the Compressor Station. However, suitable habitat is present for the following five wildlife species:

- Desert tortoise (federally listed Threatened, state-listed Threatened),
- Mohave ground squirrel (state-listed Threatened),
- Burrowing owl (California Species of Special Concern),
- American Badger (California Species of Special Concern), and
- Desert Kit Fox (protected by Mammal Hunting Regulations 2011–2012).

Table 3-6. Special Status Species Documented in the Project Vicinity

Species	Habitat Requirements
Plants^a	
Beaver Dam breadroot, <i>Pediomelum castoreum</i>	Joshua Tree Woodland, Mojavean Desert Scrub
Mojave monkeyflower, <i>Mimulus mohavensis</i>	Joshua Tree Woodland, Mojavean Desert Scrub
Chaparral sand-verbena, <i>Abronia villosa</i> var. <i>aurita</i>	Chaparral, Coastal Scrub
Wildlife	
Desert tortoise ^{b,c} , <i>Gopherus agassizii</i>	Most common in desert scrub, desert wash, and Joshua tree habitats; occurs in almost every desert habitat.
Mojave fringe-toed lizard ^d , <i>Uma scoparia</i>	Fine, loose, wind-blown sand in sand dunes, dry lakebeds, riverbanks, desert washes, sparse alkali scrub and desert scrub.
Burrowing owl ^d , <i>Athene cunicularia</i>	Open, dry annual or perennial grasslands deserts and scrublands characterized by low-growing vegetation.
Mohave ground squirrel ^c , <i>Xerospermophilus mohavensis</i>	Open desert scrub, alkali scrub and Joshua tree woodland. Also feeds in annual grasslands. Restricted to the Mojave Desert.
American badger ^d , <i>Taxidea taxus</i>	Drier open stages of most shrub and herbaceous habitats, with friable soils
Desert kit fox ^e , <i>Vulpes macrotis arsipus</i>	Desert areas with annual grasslands or grassy open stages of vegetation dominated by scattered brush, shrubs, and scrub
<p>a. CDFG Rare Plant Rank Species (California Department of Fish and Game 2012b)</p> <p>b. Federally listed as Threatened</p> <p>c. State-listed as Threatened</p> <p>d. California Species of Special Concern (California Department of Fish and Game 2008)</p> <p>e. The Mammal Hunting Regulations 2011–2012, Subdivision 2. Game and Furbearers, Chapter 5. Furbearing Mammals, §460 states that fisher, marten, river otter, desert kit fox and red fox may not be taken at any time.</p>	
Source: California Department of Fish and Game 2012a; California Native Plant Society 2012	

Desert Tortoise. The Project area is not designated as critical habitat for the desert tortoise, and desert tortoise have not been recorded in the Project area during previous biological surveys. However, desert tortoise is known to occur in the vicinity of the project site. Critical habitat for the state and federally-listed desert tortoise is located within 2.5 miles northeast and 5.5 miles west of the Project area, and both locations are contained within the Superior-Cronese Desert Wildlife Management Area (U.S. Fish and Wildlife Service 2011). Nine records of desert tortoise sign (e.g., scat, burrows) have been documented within five miles north and west of the Compressor Station (California Department of Fish and Game 2012a). Specific locations of live desert tortoise are suppressed due to sensitivity, but areas within one mile north and one mile south of the Project area are potentially occupied habitat (California Department of Fish and Game 2012a). Desert tortoise is known to transit areas outside of the Compressor Station boundary (W. Rhodehamel, PG&E biologist, personal communication, May 16, 2012). However a survey performed in October 2011 by Transcon Environmental, Inc. reported no sign of desert tortoise or desert tortoise burrows (Transcon Environmental 2011). Phoenix Biological Consulting (2012) reports that during six days

of trapping for Mohave ground squirrel within the Project area, there were 12 plant species and 24 animals identified, and desert tortoise was not reported. Although there are the known locations for desert tortoise in the vicinity of the Project, it is considered to have a low potential to occur within the Project area footprint due to low quality habitat conditions.

Mohave Ground Squirrel. The Project area is within the range of Mohave ground squirrel. Two possible recorded observations are located within 3.5 miles of the Compressor Station to the east and southeast (California Department of Fish and Game 2012a). Phoenix Biological Consulting conducted protocol presence/absence trapping surveys for Mohave ground squirrel at the Project area between April and June 2012 in accordance with the survey guideline requirements of the California Department of Fish and Game (California Department of Fish and Game 2003; Phoenix Biological Consulting 2012). A summary of the survey results is presented in Appendix B. Based on the surveys, Mohave ground squirrel is considered to be absent from the Compressor Station (Young pers. comm.). Additional protocol surveys are ongoing throughout the Hinkley area, between North Mountain General Road to the North and the Mojave River to the South; the results of the 2012 trapping sessions in this area were also negative for Mohave ground squirrel (Rhodamel pers. comm.).

Burrowing Owl. Numerous records of burrowing owl have been documented in the Project vicinity (California Department of Fish and Game 2012a), and suitable foraging habitat and small mammal burrows are present (Phoenix Biological Consulting 2012) on the Project area. However, burrowing owl has not been previously recorded at the Project area (Transcon Environmental 2011; Phoenix Biological Consulting 2012). Therefore, this species is considered to have a low potential for occurrence on the Project area and surroundings.

American Badger and Desert Kit Fox. The literature search provided two observation records for American badger in the Project vicinity (California Department of Fish and Game 2012a); however in the area of the proposed impoundments, low quality foraging habitat is present. Due to the lack of any noted large suitable burrows within the two new surface impoundments (Transcon Environmental 2011; Phoenix Biological Consulting 2012), the species is considered to have a low potential for occurrence.

Kit fox are known to inhabit desert scrub and the Project area supports low quality foraging habitat. Due to the lack of any large suitable burrow complexes within the two new surface impoundments (Transcon Environmental 2011; Phoenix Biological Consulting 2012), the species is considered to have a low potential for occurrence.

Other Species. In addition to the species documented by CNDDDB, the Project area supports limited foraging habitat for three other California species of special concern known from the region: ferruginous hawk (*Buteo regalis*) (only present as transient migrant or winter resident), loggerhead shrike (*Lanius ludovicianus*), and prairie falcon (*Falco mexicanus*). Existing trees associated with developments in the Project vicinity provide suitable roosting habitat for these special-status species. No suitable nesting habitat (almost exclusively rock ledges) occurs on the Project area for prairie falcon. Suitable nesting habitat may be present in the Project area and vicinity for loggerhead shrike. In California, loggerhead shrike typically nests in large shrubs or trees (Humble 2008) but can also use weedy plant species (e.g., Russian thistle) and man-made structures.

Other bird species could also nest within the Project area, within the vegetation in the former Pond 6 and 7 footprints, or even on bare ground. All bird nests are protected during the breeding season

under the federal Migratory Bird Treaty Act (MBTA) and CDFG Code Sections 3503, 3503.5, 3511, 3513.

- a. **Less than Significant with Mitigation Incorporated.** The project could adversely affect species identified as a candidate, sensitive, or special-status species in local and regional plans and by the California Department of Fish and Game and U.S. Fish and Wildlife Service.

Desert Tortoise. As stated in Section 2.1 above, the two new impoundments would comprise 2.48 acres. Therefore, the Project would result in the removal of approximately 2.48 acres of low quality habitat for desert tortoise, which could result in direct impact to the species if it is present or utilizes the 2.48-acre impoundment area. In addition, desert tortoise may be subject to indirect impacts from ground vibration that is expected to occur for a 2 week period during construction. There could be increased risk of desert tortoise mortality due to collision with construction-related vehicles. The Compressor Station fencing currently has gaps that allow wildlife to access the Project area, including the surface impoundment area. As stated under *Project Construction* in Section 2.1 Proposed Project, the fencing would be repaired, which would minimize long-term indirect impacts to desert tortoise due to collision and entrapment. The existing ponds have established a baseline of available surface water to desert tortoise predators such as common raven, which would only minimally increase with the implementation of this project. Implementing **Mitigation Measures BIO-1, BIO-5 and BIO-6** would reduce potential direct and indirect impacts to a less than significant level because it requires several protection measures be implemented that would avoid and minimize potential impacts during construction and once the project is operating.

Mohave Ground Squirrel. As described above, protocol presence/absence trapping surveys for Mohave ground squirrel were constructed in the Project area between April and June 2012, and the Mohave ground squirrel has been determined as absent from the Project area (**Appendix B**, Phoenix Biological Consulting 2012). Therefore, no impacts would occur to Mohave ground squirrel as a result of the Project.

Burrowing Owl. The Project would result in the removal of approximately 2.48 acres of low quality foraging and potential nesting habitat for burrowing owl, which could result in direct impact to the species if it is present or utilizes the Project area. In addition, burrowing owl may be subject to indirect impacts during construction of the Project from increased noise levels (up to 66 dB at 500 feet-see Table 3-8) and increased ground vibration that is expected to occur for a 2 week period during construction. Increased noise and vibration could result in a reduction of burrowing owl nesting success in the vicinity of the Project. Implementing **Mitigation Measures BIO-2, BIO-5 and BIO-6** would reduce impacts to a less than significant level because it includes avoidance, impact minimization and protection measures be implemented during construction.

American Badger and Desert Kit Fox. The Project would result in the removal of approximately 2.48 acres of potentially foraging habitat for American badger and desert kit fox, which could result in direct impact to the species if it is present or utilizes the two new surface impoundments. No suitable dens or burrow complexes were reported during recent biological surveys (Transcon Environmental 2011; Phoenix Biological Consulting 2012).

In addition, American badger and desert kit fox may be subject to indirect impacts during construction, such as elevated levels of human activity that would likely cause animals to avoid the project site. This may also include increased ground vibration that is expected to occur for a

2 week period during construction. Increased vibration could result in an abandonment of a natal American badger and/or desert kit fox den. **Mitigation Measures BIO-3, BIO-4 and BIO-6** would reduce impacts to significance less than significant level because it includes protection measures if the species are identified during preconstruction surveys.

Loggerhead Shrike and Other Nesting Bird Species. The Project area does not include suitable nesting habitat for loggerhead shrike, but it does include suitable nesting habitat for other species afforded protection by the Migratory Bird Treaty Act and California Fish and Game Code. If construction-related clearing, grubbing, or soil disturbance occurs on the Project area between February 1 and August 31, the Project could result in the direct impact of disturbing nesting bird species and their nests, which is a violation of the Migratory Bird Treaty Act and Fish and Game Code. In addition, nesting bird species may be subject to indirect impacts from increased noise levels (up to 66 dB at 500 feet-see Table 3-8) and increased ground vibration that is expected to occur for a 2 week period during construction. Increased noise and vibration could result in nest abandonment. **Mitigation Measures BIO-4, BIO-5 and BIO-6** would reduce impacts to a less than significant level because it includes avoidance, impact minimization and protection measures be implemented during construction.

The following mitigation measures will be incorporated into the Project to avoid and minimize potential impacts to listed species, and other species considered to have special status.

Mitigation Measure BIO-1: Implement desert tortoise protection measures during construction. The project applicant will ensure the following measures are implemented and included in construction specifications.

- Prior to surface disturbance and construction activities, a qualified biologist will conduct a preconstruction clearance survey for desert tortoise within the Project area to ensure that all tortoise are absent, or that any tortoises that present move passively off site and out of harm's way. The protocol (U.S. Fish and Wildlife Service 2009) states that two consecutive surveys will be conducted immediately prior to surface disturbance within the Project area.
- Following the pre-construction survey and prior to surface disturbance, the construction contractor in coordination with a qualified biologist will place desert tortoise exclusion fencing along the perimeter of the proposed work areas to prevent encounters with desert tortoise during construction activities. The specifications of the desert tortoise exclusion fencing will follow USFWS (Desert Tortoise Field Manual: Chapter 8. Desert Tortoise Exclusion Fence) (U.S. Fish and Wildlife Service 2009).
- A qualified biologist will remain at the site during work hours and conduct daily pre-construction clearance surveys in areas to be disturbed until temporary tortoise-proof fencing has been installed to exclude desert tortoises from entering the work area. The qualified biologist will also inspect the condition of tortoise-proof fencing. If desert tortoises are found within the construction areas, a qualified biologist will ensure it moves away passively.
- Until tortoise-proof fencing is in place around the Project area, no open trenches, excavations or other potential trap hazards will be left unfenced or uncovered overnight. These hazards will be removed each day prior to the work crew and biologist leaving the Project area as long as it is not fully enclosed by tortoise-proof fencing.

- Until tortoise-proof fencing is in place around the Project area, parked vehicles and equipment within the Project area will be inspected by workers (as instructed through the project environmental awareness training) prior to being moved each day. If a tortoise is found beneath vehicles or equipment, it will be monitored until it moves out of the area. Under no circumstances should the tortoise be moved or touched.
- All construction activities, vehicle parking, equipment and material storage areas will be contained within the area surrounded by tortoise-proof fencing.
- Prior to and during construction, all desert tortoises sighted within the Project area will be immediately reported to the qualified biologist and project foreman, and any construction activity that could potentially jeopardize the tortoise will be halted immediately until the desert tortoise moves passively (on its own) from harm's way. Desert tortoises observed in the Project area will be monitored and allowed to move out of the project area passively.
- If a desert tortoise is injured or killed, the authorized biologist will be notified, the injury or death documented, and the animal taken to a qualified veterinarian or the carcass removed by the biologist. If an injured desert tortoise is identified that may have been affected by Project-related activities, a qualified biologist will immediately transport the animal to a veterinary clinic approved by CDFG. PG&E will be responsible for payment of any veterinarian bills for injured tortoises. CDFG and USFWS will be notified in writing within five calendar days, with photographs and a written description of any injury/mortality, circumstances, probable cause and recommendations for avoidance of future incidents. The agencies will assess the final condition of the animal if it recovers.
- To minimize attractiveness to desert tortoise predators (e.g., common ravens and feral dogs), trash and food items will be contained in closed containers and will be removed from the Project site at the end of each work day. No pets or firearms will be permitted in the Project area.
- Following completion of the construction phase of the Project, the applicant will improve the existing chain link fence around the Compressor Station facility, which includes the surface impoundments, to eliminate large gaps between the fence and the ground surface to prevent desert tortoise from entering the Project area. The applicant will maintain the fence to ensure there are no gaps, which will reduce the likelihood that desert tortoise or other wildlife move into the Project area, thus minimizing entrapment or negative interactions with tortoises during Project operation.

Mitigation Measure BIO-2: Implement burrowing owl protection measures during construction. The project applicant will ensure the following measures are implemented and included in construction specifications.

- Prior to construction, a qualified biologist will conduct a preconstruction survey for burrowing owls no greater than 30 days prior to commencing ground disturbing or construction activities, with a second preconstruction survey within 24 hours prior to commencing ground disturbing or construction activities. The limits of this preconstruction survey will include the disturbance area and a 400-foot buffer.
- If burrowing owls take occupancy in the Project area before or during construction, the construction contractor will ensure that work-exclusion buffers are maintained. Work will not occur within 160 feet of occupied burrows during the non-breeding season (September

1 through January 31) or within 250 feet during the breeding season (February 1 through August 31), unless otherwise approved by the monitoring biologist and CDFG. A qualified biologist and CDFG will determine if burrowing owls and their habitat can be protected in place on or adjacent to a Project area with the use of buffer zones, visual screens (such as hay bales) or other feasible measures while Project activities are occurring to minimize disturbance impacts.

- If owls are identified during construction, on-site passive relocation will be avoided to the greatest extent practicable, and only implemented if avoidance cannot be met. Passive relocation is defined as encouraging owls to move from occupied burrows to alternate natural or artificial burrows. Any passive relocation plan will need to be approved by the CDFG.
- CDFG consultation will be required to determine if compensatory mitigation will be needed to fully mitigate Project impacts on burrowing owl if they are determined to be nesting within the new surface impoundment area.

Mitigation Measure BIO-3: Implement American badger and desert kit fox protection measure prior to and during construction. The project applicant will ensure the following measures are implemented and included in construction specifications to avoid and minimize impacts to the American badger and desert kit fox.

- If there is evidence that a burrow may be occupied by a badger or a kit fox during preconstruction surveys (see BIO-1) and if construction will occur during the natal season, all construction activities will cease within a 100-foot buffer of the burrow during the natal season (February–July) unless otherwise authorized by CDFG. Removal of an occupied American badger or desert kit fox burrow at anytime of the year will require coordination with CDFG.

Mitigation Measure BIO-4: Implement loggerhead shrike and other breeding bird protection measures during construction. The project applicant will ensure the following measures are implemented and included in construction specifications to avoid and minimize impacts to nesting birds.

- The construction contractor will schedule ground-disturbing activities, as well as any other work that generates elevated human activity, noise and vibration above background operation levels, between February 1 and August 31 to avoid the breeding season between September 1 and January 31, to the greatest extent feasible.
- If any ground-disturbing activities, or any other work that generates elevated human activity, noise and vibration above background operation levels, will take place during the bird nesting season between February 1 and August 31, a qualified biologist will conduct pre-construction surveys for nesting birds (including raptors) 7 days before these activities are initiated. If any active nests are identified in the Project area or within 300 feet of the Project area, the following buffer(s) a 300-feet of the Project area, the following buffer (s) will be established in the field with staking and flagging:
 - 100 feet for loggerhead shrike,
 - 250 feet for burrowing owl,
 - 300 feet for raptors, and

- o 50 feet for other nesting birds.

The specified buffer size may be reduced on a case-by-case basis with CDFG approval if, based on compelling biological or ecological reasoning (e.g. the biology of the bird species, concealment of the nest site by topography, land use type, vegetation, and level of project activity) and as determined by qualified wildlife biologist, that implementation of a specified smaller buffer distance will still avoid Project-related "take" (as defined by Fish and Game Code Section 86) of adults, juveniles, chicks, or eggs associated with a particular nest.

Mitigation Measure BIO-5: Prepare and conduct a sensitive species worker awareness program. Prior to the initiation of construction activities, the qualified biologist and/or Environmental Monitor will prepare a worker awareness program to educate workers about the sensitive species that could be present in the Project area (including desert tortoise, Mohave ground squirrel, burrowing owl, and nesting birds) and the mitigation measures to protect them (Mitigation Measures BIO-1, BIO-2, and BIO-3). At a minimum, the awareness program will emphasize the following information relative to these species: (a) distribution on the job site; (b) general behavior and ecology; (c) sensitivity to human activities; (d) legal protection; (e) penalties for violating State or federal laws; (f) reporting requirements; and (g) project protective mitigation measures. PG&E and the construction contractor will ensure all workers have received the awareness program and understand the various components. Interpretation will be provided for non-English speaking construction workers.

Mitigation Measure BIO-6: Maintain a log for biological resources mitigation measures. The qualified Biologist will maintain a daily log of all biological mitigation measures implemented before, during, and after construction to protect biological resources (including Mitigation Measures BIO-1, BIO-2, BIO-3 and BIO-4).

- b. **No Impact.** The Project would not 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 the CDFG or USFWS because the Project area does not support any riparian habitat or other sensitive natural communities. The Project area, where surface disturbance would occur, consists of ruderal habitat mostly lacking vegetation, with the exception of disturbed patches of saltbush scrub, which would be removed from the footprints of former Ponds 6 and 7.
- c. **No Impact.** The Project would not have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act, because the Project area does not support any wetlands including, but not limited to, marshes, vernal pools, coastal wetlands, etc.
- d. **No Impact.** The Project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species because the Project area does not contain any perennial streams, lakes, or other potential corridors for migration of aquatic species, nor does it support suitable nursery sites. The Project would not interfere with movement of any native or migratory fish. No suitable corridors for movement of terrestrial wildlife species have been identified in the Project area. The Mojave River, which is dry for the majority of the year, is located approximately two miles south of the Project area. Because the Project would occur within the disturbed area of the existing Compressor Station facilities, it is not expected to have negative effects on migration of terrestrial wildlife species in the vicinity. As described above, the sensitive species with potential to occur in the Project area (desert tortoise, Mohave ground squirrel, burrowing owl) have not been identified within and have low potential to occur within the Project area footprint due to the disturbed nature of the area and low quality habitat conditions.

- e. **No Impact.** The Project would not conflict with local policies or ordinances protecting sensitive biological resources. Chapter 88.01 (Plant Protection and Management) of the San Bernardino County Plant Protection and Management chapter regulates the removal or harvesting of specified desert native plants and the removal of vegetation within 200 feet of the bank of a stream. None of desert native plants covered under in this ordinance have been reported from the Project. In addition, no streams occur on the Project. Therefore, the Project will not conflict with requirements of the ordinance.
- f. **No Impact.** The Project would not conflict with the provisions of an adopted habitat conservation plan (HCP), natural community conservation plan, or other approved local, regional, or state habitat conservation plan. The West Mojave Plan and Final Environmental Impact Report and Statement for the West Mojave Plan were adopted as a federal land management plan that applies only to federal lands under the jurisdiction of the U.S. Bureau of Land Management (BLM) (2005). The Project area falls outside the designated habitat conservation areas and federal lands, and there are no proposed impacts to habitats covered by the plan.

V. Cultural Resources	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.5 Cultural Resources

Archaeological and historical investigations for the Project included a records search at the Archaeological Information Center, San Bernardino County Museum Redlands, University of California Museum of Paleontology (UCMP) database for San Bernardino County, and a review of plans for the Project. The investigations did not identify any historical or paleontological resources within or near the area that potentially could be impacted by the Project. The records search did identify site P-36-006767/CA-SBR-6767H, which is a sparse scatter of historic trash, near the southwest corner of the Project area. This site is outside the boundaries of the Project area and is not near the location of the proposed two new surface impoundments, which would be near the three existing impoundments adjacent to other Compressor Station facilities. Trenching to connect the piping and electrical to Ponds 6R and 7R also would be within the footprint of the existing facilities.

- a. **Less than Significant with Mitigation Incorporated.** Implementation of the Project likely would not cause a substantial adverse change in the significance of a historical resource, as defined in Section 15064.5, because no historical resources were identified within or near the Project area, based on the historical investigations conducted. Although no historic resources were identified either through the background investigations or during the Project site survey, the potential always exists for previously undiscovered prehistoric or historic resources underground which could be encountered during excavation for the ponds and pipelines. Implementation of **Mitigation Measure CUL-1** would reduce this impact because it requires a stop work order and investigation if historical resources are inadvertently discovered during construction.

Mitigation Measure CUL-1: Stop work if cultural resources are encountered during ground-disturbing activities. The applicant will ensure the construction specifications include a stop work order if cultural resources or artifacts are discovered during construction. Prehistoric materials might include obsidian and chert flaked-stone tools (e.g., projectile points,

knives, scrapers) or tool making debris; culturally darkened soil (“midden”) containing heat-affected rocks and artifacts; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered-stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. Paleontological resources (i.e., fossils) and human remains might include bones.

If potential cultural resources as described above are found, all work within 50 feet of the find will be stopped until qualified cultural resources staff is notified and determines and notifies appropriate qualified professional (e.g., archaeologist, architectural historian, paleontologist) and Native American representative to assess the significance of the find. If the find is determined to be potentially significant, the qualified professional(s), in consultation with the Native American representative, will develop a treatment plan that could include site avoidance, preservation in place, capping, excavation, documentation, and curation. Any recommendations will be reviewed by PG&E and appropriate agencies.

If any human remains are discovered the County Coroner will be notified immediately according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California’s Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) will be followed.

- b. **Less than Significant with Mitigation Incorporated.** Project construction could disrupt unknown or undiscovered archaeological resources, which potentially could cause a substantial adverse change in the significance of the resource. Although no archaeological resources were identified either through the background investigation or during the Project survey, the potential always exists for previously undiscovered archaeological resources underground which could be encountered during excavation for the ponds and pipelines. Implementation of **Mitigation Measure CUL-1** would reduce this impact to a less than significant level because it requires a stop work order and investigation if archaeological resources are inadvertently discovered during construction.
- c. **Less than Significant with Mitigation Incorporated.** Implementation of the Project would not likely directly or indirectly destroy a unique paleontological resource or site or unique geologic feature because none were identified during the investigations conducted for the Project. The Project location is within the previously excavated footprints of the former Ponds 6 and 7 within an existing gas compression station. It does not appear that the Project area is sensitive for the presence of paleontological resources. However, a potential exists to inadvertently discover paleontological resources during excavation activities associated with the Project. Implementation of **Mitigation Measure CUL-1** would reduce this impact to a less than significant level because it requires a stop work order and investigation if paleontological resources are inadvertently discovered during construction.
- d. **Less than Significant with Mitigation Incorporated.** Implementation of the Project would not likely disturb any human remains, including those interred outside of formal cemeteries, because investigations conducted for the Project did not identify any human remains or cemeteries associated with Native American and/or Euroamerican occupation within or near the Project area. Although it is not anticipated that Project related ground disturbing activities would inadvertently uncover human remains because the site of the Project is within previously disturbed soil, potential exists to inadvertently discover human remains during excavation

activities associated with the Project. Implementation of **Mitigation Measure CUL-1** would reduce this impact to a less than significant level because it requires a stop work order and investigation if human remains are inadvertently discovered during construction

VI. Geology and Soils	Potentially Significant Impact	Less-than- Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.6 Geology, Soils and Seismicity

Geology and Soils

The Hinkley Valley is comprised predominantly of alluvial fill deposits including clay, silt, sand, and gravel transported by the Mojave River, lacustrine deposits, Aeolian fine sands, and alluvial fan deposits derived from the surrounding hills and mountains. Fluvial deposits derived from the Mojave River dominate the basin-fill sediment (Figure 3-4). A conceptual model of the units beneath the Project area is shown on Figure 3-5.

Regionally, the lithology is highly variable. It consists of interbedded sands and silty sands, varying from course to fine over short distances both laterally and vertically. The coarse-grained sediments contain varying degrees of fine sand, silt, and clay, with minor amounts of gravel in some locations. The fine-grained sediments contain varying amounts of fine sand and clay, which results in heterogeneous and locally complex hydrogeologic conditions. Sediments near the surface and within the upper aquifer consist primarily of sand and silt mixed with gravel and clay.

Beneath the Project area, soils are comprised of interbedded sands, gravels, silts, and clays. The soils encountered in the borings consist of clayey sands extending to a depth of approximately 8 feet below ground surface (bgs) overlying poorly graded sands and silty sands that extend to the bottom of the boreholes at a depth of approximately 19.5 feet bgs (Cardno ENTRIX 2012b).

The National Resource Conservation Service (NRCS) web soil survey identifies soils in the Project area as Cajon Series with minor components of Norob or Halloran Series soils. These soils are typically described as excessively drained to well-drained sandy loams (National Resource Conservation Service 2012) and are not identified as typical expansive soils, which are composed of a high clay content.

Seismicity

Faults. The Alquist-Priolo Earthquake Fault Zoning Act of 1972 was drafted to avoid or reduce damage to structures from earthquakes. It prohibits development within 50 feet of an active fault zone. The Project area is not located within an Alquist-Priolo Earthquake Fault Zone and no mapped active fault traces are known to traverse the site (Figure 3-6). The nearest faults (shown on Figure 3-4 and 3-6) are the Lenwood-Lockhart Fault, located less than 2,000 feet southwest of the Project, and the Mount General Fault, located more than three miles northeast of the Project area (U.S. Geological Survey 1968). These faults are primarily right-lateral strike-slip faults of the Eastern California Shear Zone (ECSZ). The ECSZ is located east of the San Andreas fault and comprise northwest-southeast trending faults that cross the Mojave Block. The Lockhart fault is from the Holocene-Late Quaternary era, which suggests displacement within the last 0.7 million years or sooner. The fault has two sections: Lenwood and Lockhart. However, because there is insufficient data to differentiate the segments, the Lockhart and Lenwood faults are termed the Lenwood-Lockhart Fault Zone (Bryant 2000). The zone is an extension of the greater Lenwood-Lockhart-Old Woman Springs Fault Zone. An Alquist-Priolo Act map for the Project area has not yet been completed by California Geologic Survey; however, referenced material describes the southeastern portion of the Lenwood-Lockhart Fault Zone as being active (California Geological Survey 2010; Southern California Earthquake Data Center 2012). In addition, portions of the Lenwood Fault (outside the project area) are mapped as an Alquist-Priolo Earthquake Fault Zone.

Section 21750 of Title 27 requires that stability analyses for Class II surface impoundments be conducted using peak ground acceleration expected at the site based on the maximum credible earthquake (MCE). The MCE represents the largest median the peak ground acceleration (PGA) expected at the site based on the known geologic framework of the region. The MCE PGA is therefore identified as the largest PGA from consideration of the expected maximum magnitude and distance to seismic sources within 100 km (62 mi) of the site. The Lenwood-Lockhart Fault is the controlling fault for the site with an MCE of magnitude 7.5 on the Richter scale with a PGA of 0.51g (Cardno ENTRIX 2012a, 2012b; California Department of Water Resources 2012). The Mount General fault is Holocene in the middle, but otherwise Quaternary; little else is known about the fault because it is

not listed by California Geologic Survey as being an active fault (Southern California Earthquake Data Center 2012).

Liquefaction. Liquefaction is a seismic phenomenon in which loose, saturated, fine-grained granular soils behave similar to a fluid when subjected to high-intensity ground shaking. An increase in pore pressure occurs as the soil attempts to compact in response to the shaking, resulting in less grain-to-grain soil contact, and therefore, loss of strength. Liquefaction occurs when three general conditions exist: shallow groundwater (50 feet below ground surface or less); low density, fine-grained sandy soils; and high-intensity ground motion. The Project area has reported groundwater depths of 75 feet and greater and generally dense subsurface granular soils, as defined by standard penetration test (SPT) blow counts.

Subsidence. Subsidence caused by groundwater withdrawal has occurred in the alluvial valley area in southwestern San Bernardino County. Historical agricultural pumping in the Hinkley Valley caused groundwater elevations to decline by as much as 90 feet or more feet bgs from between 1930 and the late 1980s (Stamos et al. 2001). Thus, the vicinity of the Project area experienced substantial groundwater drawdown prior to the early 1990s when the Mojave River groundwater adjudication took force and started to allow groundwater levels to recover by reducing agricultural pumping (see the Hydrology and Water Quality Section for more information on Mojave River groundwater adjudication). It would be expected that land settling from subsidence would have had the opportunity to occur during this historical period. Based on literature reviews, no evidence of historical significant land subsidence was identified in the Hinkley Valley. It is possible that localized land subsidence may have occurred due to prior agricultural pumping, but it has not been noted in literature on groundwater use (such as Stamos et al. 2001). This lack of reporting may be due to the rural setting and openness of the area, settling not being observed in agricultural areas, and the local population either being unaware of settling that did occur or indifference to it. Despite the lack of evidence for widespread subsidence in the Mojave Desert, with increased groundwater pumping in the Hinkley Valley, subsidence is recognized as a potential problem in parts of the Mojave Desert (Sneed et al. 2003).

a. **Less than Significant.**

1. The Lenwood Lockhart Fault is located less than 2,000 feet from the site, while the Mount General is located more than three miles distant from the site. The Lenwood-Lockhart fault zone has a low slip rate and a long interval between major ruptures (i.e., 3,000 to 5,000 years). The Mount General fault is not considered to be an active fault. Thus, there is no known risk of exposure of people or structures from direct fault rupture as there is no evidence of a fault zone directly within the project site.
2. The surface impoundments would be designed to be able to withstand the seismic shaking from the MCE of magnitude 7.5 on the Richter scale with a PGA of 0.51g (Cardno ENTRIX 2012a). The surface impoundments would also be designed to conform to applicable requirements of the California Building Code and San Bernardino County General Plan Safety Element goals and policies, which specify design parameters to reduce seismic and other potential hazards to acceptable levels. Therefore, potential exposure of people and structures to strong seismic ground shaking would be less than significant with compliance with required applicable design standards and building codes.
3. Liquefaction requires saturated sandy soils less than 40 ft below ground surface at the time of a seismic event. While soils onsite are sandy loams, saturated soils are greater than 70

feet below ground surface. Since the groundwater levels are generally deep (75 feet and greater) and the subsurface soils are relatively dense, the potential for liquefaction does not exist. In addition, the Project area was not identified as being susceptible to liquefaction on the Geologic Hazard Overlaps map of Hinkley (San Bernardino County 2012a). Therefore, there would be no impacts from seismic-related ground failure, including liquefaction.

4. The Project area is located within the Hinkley Valley floor, several miles from any slopes. No new slopes would be created by the Project; therefore, no impacts related to seismically induced landslides would occur.
 - a. **Less than Significant.** The Project would result in the loss of topsoil from excavation and grading to create the two new impoundments that could result in soil erosion. To minimize the amount of earthwork during construction, the existing basins (former Ponds 6 and 7) would be utilized for the new surface impoundments (new Ponds 6R and 7R). Blanket drain rock would be removed from the basins, side slopes would be cut to an inclination of 3:1 (horizontal to vertical), and the soils at the bottoms of the basins would be graded. The soils at the bottom of the basins would be excavated to a depth of 8 inches (Cardno ENTRIX 2012a). Select fill could be used to backfill excavations, raise the site grades, or flatten the existing slopes. Construction would remove approximately 3,000 cubic yards of soil which would be spread across the facility within the Project area. Once the soil foundation for the liner system has been graded and compacted, the liner system components would be installed.

Overall, there would be minimal grading because the bottoms of the existing basins would be recontoured to slope toward a LCRS sump, and the side slopes would be cut to 3:1 in areas where they are currently flatter (Cardno ENTRIX 2012b). All soil disturbance activities, including preparation of subgrade, would be performed in accordance with geotechnical specifications and local grading codes (Cardno ENTRIX 2012b). The soil would be compacted and graded to facilitate site drainage and prevent soil erosion (Cardno ENTRIX 2012a). Where soils are disturbed, BMPs would be implemented to reduce erosion as part of the required Project SWPPP (as described in Section 2.2, Project Construction).

- b. **No Impact.** The Project would not 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 an onsite or offsite landslide, lateral spreading, liquefaction, or collapse.

With the Project, PG&E would be able to maintain wastewater flow rates at the average design rate of 30,000 gpd on a year-round basis rather than reducing rates to 15,000 gpd during the winter. With an increase from 15,000 gpd to 30,000 gpd in the winter months, a maximum of 17.1 additional acre-feet of water will be pumped from the aquifer per year. The additional 17.1 acre-feet cited above is well within the PG&E allowance from the Mohave Groundwater Basin, and is less than 1% of the Annual Production Allowance, and less than 0.5% of the Total 2010-2011 Production Allowance. As discussed in the Hydrology and Water Quality section, compliance with the free production allowance provides for water table stability in the water basin overall and thus the minor increase in water withdrawal is not expected to result in groundwater drawdown and thus no potential for subsidence would occur as a result of this project.

The facility is located on Pleistocene non-marine, alluvial deposits within the Hinkley Valley floor. The soils present at the site are described as excessively drained to well-drained sandy loams on at less than 2 percent slope (National Resource Conservation Service 2012). The

relatively flat topography and type of soil found onsite is not prone to landslides or other types of ground failure.

- c. **No Impact.** The Project would not be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), because the Cajon Series is not typified as an expansive soil and poses no risk or threat to life or property (Natural Resources Conservation Service 2012).
- d. **No Impact.** The Project area does not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems. The Project area supports several septic tanks in operation. The proposed Ponds 6R and 7R would not require additional septic systems, nor would they impact the existing septic tanks used by the facility.

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

3.7 Greenhouse Gas Emissions

Regulatory Setting

Although there is currently no federal overarching law specifically related to climate change or the reduction of greenhouse gases (GHGs), EPA is presently regulating GHG emissions from large stationary sources under the federal Clean Air Act. Although periodically debated in Congress, no comprehensive federal legislation concerning greenhouse gas limitations is likely until at least 2013, if then.

A variety of legislation has been enacted in California relating to climate change, much of which sets aggressive goals for GHG reductions in the state.

The following is a summary of key state regulations concerning GHG emissions:

- Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006 requires the state to reduce GHG emissions to 1990 levels by 2020.
- The AB 32 Scoping Plan (2008) contains the main strategies California will use to implement AB 32. As part of the scoping plan, CARB has been adopting regulations including for the low carbon fuel standard and for the cap and trade system, among others, for reducing GHG emissions to achieve the emissions cap by 2020.
- Senate Bill 1078/107 obligated investor-owned utilities (IOUs), energy service providers (ESPs) and community choice aggregators (CCAs) to obtain 20% of their electricity from qualified renewable sources by 2010. SB 2 X1 sets forth a longer range target of procuring 33% of retail sales from qualified renewable sources by 2020.
- AB 1493 (2002 and 2009 amendments, "Pavley" Rules) and Advanced Clean Cars (2011) together are expected to increase average fuel economy to roughly 43 miles per gallon (mpg) by 2020 and reduce GHG emissions from the transportation sector in California by approximately 14%. EPA and CARB adopted standards for 2017 to 2025 in 2012.
- EO S-01-07 mandates that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020, which is referred to as the Low Carbon Fuel Standard (LCFS).

- The State CEQA Guidelines, as amended in 2010, require lead agencies to analyze a project's GHG emissions. The adopted guidelines recommend quantification of GHG emissions, assessment of their significance, and adoption of feasible mitigation of GHG emissions when significant impacts are identified. The state has not adopted any uniform statewide numerical significance thresholds for use in CEQA to date.

CARB's AB 32 Scoping Plan (Scoping Plan) states that local governments are "essential partners" in the effort to reduce GHG emissions. The Scoping Plan also acknowledges that local governments have "broad influence and, in some cases, exclusive jurisdiction" over activities that contribute to significant direct and indirect GHG emissions through their planning and permitting processes, local ordinances, outreach and education efforts, and municipal operations. The Scoping Plan encourages local governments to reduce GHG emissions by approximately 15% from current levels by 2020.

San Bernardino County adopted a GHG Reduction Plan in December 2011 to accomplish the following specific objectives to:

- Reduce emissions from activities over which the County has jurisdictional and operational control consistent with the target reductions of the AB32 Scoping Plan;
- Provide estimated GHG reductions associated with the County's existing sustainability efforts and integrate the County's sustainability efforts into the discrete actions of this Plan;
- Provide a list of discrete actions that will reduce GHG emissions; and
- Approve a GHG Plan that satisfies the requirements of Section 15183.5 of the CEQA Guidelines, so that compliance with the GHG Plan can be used in appropriate situations to determine the significance of a project's effects relating to GHG emissions, thus providing streamlined CEQA analysis of future projects that are consistent with the approved GHG Plan.

The County GHG Reduction Plan, along with state reduction measures, would reduce GHG emissions by 15% compared to 2007 levels in the County. The Plan requires discretionary land-use projects in the County to comply with certain requirements. If a discretionary project has more than 3,000 metric tons of carbon dioxide equivalent (MTCO_{2e}) emissions per year, then it is required to reduce its emissions by 31% and may use a screening table provided in the Plan to help identify its reduction measures. If a discretionary project has less than 3,000 MTCO_{2e} emissions, the project is required to meet mandatory GHG reducing performance standards to improve the energy efficiency, water conservation, vehicle trip reduction potential, and other areas. The performance standards also apply to ministerial and categorically exempt projects. Since the County's GHG plan meets all the requirements of Section 15183.5 of the CEQA Guidelines, a project that is consistent with the County's Plan can be determined to have less than significant GHG emissions because it is part of a plan overall that will reduce emissions consistent with AB 32 (San Bernardino County Land Use Services Division 2011).

The Project is located in the jurisdiction of the MDAQMD. MDAQMD Rule 1211 (Greenhouse Gas Provisions of Federal Operating Permits) sets forth emission reporting requirements for stationary source facilities subject to Title V of the Clean Air Act Amendments of 1990 which emit or have the potential to emit 100,000 short tons of CO_{2e} during any 12-month period. MDAQMD's CEQA guidance recommends use of a significance threshold for GHG emissions of 100,000 short tons CO_{2e}/year (90,718 MTCO_{2e}) and 548,000 pounds/day (249 MTCO_{2e}). The Project is located at a Title V facility, as discussed in Section 3.3, and is therefore subject to District Rule 1211. However, since the Project does not involve a permit unit requiring a Permit to Construct (see Section 3.3), the

Federal Operating Permit does not need to be modified. Therefore, this project is in compliance with Rule 1211.

Significance Criteria

Based on the CEQA Guidelines Appendix G, an impact pertaining to GHGs and climate change is considered significant if it would:

- generate a significant amount of GHG emissions, either directly or indirectly; or
- conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHGs

As described above, San Bernardino County has adopted the San Bernardino County Greenhouse Gas Emissions Reduction Plan (December 2011), which meets CEQA Guidelines Section 15183.5 for a qualified plan which allows projects that are consistent with the Plan to be determined to have a less than significant impact if they comply with all of the Plan requirements. As part of the Plan, the County established screening criteria for new residential and commercial projects. For projects that would emit below a 3,000 MTCO_{2e} threshold per year, including those projects exempt from CEQA, the County developed a set of performance standards that all projects must implement as Conditions of Approval. For projects that exceed the 3,000 MTCO_{2e} threshold per year, the County established screening tables and a point-based GHG reduction measure system are used to mitigate impacts. Projects that implement enough GHG reduction using the screening tables are considered to have provided their “fair share” contribution of reductions and are considered consistent with the GHG Plan.

Although the MDAQMD has a significance threshold of 100,000 short tons of CO_{2e}, the analysis herein utilizes consistency with the San Bernardino GHG Reduction Plan as the measure of significance instead as a more conservative approach to evaluation of GHG emissions and climate change for the Project.

- a. **Less than Significant with Mitigation Incorporated.** Project-related GHG emissions could make an incremental contribution to global climate change and the adverse global environmental effects thereof, as would most development projects occurring worldwide. Construction and operation of the Project would generate GHG emissions through the use of equipment shown in Table 3-3. Construction-related GHG emissions were estimated using OFFROAD 2007 emission factors obtained through the South Coast Air Quality Management District (SCAQMD), EMFAC2011 emission rates for on-road worker and heavy duty truck travel, and activity data obtained from the Project applicant. All emission rates assume construction would take place within calendar year 2013.

As shown in Table 3-7, estimated construction-related GHG emissions would be approximately 19,160 pounds of CO_{2e} on the maximum day and 42 MTCO_{2e} in total over the 25 day construction period. Construction of the Project would have one-time emissions that are far below MDAQMD’s daily and annual GHG threshold and the County’s 3,000 MTCO_{2e} screening criteria. The 3,000 MTCO_{2e} trigger for mandating specific reduction amounts is for annual emissions over time.

When averaging the construction emissions over an assumed 30 year lifetime of the Project, construction emissions would be approximately 1.4 MTCO_{2e} per year, well below the County’s threshold for mandating specific annual emission reductions. Regardless, the Project must comply with the San Bernardino County Greenhouse Gas Emissions Reduction Plan (December 2011) minimum requirements for all new projects which require implementation of GHG performance

standards to ensure the individual and cumulative impacts for GHG emissions are less than significant. As such, the Project requires implementation of **Mitigation Measure GHG-1** (GHG construction standards from the County GHG Emissions Reduction Plan) to reduce potential impacts to a less-than-significant level for construction.

Table 3-7. Estimated Construction Greenhouse Gas Emissions

Greenhouse Gas Emissions	Maximum	Threshold	Total Project		Threshold	Significance
	lbs/day	lbs/day	tons	tonnes	tonnes/yr	
Carbon Dioxide - CO2	18,995	—	45.7	41.5	—	—
Methane - CH4	0.7	—	0.003	0.002	—	—
Nitrous Oxide - N2O	0.6	—	0.002	0.002	—	—
		548,000 (MDAQM D)			90,719 (MDAQM) 3,000 (County)	Less Less
CO2 equivalents	19,160	D)	46.4	42.1		

Sources: South Coast Air Quality Management District 2008; U.S. Environmental Protection Agency 2012b; California Climate Action Registry 2009; Mojave Desert Air Quality Management District 2011.

Notes:

Maximum daily and total project emissions are onsite + offsite (includes trucking of materials)

MDAQM annual GHG threshold = 100,000 tons/yr = 90,719 tonnes/yr.

San Bernardino County Screening Criteria is 3,000 MTCO_{2e}

1 short ton = 2,000 lbs

1 metric tonne = 1,000 kg or 2,204.6 lbs

(ICF revisions)

Mitigation Measure GHG-1: Implement San Bernardino County GHG construction

standards during construction. PG&E or its contractor will include as a condition of all construction contracts/subcontracts requirements to reduce GHG emissions and submitting documentation of compliance in the project completion report to the Lead Agency. PG&E or its contractor will do the following, in compliance with the San Bernardino County Greenhouse Gas Emissions Reduction Plan (December 2011).

- Select construction equipment based on low GHG emissions factors and high-energy efficiency. Where feasible, diesel-/gasoline-powered construction equipment will be replaced, with equivalent electric or compressed natural gas (CNG) equipment.
- Because it may not be feasible to use electric or CNG equipment per the County performance standard, the Project will use biodiesel fuel if the following applies:
 - Biodiesel fuel becomes available within 20 miles of the Project area.
 - The California Air Resources Board has certified that the locally available biodiesel results in reduction of GHG emissions.
 - Biodiesel fuel is approved by the manufacturer for use in diesel trucks or equipment used for remedial activities, including farm equipment and construction equipment.
 - The cost of biodiesel is not more than 125% above the price of regular diesel fuel, then

- As biodiesel comes in blended amounts (B5 = 5% biodiesel; B20 = 20% biodiesel; B100 = 100% biodiesel), PG&E will use the highest biodiesel blend that is approved for use in site trucks or equipment, available, and within the price limitation noted above.
 - Grading contractor will implement the following when possible:
 - Training operators to use equipment more efficiently.
 - Identifying the proper size equipment for a task can also provide fuel savings and associated reductions in GHG emissions.
 - Replacing older, less fuel-efficient equipment with newer models.
 - Using global positioning system (GPS) for grading to maximize efficiency.
 - Grading plans will include the following statements:
 - “All construction equipment engines will be properly tuned and maintained in accordance with the manufacturers specifications prior to arriving on site and throughout construction duration.”
 - “All construction equipment (including electric generators) will be shut off by work crews when not in use and will not idle for more than 5 minutes.”
 - Recycle and reuse construction and demolition waste (e.g., soil, vegetation, concrete, lumber, metal, and cardboard) per County Solid Waste procedures.
 - Educate all construction workers about the required waste reduction and the availability of recycling services.
 - The project manager will ensure that the contract specifications related to GHG are followed by the contractor and will include in the project completion report to the Water Board a summary of mitigation measures implemented before, during, and after construction activities.
- b. **Less than Significant.** The Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Because the Project would not result in additional facility staff for operation and maintenance nor construct a new permanent stationary source of greenhouse gas emissions, it would not result in a long-term source of emissions and would be in compliance with AB 32 and County’s Greenhouse Gas Emissions Reduction Plan. Further, vehicles would not idle more than five minutes in compliance with the MDAQMD requirements.

Notwithstanding applicability as described under “a” above, the County has determined that 3,000 MTCO₂e screening criteria would help the County achieve the emission reductions necessary by 2020 to meet the goals of AB32. As discussed in under “a” above, the Project would be consistent with the County’s GHG Reduction Plan by resulting in emissions below the County’s 3,000 MTCO₂e screening level and implementing GHG construction standards during construction. Since the County’s GHG Reduction Plan meets all the requirements consistent with the reduction goals of AB32, a project that is consistent with the County’s GHG Reduction Plan can also be determined to be consistent with AB32. Given the Project’s compliance with the County’s Plan, the Project is also considered to be in compliance the statewide reduction goals of AB32.

VIII. Hazards and Hazardous Materials	Potentially Significant Impact	Less-than- Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.8 Hazards and Hazardous Materials

The wastewater generated at the Hinkley Compressor Station is nonhazardous under Title 23 of the California Code of Regulations and is classified as a designated waste. The wastewater and accumulated pond sludge is not classified as hazardous waste. Designated waste means either of the following:

- (a) Hazardous waste that has been granted a variance from hazardous waste management requirements pursuant to Section 25143 of the Health and Safety Code.
- (b) Nonhazardous waste that consists of, or contains, pollutants that, under ambient environmental conditions at a waste management unit, could be released in concentrations exceeding applicable water quality objectives or that could reasonably be expected to affect beneficial uses of the waters of the state as contained in the appropriate state water quality control plan (California Water Code 13173).

Designated wastes do not contain hazardous materials but have the potential to affect the designated use of a water resource (see Section 3.9, Hydrology and Water Quality, for more information). Blowdown water is combined with other wastewater sources within the facility and processed through an oil-water separator before discharge to the holding tank, and is subsequently transported to an offsite hazardous waste facility for proper disposal. In the case of this facility the wastewater is a designated waste because the designated use of the groundwater beneath the facility is drinking water which potentially could be impacted by the salts contained in the blowdown water (Cardno ENTRIX 2012a). A wastewater sample was collected in December 2011 and tested; the laboratory results confirmed that no constituents were present above the hazardous waste limits established by federal or California regulations (Cardno ENTRIX 2012a).

Former Ponds 6 and 7 were permitted to operate between 1982 and 1993, and closed in 1995. During closure all residual wastes were removed. The Regional Board and PG&E collected split samples of the soil underlying the removed wastes to verify that all wastes were removed. Laboratory analysis was performed on the split samples and the results were comparable. The Water Board approved the clean closure by letter dated June 28, 1996 (Lahontan Water Board 1996).

The natural or background soil chemistry in the vicinity of the surface impoundments was evaluated as part of the 1995 closure work, and the results are summarized in the closure documentation report (Trident 1996) and the Addendum to the RWD (Cardno ENTRIX 2012b).

- a. **No Impact.** The Project would not create a significant hazard to the public or the environment because the facility would not generate, transport, use or dispose hazardous waste as defined above (the facility is classified as designated waste which is not hazardous).
- b. **Less than Significant.** During operation, no foreseeable upset and accidental conditions involving the release of hazardous materials are expected. The wastewater and accumulated solids in the units are non-hazardous (designated) waste as defined by California regulations. This designation was confirmed through sampling and testing of the wastewater and is reported in semi-annual reports on GeoTracker.

Because of the past history of chromium contamination in soils in the Project area, there could be a concern that hazardous materials exist in subsurface soils below the new impoundments (Ponds 6R and 7R) could migrate to groundwater in the event of a leak from the impoundments. However, the soils beneath the Project area reflect natural "clean" conditions, and soils potentially impacted by past releases of hazardous materials (e.g., hexavalent chromium) are not beneath proposed Ponds 6R and 7R (Cardno ENTRIX 2012b). Therefore if the proposed surface impoundments were to fail (meaning an action leakage rate of greater than 25 gallons per day), no mobilization of additional hazardous materials would occur.

The Project design considers the potential for non-hazardous wastewater leaks and/or overtopping of the surface impoundments. Potential non-hazardous wastewater leaks would be

identified by the Monitoring and Reporting Program (Cardno ENTRIX 2012b) and mitigated, if necessary, through implementation of the Corrective Action Plan (Cardno ENTRIX 2012a; Appendix I). To ensure overtopping would not occur, the impoundment design was in part based on a water balance model that demonstrates the units are of sufficient capacity to handle the additional volume of water from the 1,000-year, 24-hour storm event, handle seasonal fluctuations in water level, and the loss of storage volume due to the accumulation of sludge over the life of a surface impoundment (approximately 20-years) while maintaining 2 feet of freeboard.

Hazardous materials used during construction (fuels, lube oils, etc.) have a potential for spill or leak. However, the required Project SWPPP would include spill prevention and emergency response measures and spill notification requirements (refer to Section 2.2 Project Construction). Any spill or leak will be documented in a log by the project manager. Therefore, this impact would be less than significant.

- c. **No Impact.** The Project would not emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school because there is no existing or proposed school within a 1 quarter-mile radius of the Project area. The Hinkley School is over three miles away to the north.
- d. **No Impact.** The Project area is not presently listed on the state's list of hazardous materials sites compiled pursuant to Government code section 65962.5.
- e. **No Impact.** The Project area is not be located within an airport land use plan area and is not within 2 miles of an existing or proposed public airstrip. The closest airport or airfield is Barstow Daggett Airport, located approximately 20 miles southeast of the Project area..
- f. **No Impact.** The Project area is not located in the vicinity of a private airstrip (San Bernardino County 2007). The closest private airstrip is located 6 miles to the west.
- g. **No Impact.** The Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The two new impoundments would be located within the existing Compressor Station facility, and there would be no new employees. A limited number of vehicles would be utilizing the roads by workers, equipment, and materials delivery during the 6 to 8 week construction period (See Section 2.16 Transportation/Traffic section for more information). These vehicles would represent a negligible increase to current usage and would not impede emergency vehicle traffic in any way.
- h. **No Impact.** The Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. The Fire Hazard Severity Zone Map for northwestern San Bernardino County has the Project vicinity listed as moderate. However, neither fire nor welding would be needed during Project construction. HDPE membrane seam welding would be performed by either hot wedge fusion welding or extrusion welding. These processes use electrical generators to heat HDPE to temperatures sufficient to thermally bond sheets of the material together. No open flames would be used or permitted in the work area. Therefore, the Project would not introduce people or residences to an increased risk of exposure to wildland fires.

IX. Hydrology and Water Quality	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h. Place within a 100-year flood hazard area structures that would impede or redirect floodflows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j. Contribute to inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.9 Hydrology and Water Quality

Regulatory Setting

Clean Water Act

The Clean Water Act establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the Clean Water Act was enacted in 1948 but was significantly amended in 1972.

Under the CWA, EPA has implemented pollution control programs such as setting wastewater standards for and water quality standards for many potential contaminants in drinking water supplies.

EPA has also implemented pollution control programs such as setting wastewater standards for industry and water quality standards for potential contaminants in drinking water.

The Clean Water Act authorizes the National Pollutant Discharge Elimination System (NPDES) permit program which controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Point sources include construction sites covered under the State Water Resources Control Board Construction General Permit (CGP) as described in Order No. 2009-009-DWQ. The CGP is administered by the Regional Water Quality Control Board.

The Clean Water Act requires each state to identify waters for which existing required pollution controls are insufficient to achieve that state's water quality standards and establish total maximum daily loads in accordance with a priority ranking.

Porter-Cologne Act

In 1967, California's Porter-Cologne Water Quality Control Act established the State Water Resources Control Board (State Water Board) and nine Regional Water Quality Control Boards (Regional Water Boards) as the primary state agencies with regulatory authority over water quality. The Porter-Cologne Act provides authority to establish Water Quality Control Plans (Basin Plans) which designate beneficial uses for specific surface water and groundwater resources, and establish water quality objectives and implementation programs to meet the stated objectives and to protect the beneficial uses of water.

The Regional Water Boards issue WDRs in compliance with the applicable basin plans for point-source dischargers, such as municipal wastewater treatment plants and industrial facilities. The Hinkley Compressor Station is located within the jurisdiction of the Lahontan Water Board and operates the Compressor Station under WDRs in Board Order 6-97-82.

Construction General Permit

The State Water Resources Control Board General Permit for Discharges of Storm Water Associated with Construction Activities (CGP Order 2009-0009-DWQ) requires the development and implementation of a SWPPP for construction projects disturbing more than 1 acre of land. The SWPPP would contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the Project. The SWPPP must

include BMPs the discharger will use to protect stormwater runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

Mojave River Basin Adjudication

The Mojave River Basin Adjudication is based on the stipulated judgment in *City of Barstow, et al vs. City of Adelanto, et al* and related complaints (Case No. 2008568). The stipulated judgment, issued in 1996, addresses water shortages in the Mojave Basin Area through a designation of five subareas, all of which were found to be in overdraft, and each having an amount of groundwater that can be extracted by all parties based on a court-determined Production Safe Yield to maintain proper water balances within each subarea. The Mojave Water Agency (MWA) is the designated water master, and is responsible for administering the judgment, which involves measuring and tracking aquifer conditions and water use information in the Mojave River Basin. Parties to the Judgment are assigned a variable Free Production Allowance, which is the amount of water that may be produced (pumped or diverted) from a subarea.

The Project area is located within the Centro subarea of Mojave Basin Area adjudicated boundary. PG&E is a designated water user, owns water rights totaling approximately 2,429 afy and, based on the 2010–2011 Watermaster Annual Report, has a current base annual allowance of 1,944 afy (Mojave Water Agency 2012).

Existing Conditions

Climate and Hydrology

Average precipitation in the Project vicinity varies from 4 to 11 inches with the average near 6 inches per year (California Department of Water Resources 2003).

The Mojave River is located 1 mile south of the Compressor Station, but this stretch of the river flows only during major storms. Existing drainage patterns in the Project area flow to the east, based on topography of the vicinity of former Ponds 6 and 7 was surveyed in 2011 (Schoemann pers. comm.).

Groundwater Basin

The Project vicinity is located in South Lahontan Hydrologic Region within the Centro Subarea of the Middle Mojave River Groundwater Basin. The immediate Project area is located within the Hinkley Valley aquifer west of Barstow and north of the Mojave River. Water levels in the Centro Subarea have been relatively stable with seasonal fluctuations and declines during dry years followed by recovery during wet periods.

Groundwater movement through the Hinkley Valley alluvial channel is controlled by the aquifer geology, hydraulic conductivity and groundwater elevation. Because the Mojave River is located along the southern end of the Hinkley Valley, a majority of this recharge water flows to the north and increases groundwater elevations throughout the Hinkley Valley. Groundwater in the upper and lower aquifers generally flows in a north-northwesterly direction, from the Compressor Station to the northern end of the Hinkley Valley (Pacific Gas and Electric 2012b). However, in the immediate vicinity of the Compressor Station, groundwater flow is generally more to the north or northeast

with a gradient of 0.01 ft/ft (Cardno ENTRIX 2012a). The most recent monitoring report reports that the groundwater flow velocity in the vicinity of the facility was calculated to range from 2 to 27 feet per day (Cardno ENTRIX 2012a), based on historic evaluation of aquifer parameters. The lower end of the range is representative of ambient flow conditions.

This Lenwood-Lockhart fault zone is believed to act as a small step, causing groundwater to drop at a steeper gradient than normal when flowing towards the northeast direction.

Regionally, the lithology is highly variable. It consists of interbedded sands and silty sands, varying from course to fine over short distances both laterally and vertically. Sediments near the surface and upper aquifer consist primarily of sand and silt mixed with gravel and clay with the “brown clay” layer separating the upper and lower zones of the upper aquifer. Sediments underlying the “blue clay” layer (or aquitard) in the lower aquifer consist primarily of sand and gravel. Between the blue clay layer and consolidated bedrock at the bottom of the aquifer are permeable stratum composed of calcareous sedimentary rock and highly weathered, decomposed, and fractured bedrock. The bedrock unit outcrops in the area of the Desert View Dairy.

The thickness the shallow zone of the upper aquifer is controlled by the groundwater elevation and the top of the brown clay layer, and is about 20 feet in the vicinity of the Compressor Station, and increases to about 40 feet toward the north. The brown clay separating the shallow and deep portion of the upper aquifer is shown to have a thickness of about 20 feet at the station. The lower zone of the upper aquifer is shown to have the same thickness contours as the brown clay layer. The blue clay layer is shown to be continuous, fully separating the upper and lower aquifers in the Hinkley Valley north of the river. The blue clay layer is about 30 feet thick under the Compressor Station, but is reduced to 10 feet in the vicinity of Hinkley and to the north and 40 feet in the vicinity of the Mojave River in the south. The lower aquifer is shown to have a thickness of 100 feet at the Compressor Station. It is shown to increase to over 250 feet below the Mojave River channel and to reduce to about 20 feet below Hinkley. Below the Lower Aquifer is a granitic bedrock unit that is encountered at a maximum depth of 300 feet below the Compressor Station (Lahontan Water Board 2008a). Supply wells providing water to the Compressor Station are screened across both the upper and lower aquifers.

Groundwater Quality

The geochemistry of the Hinkley Valley aquifer has not been fully characterized. Potential constituents in the Hinkley aquifer include arsenic, iron, manganese, nitrate, Total Dissolved Solids (TDS), and chromium. Maximum contaminant levels (MCLs) are enforceable limits for contaminants in drinking water and Secondary Maximum Contaminant Levels (SMCLs) are established to protect the public welfare (i.e., adversely affect its odor, taste or appearance). Federal MCLs are established under the Federal Safe Drinking Water Act and State MCLs are established by California Department of Public Health and must be at least as stringent as the federal MCL, if one exists. Potential constituents in the Hinkley aquifer are compared to Federal and State MCLs to characterize its water quality.

Water quality sampling for pH, arsenic, iron, manganese, nitrate, salinity (i.e., TDS), and chromium had been conducted during previous monitoring efforts, including PG&E's 2006 sampling conducted for the 2007 Background Study Report (Pacific Gas and Electric 2007).

- High arsenic concentrations are believed to be naturally occurring. Based on results from a USGS study on wells in the Mojave Water Agency management area from 1991 to 1997,

naturally-occurring arsenic concentrations in water from wells in the western Mojave Desert commonly exceed 10 ppb and a few exceed 100 ppb (Christensen 2001).

- PG&E's 2007 Background study found arsenic in wells (up to 200 feet in depth) ranging from less than 1 ppb to 12 ppb with most concentrations under 10 ppb along the Mojave River upgradient of the Compressor Station. The MCL for arsenic is 10 ppb. PG&E's 2007 Background Study Report (Pacific Gas and Electric 2007) presented dissolved iron levels in forty-seven wells at less than 500 ppb (the method detection level was 500 ppb). The SMCL for Iron is 300 ppb.
- The 2007 Background Study Report also described dissolved manganese levels in background areas to range from less than 1 ppb (method detection level of 1 ppb) up to 48 ppb. Five out of forty-seven wells sampled had one or more detections of manganese greater than 10 ppb. The SMCL for manganese is 50 ppb.
- The nitrate concentrations in groundwater in the Hinkley Valley are generally less than a few parts per million (Pacific Gas and Electric 2007). The 2007 Background Study Report found nitrate levels in background areas to range from less than 0.5 ppm (equal to the method detection level) up to 21 ppm. The federal MCL is 45 ppm (as NO₃) and the State MCL is 10 ppm (as N).
- Concentrations of TDS generally increase to the north with distance from the Mojave River (Lahontan Water Board 2008b). The source of salts and dissolved solids may originate naturally from alluvial sediments and from human activities, such as agriculture. The 2007 Background Study Report found TDS levels in the areas sampled range from 90 ppm near the Mojave River up to 2,390 ppm near a former dairy or confined-animal property but are generally less than 1,000 ppm in most areas (Pacific Gas and Electric 2007). The MCL for TDS is 500 ppm.

Chromium levels have been heavily affected by historical discharges of chromium-contaminated water from the PG&E facility in the 1950s and 1960s which has resulted in a large area of contaminated groundwater in the Hinkley Valley. The Compressor Station is the source area for hexavalent chromium (Cr[VI]) contamination in groundwater caused by percolation of untreated cooling water from unlined surface impoundments operating from 1952-1965. Chromium-contaminated soil since has been excavated from shallow depths in the area of the former unlined surface impoundments, pipelines, and beneath tanks (Lahontan Water Board 2008b). The highest concentrations of Cr[VI] in groundwater are still almost directly below the former unlined surface impoundments at the Compressor Station, with concentrations reported up to 4,200 µg/L in second quarter 2012. However, just south of the Compressor Station (i.e., up-gradient of the chromium plume) groundwater is considered outside of the Cr[VI] plume and is used for freshwater supply for Compressor Station operations and remedial activities (from PGE-14, FW-01, and FW-02).

Groundwater quality results in July and August, 2011 from monitoring wells (MW-01 and PMW-01) in the vicinity of Ponds 6R and 7R show high levels of TDS (540 and 520 milligram per liter [mg/L], respectively) and Cr[VI] (25.8 µg/L and 104 µg/L, respectively), along with other constituents (Lahontan Water Board 2012). Water quality results from one of the production wells used for industrial processes at the Compressor Station (PGE-15) on December 30, 2011 show no detection of Cr[VI] and 153 mg/L of TDS (Lahontan Water Board 2012). Other 2011 data results show that VOCs and pesticides were not detected and metals were detected at levels less than the MCL in the

supply wells. Arsenic was the only chemical exceeding the MCL of 0.01 mg/L at 0.017 mg/L in April 2011 (Cardno ENTRIX 2012a).

Local Water Usage

All of the existing water supplies in the Hinkley Valley and nearby Barstow are pumped groundwater. There are an estimated 500 domestic wells in the Hinkley Valley, but the volume of water used for residential properties is generally small in comparison to agricultural use. After groundwater was reported to be contaminated with hexavalent chromium in 1987, a number of drinking water wells were abandoned following property purchase by PG&E. The standard practice has been to seal these domestic wells, although a few were left to serve as monitoring wells. As part of the PG&E Hinkley Groundwater Remediation Project, PG&E is currently working to expand their existing remediation activities to expedite the groundwater clean-up.

Wells within a 1-mile radius of the Project area pump groundwater for agriculture (including stock watering), domestic, and industrial uses (Figure 3-7). Agricultural wells are primarily for feed cultivation (alfalfa) and stock watering for the adjacent dairy and horse ranches. Approximately 60 water supply wells are within a 1-mile radius and comprise the domestic usage. This estimation is based on a local well record search and aerial images on Google Earth and may not indicate actual occupancy of residences or use of these wells. The closest domestic well shown on Figure 3-7 is located approximately 700 feet due east of Pond 4 (Well 01-02). With respect to groundwater, this well is cross gradient to the surface impoundments. The closest active domestic well to the west (Well 02-25) is located at a distance of approximately 1,350 feet, and to the south (Well 02-05), approximately 800 feet from the Project area. These wells are primarily used for domestic purposes as they contain freshwater and are located outside of the existing Cr[VI] plume boundary. There are no domestic supply wells in use directly downgradient (north or northeast) of the surface impoundments.

PGE's primary groundwater supply consumption within the Project area is for domestic (i.e., sinks, toilets) and industrial supply (i.e., operation of cooling towers) for the Compressor Station. The pump flow meters do not distinguish between water used as domestic water supply and water used in the industrial process. On-site production wells owned by PG&E provide the water used at the Compressor Station. Production wells used for industrial operations include PGE-6, PGE-12, PGE-13, and PGE-15, (Lahontan Water Board 2012). The permitted annual average flowrate to the surface impoundments of 30,000 gpd. The current annual average pumping rate is less than 50 percent of historic rates. In the WDR Board Order 6-90-42 discharge rates are reported as approximately 50,000 gpd, with a capacity over seven surface impoundments for 60,000 gpd (Lahontan Water Board 1990). Operational changes and facility improvements reduced the average rate of pumping and facilitated the clean-closure of four surface impoundments in 1996.

The water supply for the community center is the same as for the Compressor Station. All wells are operated intermittently to supply the station and the community center. Well PGE-14, located to the south of the Compressor Station, is exclusively used to supply the groundwater remediation systems.

Over the last 20 years, groundwater levels have risen over 15 to 20 feet in the shallow aquifer below the Compressor Station due to regional efforts to reduce drafting of the aquifer by the MWA, and in part, due to PG&E cutbacks in supply well pumping for industrial use (Cardno ENTRIX 2012a).

Shown on Figure 3-8 is a chart of measured groundwater level from monitoring wells located upgradient and downgradient of the current surface impoundments that illustrates the general rise of the water table (Pacific Gas and Electric 2012a).

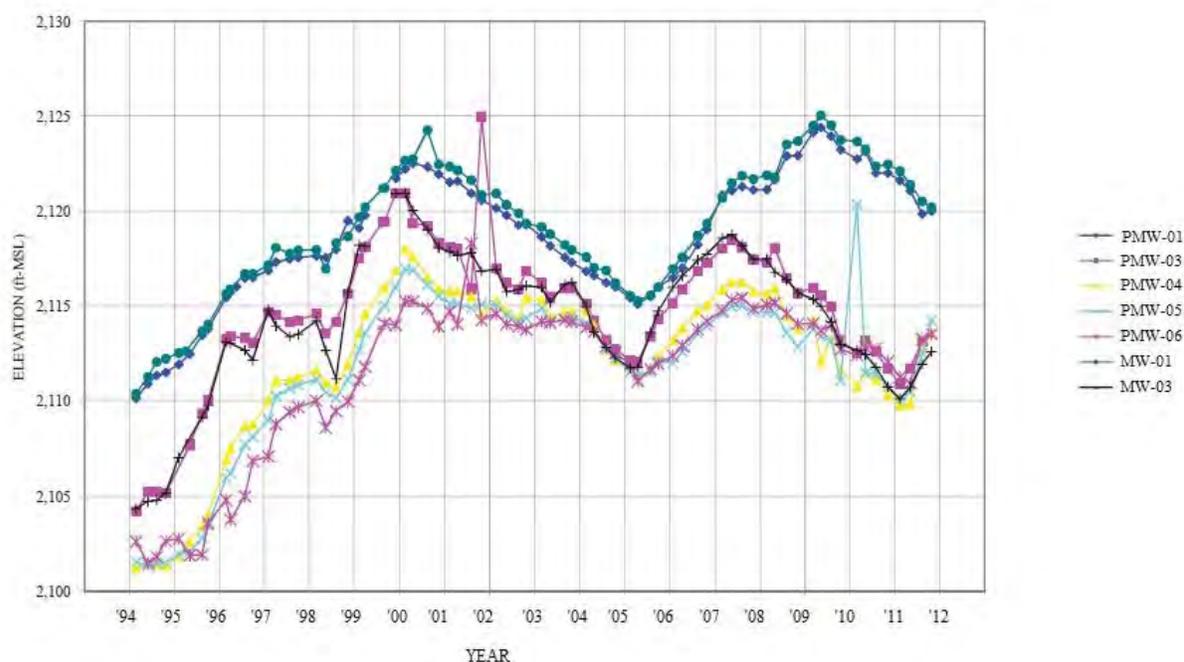


Figure 3-8. Groundwater Elevations in the Project Area from 1994–2012

A water balance analysis was performed as part of the RWD to ensure sufficient capacity of the surface impoundments, taking into account the seasonal fluctuation in blowdown flowrates, the accumulation of solids in the impoundments, and the precipitation and evaporation rates for the Hinkley Region (Cardno ENTRIX 2012a, 2012b). Inputs to the facility were determined based on a daily design flow from the compressor cooling operations of 30,000 gallons per day plus the average monthly precipitation in inches. Output was represented as the average monthly evaporation in inches per month over the surface area of the surface impoundments and converted to equivalent gallons of water. Although the water balance analysis assumes 30,000 gpd annually, flow rates must presently be reduced to 15,000 gpd during the winter to meet freeboard requirements.

- a. **Less than Significant.** The blowdown from the cooling towers at the compressor station accounts for approximately 90% of the discharge to the surface impoundments (Lahontan Water Board 2012). The remaining 10% of the discharge to the surface impoundments is comprised of intermittent waste streams from cleaning and maintenance operations (Lahontan Water Board 2012). Wastewater in the surface impoundments would contain constituents including arsenic, fluoride, hexavalent chromium, magnesium, nitrate and TDS. Protection of water quality standards and compliance with WDRs would be accomplished through the multiply-redundant containment and monitoring systems incorporated into the surface impoundment design. The new surface impoundments would be installed in the footprint of former surface impoundments which have been identified as being clean-closed and are outside of the original chromium discharge and source areas for the Cr[VI] contamination from the

Facility (Lahontan Water Board 2012). In addition, the surface impoundments would be lined with HDPE, and would have no less than 1×10^{-6} cm/sec permeability to prevent wastewater from leaching into the underlying groundwater aquifer. Therefore, it is not expected that this Project would contribute to degradation of groundwater quality due to Cr[VI] or other constituents in the wastewater.

To ensure that groundwater would not be affected by the Project, PG&E would follow an approved Operation, Maintenance, and Contingency Plan, perform a Monitoring and Reporting Program (Cardno ENTRIX 2012a, 2012b), and meet all requirements within the revised WDRs issued by the Regional Board.

- b. **Less than Significant.** The two new surface impoundments would allow the station greater flexibility in wet years to operate during the winter months at an annual average rate of 30,000 gpd. When the existing surface impoundments are close to capacity, the Compressor station currently has to reduce blowdown in the cooling towers and discharge to the impoundments. The proposed increase in flowrate to the impoundments during the winter would result in an increase in annual groundwater pumping. With the Project, PG&E would be able to maintain wastewater flow rates at the average design rate of 30,000 gpd on a year-round basis rather than reducing rates to 15,000 gpd during the winter. With an increase from 15,000 gpd to 30,000 gpd in the winter months, a maximum of 17.1 additional acre-feet of water would be pumped from the aquifer per year. The additional 17.1 acre-feet cited above is well within the PG&E allowance from the Mohave Groundwater Basin, and is less than 1% of the Annual Production Allowance, and less than 0.5% of the Total 2010-2011 Production Allowance. The adjudicated production allowances provide for maintenance of the water table and avoidance of regional drawdown. Given that the water table has actually been rising as a result in the adjudication and the additional water use is within PG&E's allowance, the additional water use is not expected to result in aquifer drawdown that would substantially affect other water users or uses.

A calculation of specific well drawdown was estimated using this equation and the following assumptions: storage coefficient (S) of 0.20; transmissivity of 3,750 ft²/day (based on assumed aquifer thickness of 75 feet and hydraulic conductivity of 50 feet/day); time of 100 years (assuming additional pumping 6 months each year); and additional pumping of 15,000 gpd.² The resultant drawdown for a well 1,000 feet from the source well would be 1.5 feet over 100 years if no aquifer recharge occurs from annual precipitation. This is not expected to substantially affect other well uses or users.

- c. **Less than Significant.** Construction of Ponds 6R and 7R would not alter local drainage patterns or result in substantial on- or off-site erosion in the Project area. The Project area has no surface drainage features other than small drainage channels built as part of the facility. In addition, the Project is located in a geographically flat area where most of the drainage would likely accumulate as localized pools and ultimately evaporate or infiltrate into surface soils, rather than being transported as sheet flow. Stormwater that falls in secondary containment areas

² Source for assumptions: Storage coefficient for unconfined aquifers is approximately the same as specific yield. Specific yield identified in the Groundwater Remediation EIR (Lahontan RWQCB 2012) for sand and silt is 20 to 25%. Transmissivity calculated based on assumed hydraulic conductivity of 50 feet/day and assumed saturated thickness of 75 feet (from Appendix A of Groundwater Remediation EIR, ICF 2012). Time assumed to be net of 50 years (100 years with additional pumping 6 months/year). Additional pumping assumed to be 15,000 gpd. This equation solved by using calculator at <http://www.icalcul8.com/theis.php>.

around sumps, valves, and other outdoor equipment is routed to the oil-water separator, and then to the surface impoundments; by adding Ponds 6R and 7R the facility capacity for stormwater management is increased. Once the impoundments are constructed, the soil would be compacted and graded to facilitate site drainage and prevent soil erosion (Cardno ENTRIX 2012a). The presence of additional surface impoundments would not increase on or offsite erosion.

Soil disturbance during construction could have the potential impact of increasing erosion in the Project area. However, as described in Section 2.2 Project Construction, the Project would be constructed in compliance with Coverage under the State Water Resources Control Board Construction General Permit (Order No. 2009-009-DWQ) SWPPP which identifies BMPs that would be implemented during construction.

- d. **Less than Significant.** Construction of Ponds 6R and 7R would not alter regional drainage patterns and would not result in on- or off-site flooding. Some onsite stormwater is routed to the surface impoundments; by adding Ponds 6R and 7R the facility capacity for flood management is increased and would be beneficial in further preventing flooding on or offsite.
- e. **No Impact.** The Project would not 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. Ponds 6R and 7R would be constructed below grade with a two-foot freeboard. Due to the surface impoundment design, operational controls, and comprehensive monitoring systems, the impoundments would not be anticipated to overflow. If needed, wastewater flow rates are adjusted to ensure overflow does not occur at the surface impoundments. In addition, no new impervious area would be created and therefore no substantive change between pre- and post- construction runoff conditions or flow rates is anticipated because the existing levees would not be modified and the surface impoundments would be built within the footprint of former Ponds 6 and 7. Therefore, the Project would have no impact on contributing runoff water which would provide substantial additional sources of polluted runoff.
- f. **Less than Significant.** The Project would not substantially degrade water quality. The Discharger (PG&E) has proposed engineered alternatives to the CCR, title 27 prescriptive standards for the construction of the Class II Surface Impoundments. Lahontan Water Board staff has evaluated these proposed alternatives and has determined that these alternatives (1) meet the CCR, title 27 requirements; (2) are consistent with the performance goal of the prescriptive standards, and (3) afford equivalent protection against water quality impairment. In the unlikely event that a release does occur from the alternative liner, the Monitoring and Reporting Program requires PG&E to submit a technical report describing actions taken to abate the release and any proposed future actions to abate the adverse impacts to the environment. In addition, the existing facility has both a Hazardous Materials Business Plan (HMBP) and SPCC Plan which would be updated in the future with any changes to the facility. The facility Corrective Action Plan addresses the actions required in the event of a reasonably foreseeable release from the facility, including potential leaks from the surface impoundments and associated piping and appurtenances. In the event of discovery of water quality impacts PG&E has increased financial assurances as outlined in the RWD and Addendum (Cardno ENTRIX 2012a,b). Therefore, the potential for the Project to otherwise substantially degrade water quality is less than significant.

- g. **No Impact.** The Project does not include housing and, therefore, would not place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map, or other flood hazard delineation map. In addition, the surface impoundments would contain the volume of rain which falls onto the surface impoundment areas in a 1,000-year, 24-hour storm event, while maintaining two feet of freeboard.
- h. **No Impact.** According to the Federal Emergency Management Agency, the Project area is in Zone D, which is defined as “Areas with possible but undetermined flood hazards. No flood hazard analysis has been conducted.”
- i. **No Impact.** The Flood Control District of San Bernardino County had historically prepared their own maps (Pacific Gas and Electric 1989) based on the most severe flood of the Mojave River in the area which occurred in 1969. The Project area was not within this flood area and was historically classified outside the Mojave River 100-year flood plain.

In addition, the proposed surface impoundments, when completed, would be below grade to comply with the Title 27 freeboard requirement (2 feet), and they would not impede or redirect flood flows. Therefore, there would be no impact of the Project on flood flows.

- j. **No Impact.** No levees or dams are present within the vicinity of the Project area. Nor are any proposed during Project implementation; therefore, implementation would not expose people or structures to flooding as a result of a levee or dam failure. Therefore, there would be no impact.
- k. **No Impact.** The Project would not contribute to inundation by seiche, tsunami or mudflow. Tsunamis are waves in oceans or seas usually generated by seismic events that displace a large volume of water. The Project area is not located near ocean or sea waters. Seiches are waves generated in closed water bodies (lakes) generally in response to oscillations caused by the propagation of seismic waves. Even though the Project is located within a seismically active region, there are no water bodies in the vicinity of the Project capable of generating seiches or tsunamis that could result in inundation at the Project area. Mudflows require super-saturated slope conditions. The topography at and adjacent to the Project area is relatively level. Slopes capable of generating mudflows are not present and would not be created by Project implementation. Therefore, there would be no impact.

X. Land Use and Planning	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.10 Land Use and Planning

- a. **No Impact.** The Project would not physically divide an established community. The surrounding and nearby community of Hinkley has historically been limited to single family houses on large agricultural acreage lots, as well as single family homes on smaller lots (San Bernardino County 2007). The Project would be contained within the existing Compressor Station boundaries and would not extend into the established community. Therefore, there is no potential to physically divide the community.
- b. **No Impact.** The Project would not conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project. The Project is entirely within the existing Compressor Station facility, which has a land use designation of Public Facilities. Therefore, the Project would not conflict with any future land use developed in compliance with the County General Plan and zoning ordinances. San Bernardino County General Plan (San Bernardino County 2007) identifies the land use designations for the surrounding areas as RL (Rural Living), RL-5 (Rural Living 5-acre minimum), and RL-10-AP (Rural Living 10-acre minimum, Agricultural Preserve).
- c. **No Impact.** The Project area is within a HCP, as shown on Map 45 of the West Mojave Plan (March 2006). However, the Project area falls outside the designated habitat conservation areas, and there are no proposed impacts to habitats covered by the plan. Also refer to Section 3.4 Biological Resources.

XI. Mineral Resources	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.11 Mineral Resources

- a. **No Impact.** The Project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. The Project area is not located in one of the California Geological Survey's Mineral Resource Zones, where access to important mineral resources may be threatened, according to provisions of the California Surface Mining and Reclamation Act of 1975. The Project area is not within a designated MRZ.
- c. **No Impact.** The Project would not 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 or of a known locally important mineral resource recover site. The Project area is not located within a mineral resource zone identified in the San Bernardino County Mineral Resource Overlay. Therefore, no loss of or interference with mineral resource operations would result from implementation of the Project.

XII. Noise	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Expose persons to or generate excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Be located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.12 Noise

Noise is generally defined as unwanted or unpleasant sound and as such response to noise is subjective and can vary greatly from person to person. Factors that can influence individual response include: intensity, frequency, and time pattern of the noise; the amount of background noise present prior to the intruding noise; and the nature of work or human activity that is exposed to the noise. The adverse effects of noise include interference with concentration, communication, stress, and sleep. At the highest levels, noise can induce hearing damage.

The unit of measurement of environmental noise is the decibel (dB). To better approximate the range of sensitivity of the human ear to sounds of different frequencies, the A-weighted decibel scale was devised. Because the human ear is less sensitive to low-frequency sounds, the A-scale de-emphasizes these frequencies by incorporating frequency weighting of the sound signal. When the A-scale is used, the decibel levels are shown as dBA.

According to San Bernardino County Ordinance 83.01.080, noise levels in residential areas are not to exceed 55-dBA L_{eq}^3 from 7:00 a.m. to 10:00 p.m. or 45-dBA L_{eq} from 10:00 p.m. to 7:00 a.m. However, Section 83.01.080(g)(3) exempts the following sources of noise from the regulation: 1) Motor vehicles not under the control of the commercial or industrial use; 2) Emergency equipment, vehicles, and devices; and 3) temporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., from Monday through Saturday (there is no exemption for Sundays and federal holidays).

Construction of the proposed surface impoundments would require several pieces of large equipment. Typical noise levels associated with the equipment for the Project at the equipment site and 500 feet away are listed in Table 3-8 below. The closest residents are located approximately 1,000 feet east of Pond 4 in the Project area (refer to well labeled 01-02 on Figure 3-7, as well as Figure 2-2 for pond locations).

Table 3-8. Typical Construction Noise Levels

Equipment	Noise at 50 feet L_{max} (dBA)	Noise at 500 feet L_{max} (dBA)	Noise at 1,000 feet L_{max} (dBA)
Tractor Trailer	84	65	59
Back hoe	80	61	55
Roller	85	66	60
Grader	85	66	60
End Dump	84	65	59
Generator	82	63	57
Compressor	80	61	55
Pneumatic tools	85	66	60

The closest airport or airfield is Barstow Daggett Airport, located approximately 20 miles southeast of the Project area, and the closest private airstrip is located approximately six miles to the west.

- a. **Less than Significant with Mitigation Incorporated.** The project could expose persons to or generate noise levels in excess of standards established in the San Bernardino County noise ordinance during project construction. Noise levels of tractor trailers, heavy equipment, and/or pneumatic tools could slightly exceed 55 dBA at the nearest residence (Table 3-8). **Mitigation Measure NOI-1** would reduce this impact to less than significant by restricting construction to daytime hours and limiting time equipment is allowed to idle.

Mitigation Measure NOI-1. Restrict construction activities to day time hours and weekdays. The construction contractor or project manager will ensure that construction activities involving the use of tractor trailers, heavy equipment, and/or pneumatic tools will be performed between 7:00 a.m. and 7:00 p.m. on Monday through Saturday, and no work at noise levels above 45db at the nearest occupied residence will be performed on Sundays or federal holidays. Additionally, this equipment will not be allowed to idle longer than 5 minutes.

- b. **Less than Significant with Mitigation Incorporated.** The Project could expose persons to or generate excessive groundborne vibration during excavation and grading for the proposed

³ L_{eq} is the equivalent steady-state sound level which, in a stated period, would contain the same acoustic energy as the actual time-varying sound level during the same period.

surface impoundments for a limited time (approximately 2 weeks) during construction. Worker exposure would be limited with implementation of hearing protection under the Project Health and Safety Plan. Implementation of **Mitigation Measure NOI-1** would reduce this impact to less than significant by restricting construction to daytime hours. Excessive vibrations, whenever present, will be documented in a log by the construction contractor or project manager.

- c. **Less than Significant.** Operation and maintenance of the proposed surface impoundments would generate little or no noise and would be similar to the existing surface impoundments since surface impoundments are operated individually. Any noise increase would be negligible and not likely noticeable to nearby residents. Therefore, the Project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- d. **Less than Significant with Mitigation Incorporated.** Project construction activities (excavation, grading, and trenching) would temporarily increase noise levels at the Project area, as described in the discussion under "a". **Mitigation Measure NOI-1** would reduce this impact to less than significant by restricting construction to daytime hours and limiting time equipment is allowed to idle.
- e. **No Impact.** The Project would not be located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels. The closest airport or airfield is Barstow Daggett Airport, located approximately 20 miles southeast of the Project area approximately six miles to the west
- f. **No Impact.** The Project would not be located in the vicinity of a private airstrip and expose people residing or working in the Project area to excessive noise levels. The closest private airstrip is located approximately six miles to the west (Lahontan Water Board 2008a).

XIII. Population and Housing	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.13 Population and Housing

- a. **No Impact.** The Project would not 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).

During construction, the Project would employ six to ten construction workers. These construction workers would be hired from the local labor force, except for skilled labor for geomembrane installation that would stay in hotels, likely near Barstow. Due to the small number of construction workers and the short duration of the construction time frame (6-8 weeks), no impact on population and housing would occur.

Project implementation would result in continuing operation of an existing industrial facility. It does not involve the construction of new residential or commercial development or infrastructure that could result in additional population growth in the Project area. Project implementation would not displace existing housing or residents as all new construction is contained within the existing facility.

- d. **No Impact.** The Project would not displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere for the reasons described above.
- e. **No Impact.** The Project would not displace a substantial number of people, necessitating the construction of replacement housing elsewhere for the reasons described above.

XIV. Public Services	Potentially Significant Impact	Less-than- Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a 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 following public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.14 Public Services

- a. **No Impact.** Project construction and operation activities have the potential for accidents involving personal injury, fire, and spills/releases of materials stored onsite. In the event of such an emergency, local emergency service providers (fire and police protection) would be required to respond. Due to the short duration of construction, the Project would not result in the need for additional fire, police, or emergency services providers. (The potential for construction vehicles blocking roadways during construction is addressed in Section 3.16, Transportation/Traffic). During and after construction, the operation at the facility would not deviate from its existing operations. The two additional impoundments would not require additional employees and, therefore, would not result in an increased need for services of public facilities. Therefore, implementation of the Project would not require expansion of the existing local emergency services and would not impact response times as they are already prepared to respond to the existing facility.

XV. Recreation	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.15 Recreation

- a. **No Impact.** The Project would not increase the use of existing neighborhood and regional parks or other recreational facilities. No population growth, either direct or indirect, is associated with implementation of the Project. The Project would not increase demand for recreational amenities, nor would it interfere with existing recreational uses.
- b. **No Impact.** The Project would not include recreational facilities or require the construction or expansion of recreational facilities. Implementation of the Project includes improvements to an existing industrial facility and does not include the construction, expansion or removal of a recreational facility.

XVI. Transportation/Traffic	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Result in inadequate emergency access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.16 Transportation/Traffic

Local Setting

The Project vicinity is within an unincorporated rural area of San Bernardino County. Local roadways to the facility include Fairview Road and Community Boulevard. Highway 58 is the closest major roadway.

SR 58 (also called the Mojave-Barstow Highway and the Barstow/Bakersfield Highway) is the primary regional roadway in the project area. It originates east of the project area in Barstow at Interstate 15 (I-15) and extends west to Mojave and Bakersfield. Regionally, SR 58 provides a connection between Barstow, Mojave and Bakersfield. Locally, SR 58 is the main access route to the community of Hinkley

from both the east and west. In the vicinity of the project area, SR 58 is a two-lane highway with 11- to 12-foot lanes and 6- to 8-foot-wide shoulders. It also has several driveways and intersecting cross streets. The speed limit for the portion of the highway that runs through the project area is 60 miles per hour (San Bernardino County 2007). Within the project area, the only SR 58 intersection that is signalized is at Lenwood Road; other locations are stop-sign controlled. Table 3-9 shows average annual daily traffic (AADT) on SR 58 in the vicinity of the project area.

Table 3-9. Annual Average Daily Traffic on SR 58 in the Project Vicinity

Highway	Cross Street	Back AADT	Ahead AADT
SR 58	Harper Lake Road	9,700	10,000
SR 58	Lenwood Road	10,000	11,300

Source: Caltrans 2011.

AADT = annual average daily traffic (total traffic volume for the year divided by 365 days).

Back AADT = traffic south or west of the count location.

Ahead AADT = traffic north or east of the count location.

In 2009, CPUC (California Public Utilities Commission 2010) estimated that the level of service (LOS) at the intersections of SR 58/Harper Lake Road was LOS of B/C (~12,100 AADT) and at SR 58/Lenwood Road was LOS A (12,100 AADT). Traffic levels in 2011 were lower than those studied by CPUC in 2009. These levels of service are better than the County and Caltrans standard of LOS D.

As shown in Table 3-10, the existing roadways are not highly congested because of the rural nature of the project area.

Table 3-10. Average Daily Traffic on Local Access Roads

Road	Count Site	ADT
Hinkley Road	South of SR 58	282
Community Boulevard	East of Hinkley Road	321
	East of Lenwood Road	976

Source: San Bernardino County 2012b.

ADT = average daily traffic.

- a. **Less than Significant with Incorporated Mitigation.** The two additional impoundments do not require additional workers, so there would be no permanent increases in traffic from Project operation. There would be short-term construction related traffic including large vehicles on local roads to and from the Project area, and up to ten construction workers would commute to and from the site. Due to the rural nature of the Project area, the small number of vehicle trips associated with the Project, and the short duration of construction activities, construction related traffic would not result in a significant increase in traffic. However, the temporary increase in large vehicles on small local roadways could result in occasional delays or blocked roadways as trucks await access to the site.

This could be considered a conflict with County policies related to providing a safe and effective transportation system that provides adequate traffic movement (Goal D/CI 1 of the Desert Regional goals and policies of the County's circulation and Infrastructure Element). **Mitigation**

Measure TRA-1 would ensure this impact is less than significant by requiring a traffic control plan during construction.

Mitigation Measure TRA-1: Implement traffic control measures during construction. To minimize impacts on local surface streets in the project area, PG&E will ensure that construction contractors implement the following traffic control measures during project construction:

- On days with large truck traffic, use personnel as necessary to direct traffic and prevent vehicles from lining up on county roads and highways during construction.
 - Vehicles will not be allowed to block the roadway, resulting in an inadvertent temporary lane closure, while waiting to enter the Project area for longer than five minutes.
 - Emergency vehicle access will be maintained at all times, and there will be no road closures.
 - Maintain log entries whenever the above mitigation measure is implemented.
- b. **Less than Significant.** The Project would not conflict with the County's congestion management program because the Project would not result in a permanent traffic increase because no additional workers or other traffic would be required to operate the additional impoundments. Congestion associated with construction-related traffic is addressed under "a".
- c. **No Impact.** The Project would not result in a change in air traffic patterns because it would have no impact on any airports or airstrips or flight paths of overhead air craft.
- d. **No Impact.** The Project would not increase hazards because of a design feature or incompatible uses because the two additional impoundments would be located entirely within the existing Compressor Station facility and are considered a compatible use. Potential hazards associated with construction vehicles blocking access on local roadways is addressed under "a".
- e. **Less than Significant with Incorporated Mitigation.** The two additional impoundments would be within the existing Compressor Station facility and would not interfere with any emergency access. However, as described under "a", Project construction would result in a small increase in large vehicles on the roadway for a short period of time and thus a slight potential for blocked roadways while waiting to enter the Project area. This could potentially block an emergency vehicle using the roadway. **Mitigation Measure TRA-1** would reduce this impact to less than significant by ensuring emergency vehicle access is maintained and no roadways are closed.
- f. **No Impact.** The project would not conflict with County plans and policies regarding public transit, bicycle or pedestrian facilities because there would be no direct or indirect effect on such facilities. The Project area is in a rural area and would not generate additional workers.

XVII. Utilities and Service Systems	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.17 Utilities and Service System

- a. **Less than Significant.** The Project would not exceed RWQCB wastewater treatment requirements. As discussed in Chapters 1 and 2 and in Section 3.9, Hydrology and Water Quality, the Project consists of the construction of two additional Class II surface impoundments for management of facility derived wastewater and their operation and maintenance. The Revised RWD and Addendum (Cardno ENTRIX 2012a, 2012b) would be the source of revised facility WDRs issued by the Regional Board. The facility would comply with WDRs issued by the Regional Board. Implementation of the Operation and Maintenance Plan and the Monitoring and Reporting Program would prevent exceedances of the Regional Board wastewater treatment requirements.
- b. **Less than Significant.** The Project includes construction of two additional Class II surface impoundments for management of facility derived wastewater. This MND covers the effects

associated with construction, operation, and maintenance of the impoundments, and has presented mitigation measures that would be implemented to reduce potential impacts to a less-than-significant level. Therefore, the Project would not 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. **No Impact.** Project implementation would not require additional stormwater facilities. The facilities being constructed would allow for additional storage area for facility wastewater and stormwater.
- d. **No Impact.** The existing PG&E facility water wells that serve the existing Compressor Station facilities in the Project area would be sufficient to meet facility demand with construction of the two additional impoundments, which would hold wastewater and would not generate demand for additional water supply. During construction activities, water supply to workers will be provided by PG&E. No additional water supply wells would need to be constructed with implementation of the Project.
- e. **No Impact.** All wastewater generated at the existing facility is managed onsite. Potable water and water used in toilets and sinks is disposed of in onsite septic systems. Although temporary construction workers would use on-site septic system, there would be no additional permanent workers and thus no additional demand would be placed on a local wastewater treatment provider. The on-site septic system is located within the Compressor Station facility (Project area) on the north of the compressor station (Cardno ENTRIX 2012).
- f. **Less than Significant.** Project construction would generate solid waste from removing vegetation in Ponds 6R and 7R and from scrap pieces remaining after installation of the engineered HDPE liner. All solid waste generated during construction of the proposed surface impoundments would be transported offsite to the appropriate disposal facility dependent on waste classification. The Barstow Sanitary Landfill, located in Barstow is the closest landfill to the project area and has an 80,354,500-cubic-yard capacity. The Barstow Sanitary Landfill accepts agricultural, construction/demolition, industrial, mixed municipal, biosolids (sludge), and other designated waste. The Barstow Sanitary Landfill is expected to reach capacity by 2071 (California Department of Resources Recycling and Recovery 2010). Once operating, any solid waste generated by the two additional impoundments would be negligible, and there would be no additional employees generating solid waste.
- g. **No Impact.** The proposed Project involves the construction of two additional Class II surface impoundments for management of facility derived wastewater. The Revised ROWD and Addendum (Cardno ENTRIX 2012a, 2012b) propose to clean close Ponds 4, 5, 6R, and 7R and close Pond 8 as a Class II landfill to manage all residual waste. Closure of these facilities would comply with all federal, state, and local statutes and regulations related to solid waste (Cardno ENTRIX 2012a, 2102b) The project would generate minimal solid waste during operations and thus would comply with requirements for solid waste.

XVIII. Mandatory Findings of Significance	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Does the project have impacts that are individually limited but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.18 Mandatory Findings of Significance

- a. **Less than Significant Impact with Mitigation Incorporated.** The Project is not expected to threaten or reduce fish, or plant populations, but could adversely affect wildlife species identified as candidate, sensitive or special status species (refer to Section 3.4). Mitigation measures, such as pre-construction surveys, worker environmental awareness training, and construction monitoring, time-of-year restrictions, are included to protect biological resources including Mohave ground squirrel, desert tortoise, burrowing owl, and other endangered or protected species (refer to Mitigation Measures BIO-1 through BIO-6 in Section 3.4) would reduce impacts to a less than significant level.

The project is not expected to eliminate important examples of the major periods of California history or prehistory because none were identified in the Project area; however, excavation activities during construction could result in the discovery of previously unknown buried cultural or historical resources (refer to Section 3.5). Mitigation measures to stop work if resources are discovered and determine the potential need for protection are included to protect unknown cultural resources (refer to Mitigation Measure CUL-1 in Section 3.5).

Therefore, with the mitigation measures incorporated into the Project, the potential for the Project 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, substantially reduce the number or restrict the range

of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory would be less than significant.

- b. **Less than Significant Impact with Mitigation Incorporated.** The Project has the potential to result in incremental effects that, when viewed in connection with the effects of other projects, could be cumulatively considerable. Other projects include previously approved containment and remediation activities and the currently proposed Hinkley Groundwater Remediation Project (which expands the containment and remediation activities), conducted by PG&E to remediate groundwater contaminated with Cr[VI] that historically originated from the Compressor Station.

Potential cumulative effects include construction-related dust, GHG emissions, noise and traffic. Implementing Mitigation Measures AIR-1, GHG-1, NOI-1 and TRA-1 (described in Sections 3.3, 3.7, 3.12 and 3.16 above) would ensure project impacts are less than significant and do not result in a substantial contribution to cumulative effects.

Additionally, there is potential for cumulative effects related to groundwater and water quality. Large volumes of groundwater would be extracted as part of the Hinkley Groundwater Remediation Project, as described in the environmental impact report prepared for the project (ICF 2012). Following issuance of the existing WDRs (Board Order 6-97-82) adopted in 1997, pumping was close to the annual average of 30,000 gpd. However, over the years, pumping has been significantly reduced to account for less evaporation in the existing surface impoundments due to weather conditions and use of better cooling tower corrosion chemicals. Therefore, in recent years, pumping has been less than 30,000 on an annual average basis. The Project would allow PG&E to return to the permitted pumping rate of 30,000 gpm on a year-round basis, which would result in a minor increase in pumping rates compared to existing levels. However, the additional total annual volume of water required to operate the Compressor Station with the two new surface impoundments would result in a minimal impact on groundwater supplies, even with the simultaneous operation of the Hinkley Groundwater Remediation Project. Thus, the Project would not result in a substantial contribution to cumulative depletion of groundwater supplies. Further, the project includes a comprehensive Monitoring and Reporting program to protect groundwater resources and effectively determine whether water degradation is occurring (refer to Section 2.2 above).

Therefore, no adverse cumulative impact to the environment is anticipated.

- c. **Less than Significant Impact with Mitigation Incorporated.** This IS/MND evaluates potential environmental effects for 17 issue areas or resource topics to determine if there would be substantial adverse effects on human beings. Mitigation measures have been identified for potential impacts (described in Sections 3.3, 3.7, 3.12 and 3.16 above). Implementation of Mitigation Measures AIR-1, GHG-1, NOI-1 and TRA-1 would be required during construction, operation and maintenance of the Project and, thus, would ensure project impacts are less than significant and do not result in environmental effects that cause substantial adverse effects on human beings, either directly or indirectly.

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4.2 Personal Communications

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Schoemann, Sally. Senior Consultant / Civil and Environmental Engineering with Cardno ENTRIX. October 10, 2012 – email to Alexa La Plante titled *Response to ICF Questions re. Hinkley Pond 6R/7R Project*.

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Telephone Conversation with Danica Schaffer-Smith, Cardno ENTRIX.

Chapter 5

Report Preparation

This initial study was originally prepared by Cardno ENTRIX in June 2012 and was reviewed and revised by ICF International (formerly Jones & Stokes) under Lahontan Water Board direction.

5.1 Cardno ENTRIX

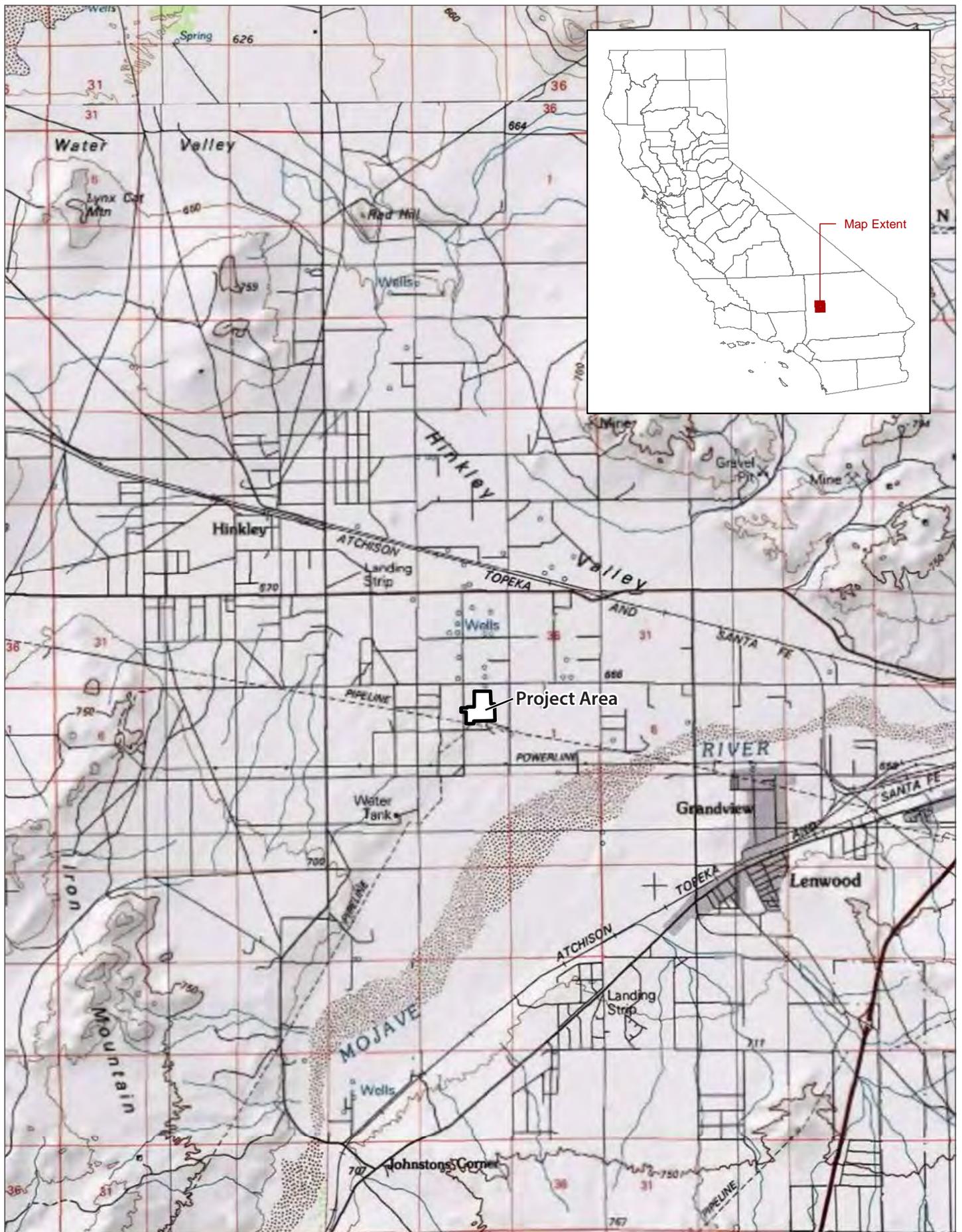
Project Manager	Sarah Schoemann, P.E.
CEQA Senior Reviewer/Author	Brenda Peters
Aesthetics	Erin DeVine, P.G.
Air Quality	Bradford Boyes
Biological Resources	Richard Williams / Robert Knutson
Cultural Resources	John Nadolski
Hazards and Hazardous Materials	Sarah F. Schoemann, P.E.
Hydrology/Water Quality	Sarah F. Schoemann, P.E.
Land Use	Erin DeVine, P.G.
Noise	Erin DeVine, P.G.
Recreation	Erin DeVine, P.G.
Traffic	Erin DeVine, P.G.
Utilities	Erin DeVine, P.G.

5.2 ICF International

Project Manager	Alexa La Plante
Project Director/Senior Reviewer	Kate Giberson
CEQA Advisor/Reviewer	Rich Walter
Aesthetics	Alexa La Plante
Agricultural and Forest Resources	Alexa La Plante
Air Quality	Matthew McFalls
Biological Resources	Mikael Romich

Cultural Resources	Joanne Grant
Geology and Soils	Alexa La Plante
Greenhouse Gas Emissions	Matthew McFalls
Hazards and Hazardous Materials	Alexa La Plante
Hydrology and Water Quality	Alexa La Plante
Noise	Alexa La Plante
Population and Housing	Alexa La Plante
Public Services	Alexa La Plante
Transportation/Traffic	Alexa La Plante
Utilities and Service Systems	Alexa La Plante
Mandatory Findings of Significance	Kate Giberson
Graphics	Tim Messick

Figures



Sources: USGS 1982, Cardno ENTRIX.

Pacific Gas & Electric

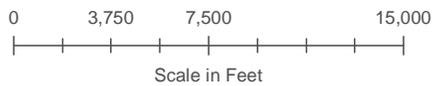
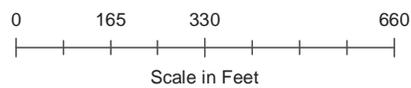


FIGURE 2-1

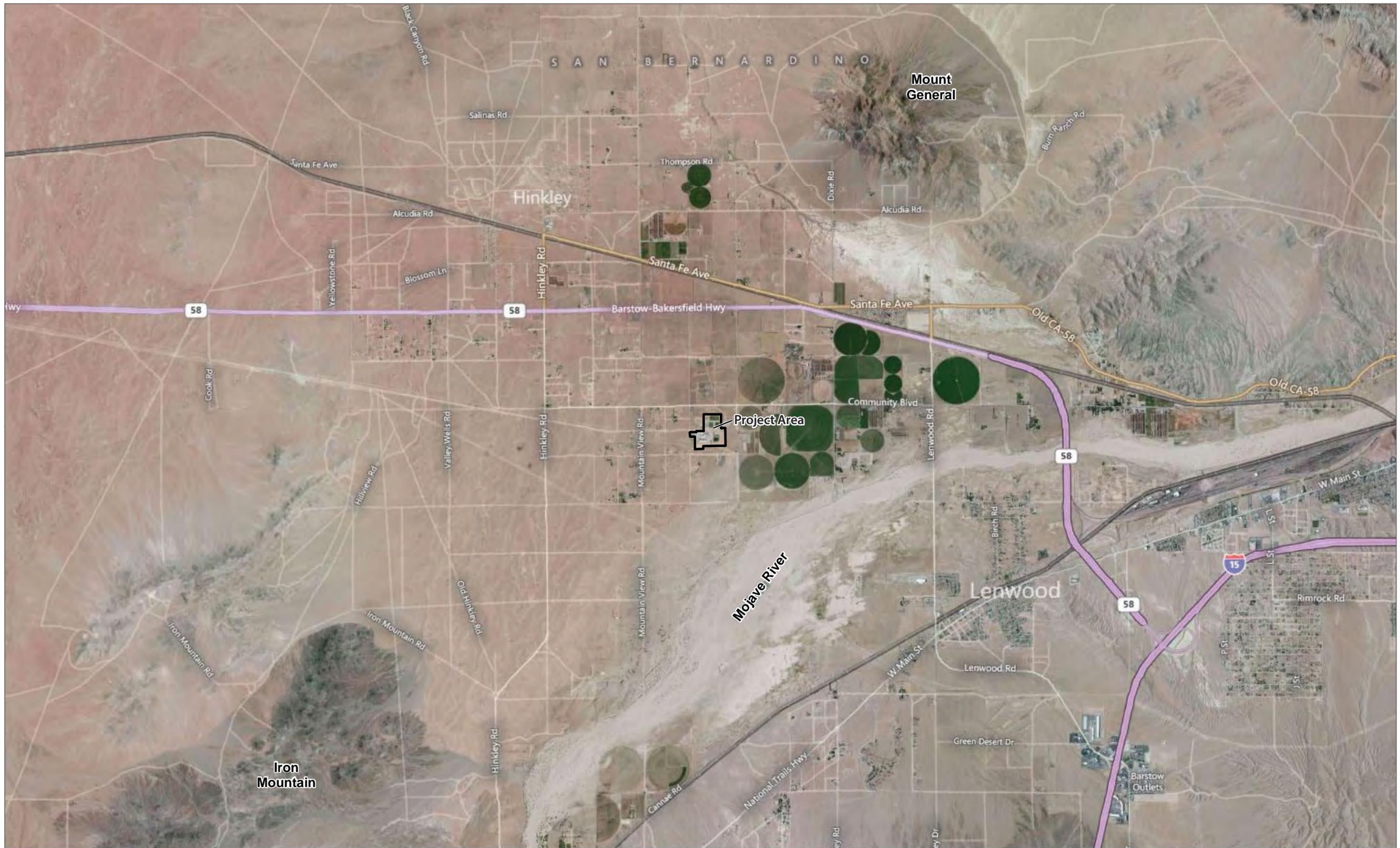
Project Vicinity
Hinkley Compressor Station
Hinkley, CA



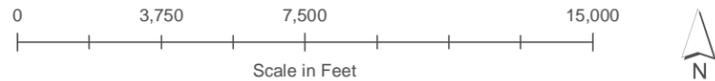
Sources: NAIP 2011, Cardno ENTRIX.



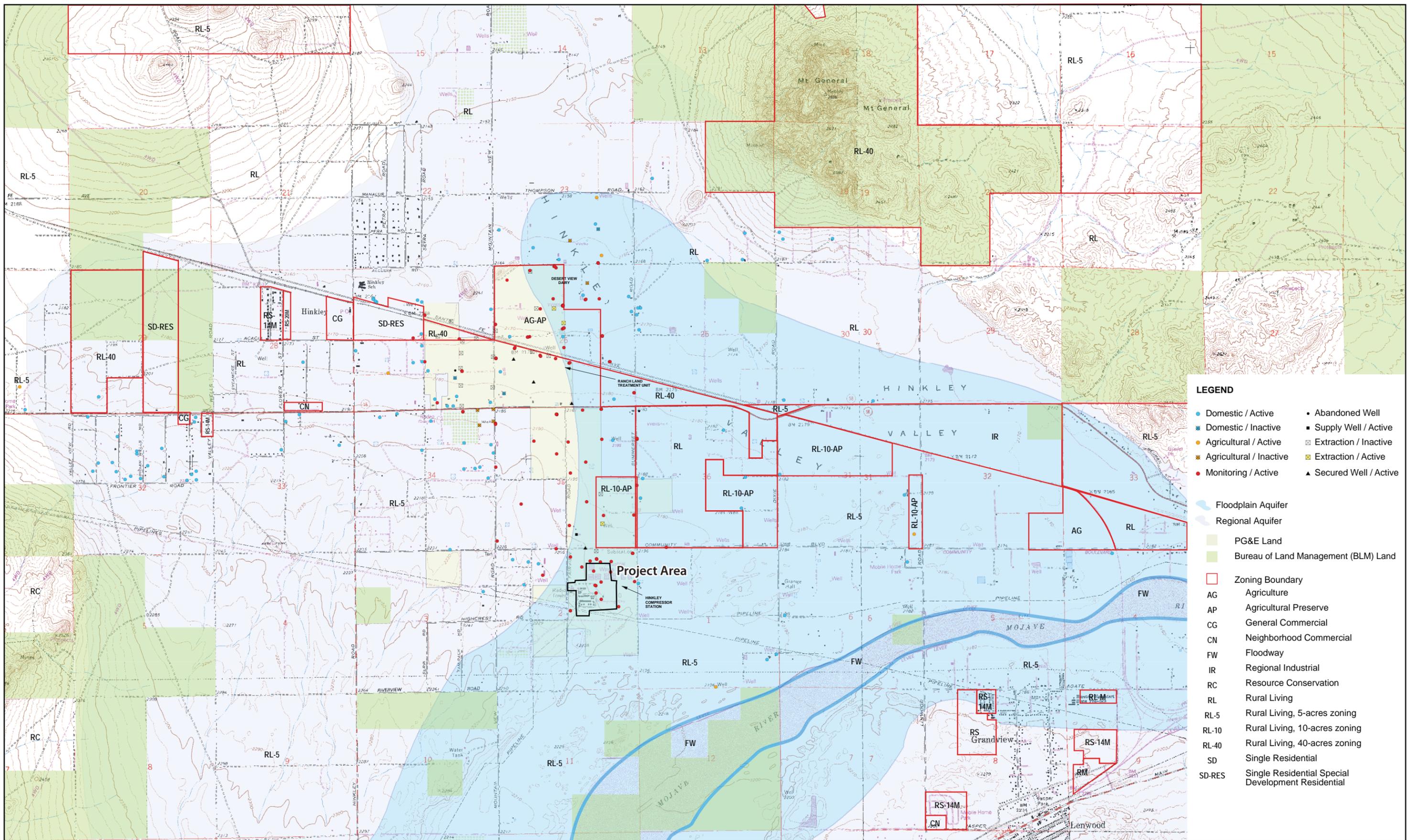
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FIGURE 2-2
Project Area
 Hinkley Compressor Station
 Hinkley, CA



Source: Cardno ENTRIX.



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FIGURE 3-1
 Geographic Features in the Hinkley Valley
 Hinkley Compressor Station
 Hinkley, CA



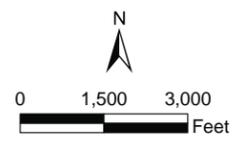
LEGEND

- Domestic / Active
- Domestic / Inactive
- Agricultural / Active
- Agricultural / Inactive
- Monitoring / Active
- Abandoned Well
- Supply Well / Active
- ⊠ Extraction / Inactive
- ⊠ Extraction / Active
- ▲ Secured Well / Active

- Light Blue Area: Floodplain Aquifer
- Light Blue Area: Regional Aquifer
- Light Green Area: PG&E Land
- Light Green Area: Bureau of Land Management (BLM) Land

- Red Outline: Zoning Boundary
- AG: Agriculture
- AP: Agricultural Preserve
- CG: General Commercial
- CN: Neighborhood Commercial
- FW: Floodway
- IR: Regional Industrial
- RC: Resource Conservation
- RL: Rural Living
- RL-5: Rural Living, 5-acres zoning
- RL-10: Rural Living, 10-acres zoning
- RL-40: Rural Living, 40-acres zoning
- SD: Single Residential
- SD-RES: Single Residential Special Development Residential

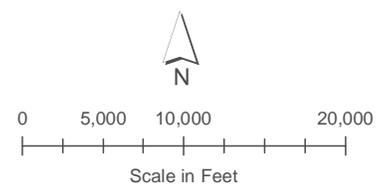
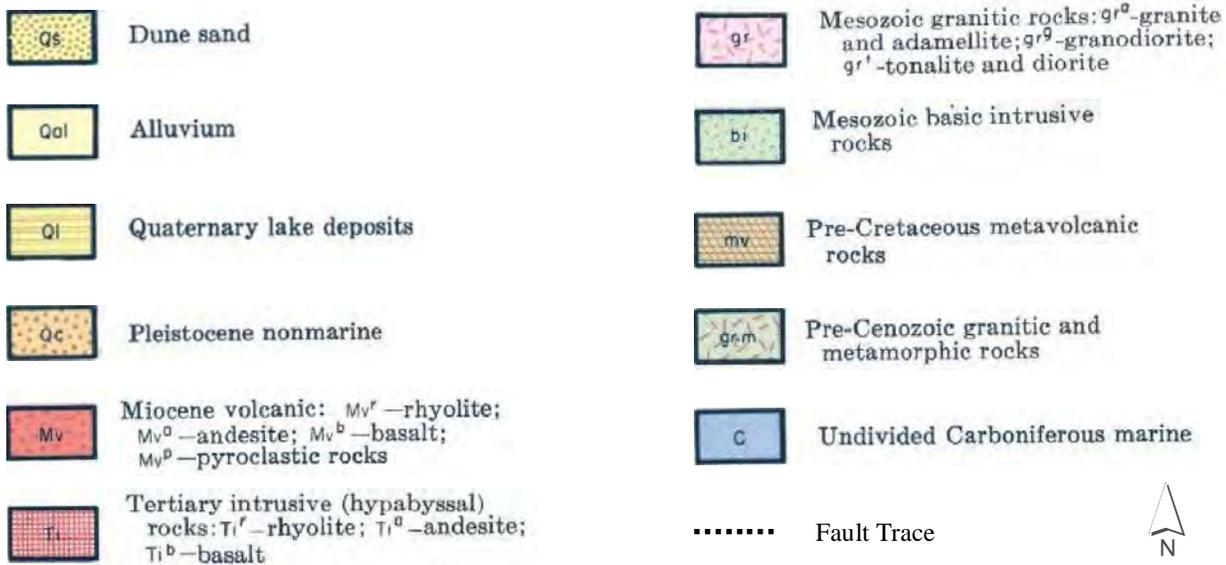
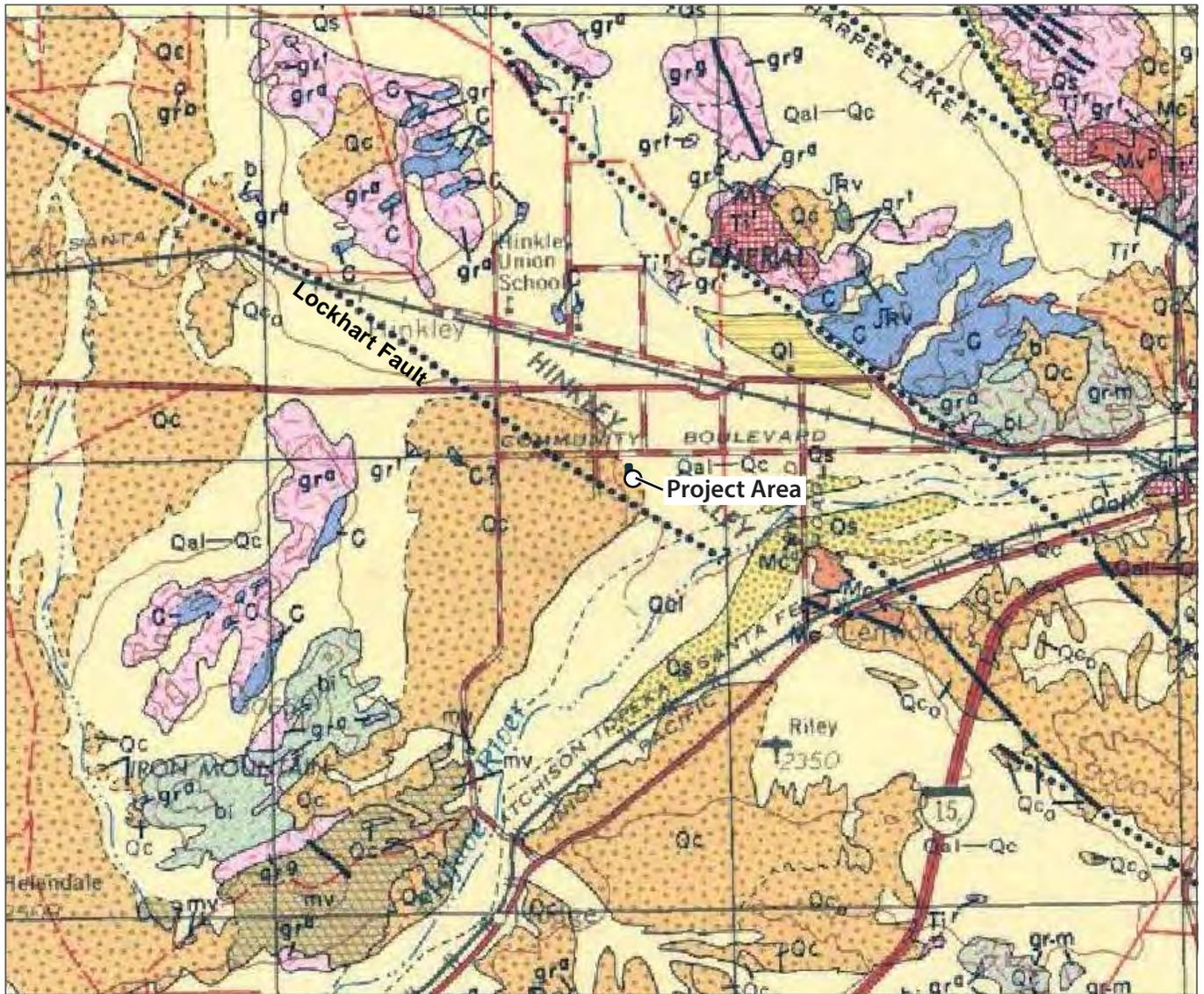
Sources: San Bernardino County 2007, Cardo ENTRIX.



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FIGURE 3-2

Topography and Land Use
in the Hinkley Valley
Hinkley Compressor Station
Hinkley, CA

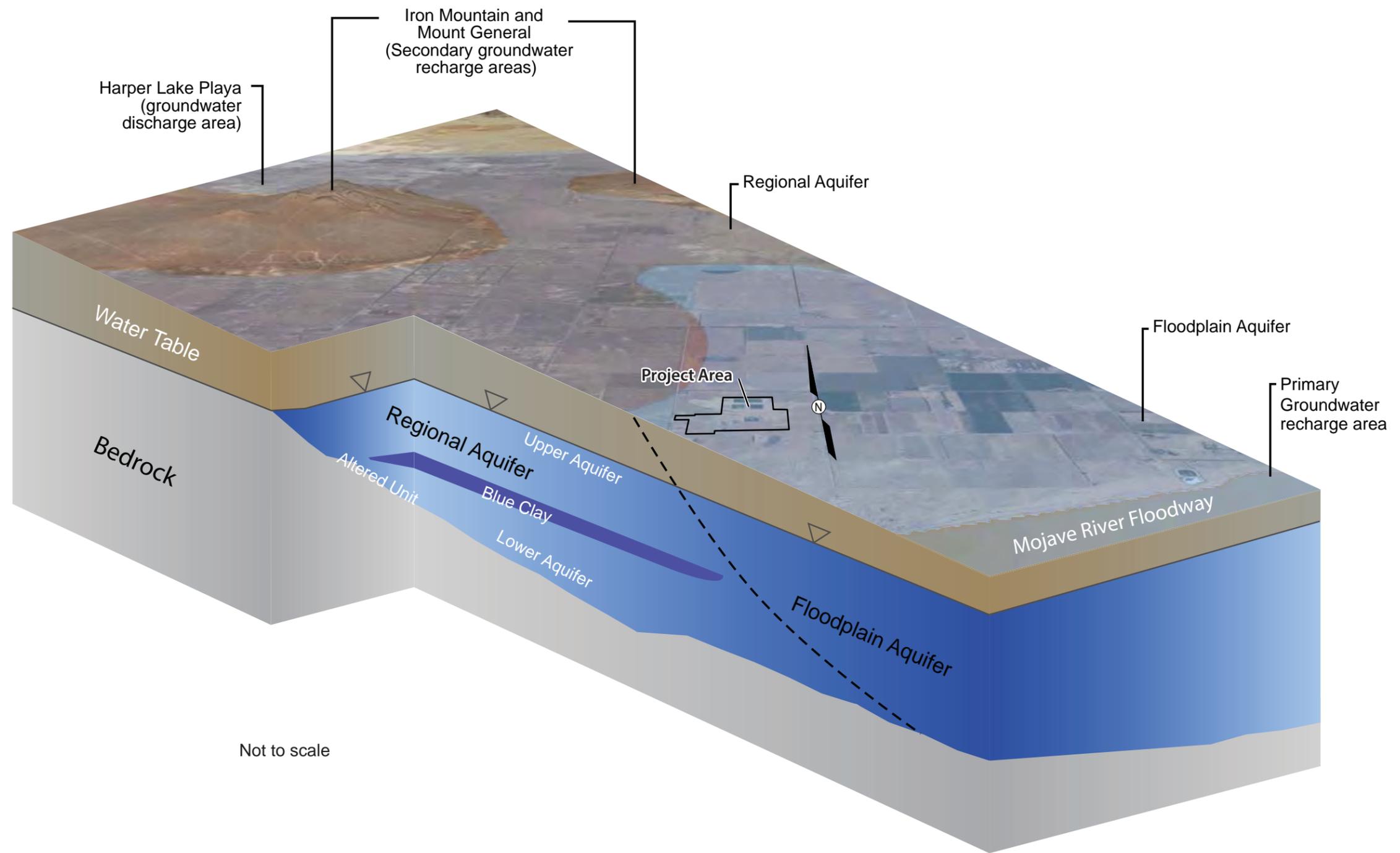


Sources: USGS 1968, Cardno ENTRIX.

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FIGURE 3-4

Regional Geologic Setting
Hinkley Compressor Station
Hinkley, CA

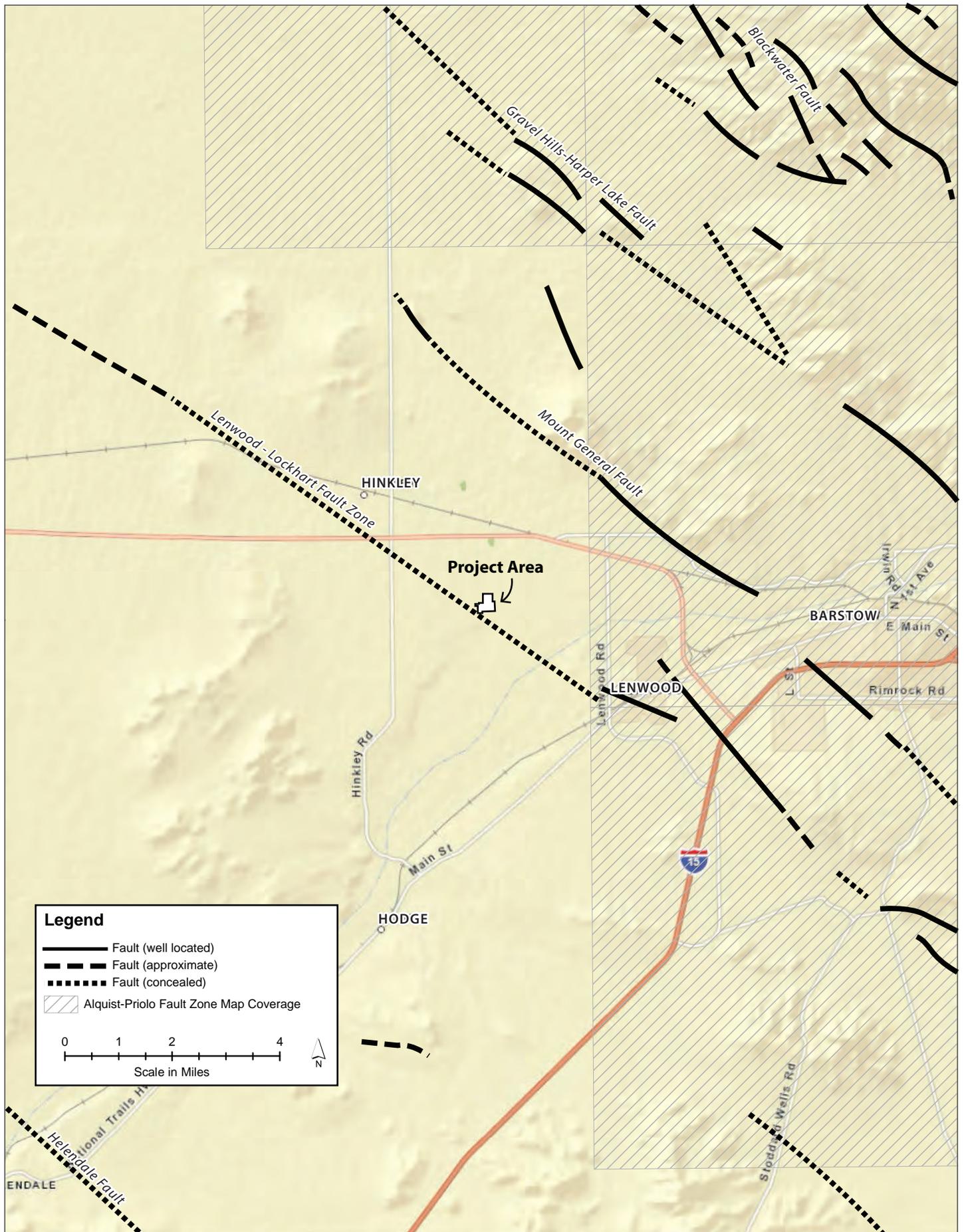


Source: PG&E 2007, Cardno ENTRIX.

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FIGURE 3-5

**Generalized Conceptual Diagram of Local Geology
and Groundwater in the Hinkley Valley**
Hinkley Compressor Station
Hinkley, CA

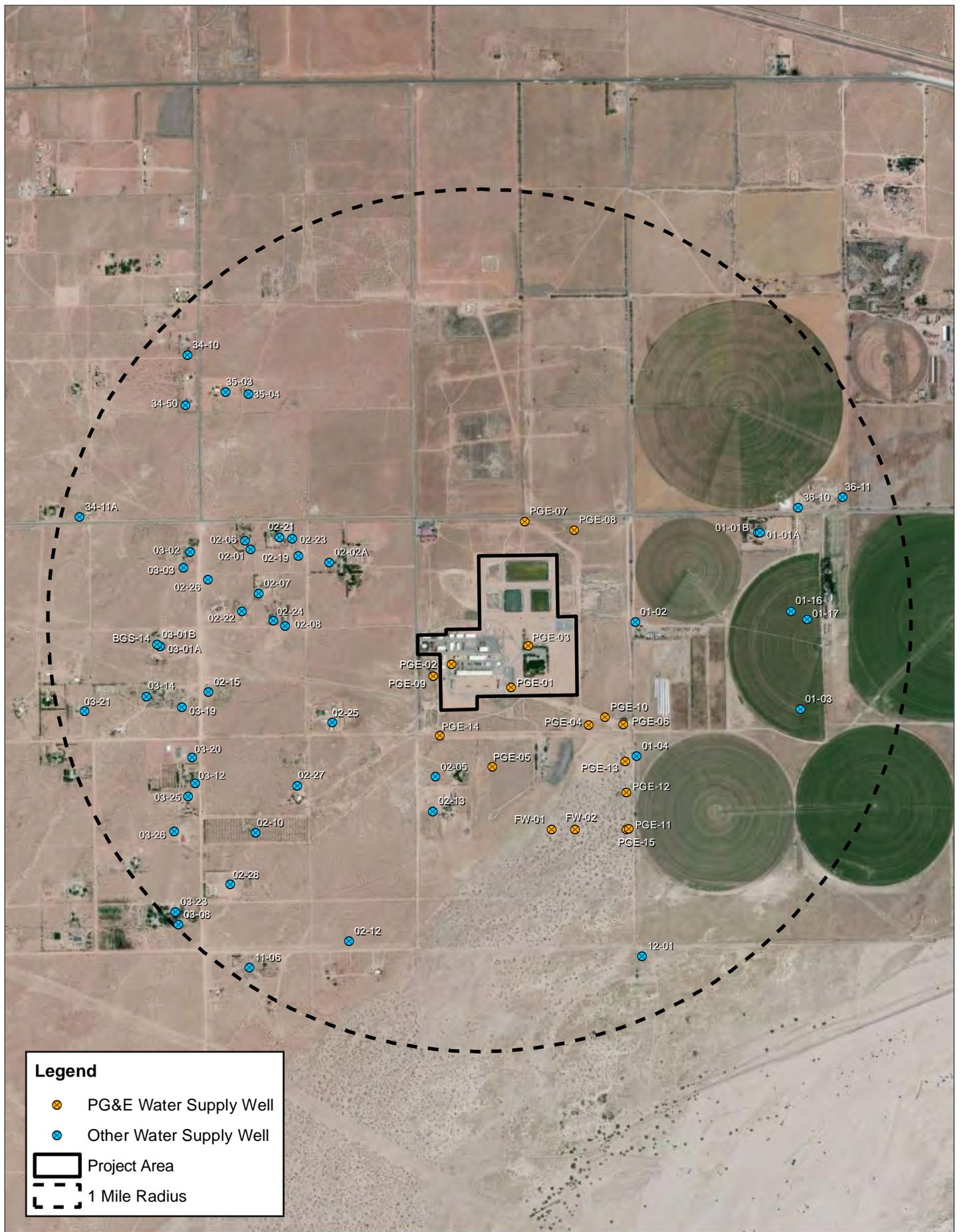


Sources: Base map: Cardno ENTRIX. Faults: California Department of Conservation 2010.

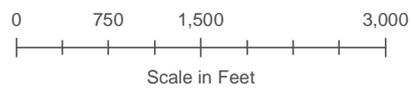
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FIGURE 3-6

Geologic Faults in the Hinkley Valley
 Hinkley Compressor Station
 Hinkley, CA



Source: Cardno ENTRIX.



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FIGURE 3-7
 Water Supply Wells within 1 Mile Radius
 Hinkley Compressor Station
 Hinkley, CA

Appendix A
Air Quality Emissions Calculations

ICF REVISIONS TO ONROAD CALCULATIONS, DAILY

	Daily VMT	Pounds per Day									
		ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O	CO2e
Pickup Truck/SUV	160	0.0457917	1.254165	0.160689	0.0015287	0.0009582	0.0008622	151.01891	0.016	0.016	156.31491
Semi Truck w/Flatbed Trailer (equipment)	120	0.1457267	0.6919051	3.0882906	0.0041536	0.1786514	0.1499515	435.36798	0.012	0.012	439.33998
Water Truck	10	0.0121439	0.0576588	0.2573575	0.0003461	0.0148876	0.012496	36.280665	0.001	0.001	36.611665
Pickup Truck/SUV	320	0.0915833	2.5083301	0.321378	0.0030574	0.0019165	0.0017245	302.03782	0.032	0.032	312.62982
Dump Truck (rock)	80	0.0971511	0.4612701	2.0588604	0.0027691	0.1191009	0.0999677	290.24532	0.008	0.008	292.89332
Semi Truck w/Flatbed Trailer (GCL)	2600	3.1574123	14.991278	66.912963	0.089995	3.8707797	3.2489487	9432.973	0.26	0.26	9519.033
Semi Truck w/Flatbed Trailer (HDPE)	1600	1.9430229	9.2254018	41.177208	0.0553815	2.3820183	1.999353	5804.9065	0.16	0.16	5857.8665
Semi Truck w/Flatbed Trailer (equipment)	200	0.2428779	1.1531752	5.147151	0.0069227	0.2977523	0.2499191	725.61331	0.02	0.02	732.23331
Water Truck	10	0.0121439	0.0576588	0.2573575	0.0003461	0.0148876	0.012496	36.280665	0.001	0.001	36.611665
Pickup Truck/SUV	160	0.0457917	1.254165	0.160689	0.0015287	0.0009582	0.0008622	151.01891	0.016	0.016	156.31491
Haul Truck (waste materials)	40	0.0485756	0.230635	1.0294302	0.0013845	0.0595505	0.0499838	145.12266	0.004	0.004	146.44666
Semi Truck w/Box Trailer (piping)	240	0.2914534	1.3838103	6.1765812	0.0083072	0.3573027	0.299903	870.73597	0.024	0.024	878.67997
Semi Truck w/Flatbed Trailer (equipment)	40	0.0485756	0.230635	1.0294302	0.0013845	0.0595505	0.0499838	145.12266	0.004	0.004	146.44666
Water Truck	10	0.0121439	0.0576588	0.2573575	0.0003461	0.0148876	0.012496	36.280665	0.001	0.001	36.611665
Maximum Daily Emissions, pounds (Phase 1, onsite) - from ENTRIX'S CALCULATIONS		2.96	13.21	18.51	0.03	1.19	1.01	2363	0.25	0.13	2409
Maximum Daily Emissions, pounds (Phase 2, onsite) - from ENTRIX'S CALCULATIONS		1.46	8.05	9.41	0.02	0.65	0.55	1468	0.12	0.08	1496
Maximum Daily Emissions, pounds (Phase 3, onsite) - from ENTRIX'S CALCULATIONS		0.88	4.8	6.23	0.01	0.44	0.37	969	0.07	0.05	986
Maximum Daily Emissions, pounds (Phase 1, offsite)		0.2036623	2.0037289	3.5063372	0.0060284	0.1944972	0.1633097	622.66756	0.029	0.029	632.26656
Maximum Daily Emissions, pounds (Phase 2, offsite)		5.5441914	28.397114	115.87492	0.1584718	6.6864554	5.6124089	16592.057	0.481	0.481	16751.268
Maximum Daily Emissions, pounds (Phase 3, offsite)		0.4465401	3.1569042	8.6534881	0.0129511	0.4922495	0.4132288	1348.2809	0.049	0.049	1364.4999
Maximum Daily Emissions, pounds (All Phases, onsite)		2.96	13.21	18.51	0.03	1.19	1.01	2363	0.25	0.13	2409
Maximum Daily Emissions, pounds (All Phases, offsite)		5.5441914	28.397114	115.87492	0.1584718	6.6864554	5.6124089	16592.057	0.481	0.481	16751.268
TOTAL		8.50	41.61	134.38	0.19	7.88	6.62	18955.06	0.73	0.61	19160.27
MDAQMD Thresholds		137	548	137	137	82	82	--	--	--	548,000

ICF REVISIONS TO THE CONSTRUCTION EMISSIONS ANALYSIS

EMFAC 2011 OUTPUT

Obtained from: http://www.arb.ca.gov/jpub/webapp/EMFAC2011WebApp/rateSelectionPage_1.jsp

EMFAC 2011		worker trips										all other trips (HHDT in EMFAC 2007)										
2013 Estimated Annual Emission Rates																						
EMFAC 2011 Vehicle Categories																						
San Bernardino COUNTY																						
Mojave Desert AIR BASIN																						
Mojave Desert AQMD																						
Area	CalYr	Season	Veh	Fuel	MdlYr	Speed (Miles/hr)	Pop (Vehicles)	VMT (Miles/day)	Trips (Trips/day)	VMT% by type	ROG_RUNEX (gms/mile)	CO_RUNEX (gms/mile)	NOX_RUNEX (gms/mile)	CO2_RUNEX (gms/mile)	CO2_RUNEX(Pa) (gms/mile)	PM10_RUNEX (gms/mile)	PM10_PMTW (gms/mile)	PM10_PMBW (gms/mile)	PM2_5_RUNEX (gms/mile)	PM2_5_PMTW (gms/mile)	PM2_5_PMBW (gms/mile)	SOX_RUNEX (gms/mile)
San Bernardino (MD)	2013 Annual	LDA	GAS	AllMyr	AllSpeeds	147858.1898	1.21E+07	930616.9532	0	0.996	0.078594711	2.272148892	0.225139203	339.1816371	310.7756249	0.00190715	0.007999959	0.036749814	0.001712688	0.001999999	0.015749919	0.003424217
San Bernardino (MD)	2013 Annual	LDA	DSL	AllMyr	AllSpeeds	518.0067803	39085.04439	3004.555263	0	0.0032	0.049143332	0.250828826	0.760404218	395.1250836	351.5346814	0.036241724	0.007999959	0.036749815	0.033342387	0.001999999	0.015749992	0.003772109
San Bernardino (MD)	2013 Annual	LDT1	GAS	AllMyr	AllSpeeds	24174.51219	1916003.057	146844.5035	0	0.9988	0.234088079	5.551362071	0.620580168	390.9298338	358.2053625	0.004606806	0.007999959	0.036749816	0.004116784	0.001999999	0.015749919	0.003997459
San Bernardino (MD)	2013 Annual	LDT1	DSL	AllMyr	AllSpeeds	32.38828241	2279.055686	172.3456144	0	0.0012	0.074545917	0.358115157	0.940749492	394.3066094	350.14718	0.061607615	0.007999959	0.036749815	0.056679008	0.001999999	0.015749992	0.003764324
San Bernardino (MD)	2013 Annual	LDT2	GAS	AllMyr	AllSpeeds	57884.70032	4879055.057	363208.9125	0	0.9996	0.104398122	3.12581218	0.44429511	462.5649732	432.0553771	0.002225944	0.007999959	0.036749815	0.002005784	0.001999999	0.015749992	0.004670165
San Bernardino (MD)	2013 Annual	LDT2	DSL	AllMyr	AllSpeeds	26.8213501	2129.16447	152.144498	0	0.0004	0.058291393	0.298449709	0.952875496	390.9185276	353.1106697	0.046466911	0.007999958	0.036749815	0.04275163	0.001999999	0.015749992	0.003731951
San Bernardino (MD)	2013 Annual	LHD1	GAS	AllMyr	AllSpeeds	11871.55643	709520.5099	176868.4955	0		0.102593548	3.161566752	0.918218102	692.8735779	685.9448421	0.001155292	0.007999958	0.036749814	0.00106473	0.001999999	0.015749919	0.006969354
San Bernardino (MD)	2013 Annual	LHD1	DSL	AllMyr	AllSpeeds	8390.420003	511023.9191	105540.923	0		0.142165336	0.910961461	7.061800909	523.4420372	518.2076168	0.030380091	0.011999938	0.0764396	0.027949685	0.002999985	0.032759828	0.004997102
San Bernardino (MD)	2013 Annual	LHD2	GAS	AllMyr	AllSpeeds	890.7590981	52442.46943	13270.98237	0		0.080792782	2.99738789	0.74414857	692.8736341	685.9448978	0.00101892	0.007999958	0.036749814	9.10E-04	0.001999999	0.015749919	0.006966008
San Bernardino (MD)	2013 Annual	LHD2	DSL	AllMyr	AllSpeeds	2627.562892	157841.703	33051.43232	0		0.135096309	0.88653545	6.913991686	521.8959053	516.6796462	0.028760342	0.011999938	0.08917953	0.026459514	0.002999984	0.038219793	0.004982342
San Bernardino (MD)	2013 Annual	MCY	GAS	AllMyr	AllSpeeds	11903.01418	271343.3487	23803.64622	0		3.649265511	46.20012908	1.397074176	157.9598286	156.3802303	0.001086633	0.007999518	0.036747065	8.65E-04	0.001999988	0.015748741	0.002419293
San Bernardino (MD)	2013 Annual	MDV	GAS	AllMyr	AllSpeeds	56927.33426	4330166.78	357445.6919	0	0.8871	0.115499274	3.704620914	0.596721891	585.4817829	556.6317071	0.00214566	0.007999959	0.036749814	0.001958035	0.001999999	0.015749919	0.005906731
San Bernardino (MD)	2013 Annual	MDV	DSL	AllMyr	AllSpeeds	48.80408629	3733.126831	285.9122275	0	0.0008	0.040928139	0.217306511	0.628349262	401.4737906	375.244327	0.030310713	0.007999959	0.036749816	0.030369857	0.001999999	0.015749919	0.003827718
San Bernardino (MD)	2013 Annual	MH	GAS	AllMyr	AllSpeeds	4602.188044	80643.29651	460.4029282	0		0.1809648	10.57085211	1.564847723	689.696911	682.7997241	0.001960690	0.007999958	0.036749813	0.001748315	0.001999999	0.015749919	0.00705669
San Bernardino (MD)	2013 Annual	MH	DSL	AllMyr	AllSpeeds	821.1792587	14495.8215	82.11793338	0		0.180329958	0.64579157	7.659797064	1069.3508	1058.657292	0.288794581	0.011999938	0.130339314	0.265691022	0.002999985	0.055859694	0.010208686
San Bernardino (MD)	2013 Annual	Motor Coach	GAS	AllMyr	AllSpeeds	27.80253164	4017.103751	0	0		0.267439995	1.64486091	10.39421904	1647.995487	1631.515532	0.391373295	0.011999937	0.130339319	0.360398312	0.002999984	0.055859708	0.015722647
San Bernardino (MD)	2013 Annual	OBUS	DSL	AllMyr	AllSpeeds	175.7659073	16712.88629	8026.92335	0		0.218885451	8.144745361	3.232322568	689.6966205	682.7996453	5.76E-04	0.007999958	0.036749815	5.31E-04	0.001999999	0.015749919	0.007109398
San Bernardino (MD)	2013 Annual	PTO	DSL	AllMyr	AllSpeeds	0	0	4362.511027	0		0.737651665	3.478027216	13.9549913	2142.780523	2121.352718	0.408895507	0	0	0.376266667	0	0	0.020443128
San Bernardino (MD)	2013 Annual	SBUS	GAS	AllMyr	AllSpeeds	35.04804816	2833.369135	140.1922008	0		3.976381355	55.56129058	3.627873704	742.1199385	734.6987391	0.01585284	0.007999959	0.036749815	0.0103034924	0.001999999	0.015749992	0.004063255
San Bernardino (MD)	2013 Annual	SBUS	DSL	AllMyr	AllSpeeds	356.244338	11397.9275	0	0		0.404602247	2.129086602	10.73759136	1286.165049	1273.303398	0.235710308	0.011999937	0.744796018	0.216853484	0.002999984	0.319198332	0.012270616
San Bernardino (MD)	2013 Annual	T6 Ag	DSL	AllMyr	AllSpeeds	34.84925784	1172.860622	0	0		0.441814498	1.323907803	8.462439437	1073.620695	1068.848488	0.437212158	0.011999937	0.130339319	0.402234596	0.002999984	0.055859708	0.010242843
San Bernardino (MD)	2013 Annual	T6 CAIRP heavy	DSL	AllMyr	AllSpeeds	21.34741052	1330.617883	0	0		0.156807461	6.97095037	3.346429052	1063.670158	1053.033457	0.19408616	0.011999937	0.130339319	0.179039927	0.002999984	0.055859708	0.010147911
San Bernardino (MD)	2013 Annual	T6 CAIRP small	DSL	AllMyr	AllSpeeds	62.92291967	4388.283628	0	0		0.140929173	7.40191418	3.748418463	1060.446784	1049.842316	0.203001135	0.011999937	0.130339319	0.186761044	0.002999984	0.055859708	0.010171158
San Bernardino (MD)	2013 Annual	T6 instate constructi	DSL	AllMyr	AllSpeeds	148.7958959	7664.933442	0	0		0.243398355	1.055590175	8.700628515	1066.451444	1055.78693	0.337595089	0.011999937	0.130339319	0.310587482	0.002999984	0.055859708	0.010174445
San Bernardino (MD)	2013 Annual	T6 instate constructi	DSL	AllMyr	AllSpeeds	305.2968682	19193.85541	0	0		0.243960511	1.980639172	5.844206509	1061.888087	1051.269206	0.311721177	0.011999937	0.130339319	0.286783483	0.002999984	0.055859708	0.010130909
San Bernardino (MD)	2013 Annual	T6 instate heavy	DSL	AllMyr	AllSpeeds	422.570803	22106.5723	0	0		0.331925454	1.028734506	8.375923574	1065.646555	1054.990809	0.326379416	0.011999937	0.130339319	0.300260963	0.002999984	0.055859708	0.010166766
San Bernardino (MD)	2013 Annual	T6 instate small	DSL	AllMyr	AllSpeeds	888.2879909	56706.58643	0	0		0.231524833	0.941056365	5.519464423	1060.963032	1050.353669	0.295026474	0.011999937	0.130339319	0.271424356	0.002999984	0.055859708	0.010122086
San Bernardino (MD)	2013 Annual	T6 OOS heavy	DSL	AllMyr	AllSpeeds	12.23891555	762.9019348	0	0		0.156807461	6.97095037	3.346429053	1063.670158	1053.033457	0.19408616	0.011999937	0.130339319	0.179039927	0.002999984	0.055859708	0.010147911
San Bernardino (MD)	2013 Annual	T6 OOS small	DSL	AllMyr	AllSpeeds	36.07502179	251.85945	0	0		0.140929173	7.40191418	3.748418464	1060.446784	1049.842316	0.203001135	0.011999937	0.130339319	0.186761044	0.002999984	0.055859708	0.010171158
San Bernardino (MD)	2013 Annual	T6 Public	DSL	AllMyr	AllSpeeds	118.7255888	2102.772724	0	0		0.05081007	2.029840086	8.117032961	1085.195364	1074.34341	0.05474457	0.011999937	0.130339319	0.05306214	0.002999984	0.055859708	0.010353271
San Bernardino (MD)	2013 Annual	T6 utility	DSL	AllMyr	AllSpeeds	35.14963177	692.0462894	0	0		0.117505139	5.07657903	5.595668991	1061.850409	1051.236498	0.194457481	0.011999937	0.130339319	0.178900883	0.002999984	0.055859708	0.010130594
San Bernardino (MD)	2013 Annual	T6TS	GAS	AllMyr	AllSpeeds	492.9380201	43949.77533	9862.70475	0		0.267779589	9.37428108	2.534113572	689.6966254	682.7996591	0.001091737	0.007999958	0.036749812	9.68E-04	0.001999999	0.015749919	0.007040641
San Bernardino (MD)	2013 Annual	T7 Ag	DSL	AllMyr	AllSpeeds	44.81387558	3100.231863	0	0		0.610704878	2.575667157	14.58187935	1660.863428	1644.254794	0.010321133	0.035999812	0.061739677	0.553215443	0.008999953	0.026459862	0.015845414
San Bernardino (MD)	2013 Annual	T7 CAIRP	DSL	AllMyr	AllSpeeds	2774.92647	63487.2491	0	0		0.31988349	3.272787965	8.105015996	1644.212769	1627.770642	0.478359914	0.03599812	0.061739677	0.44085601	0.008999953	0.026459862	0.01586558
San Bernardino (MD)	2013 Annual	T7 CAIRP constructi	DSL	AllMyr	AllSpeeds	23.58477547	5587.60922	0	0		0.337628589	2.363806276	8.290574002	1644.927988	1628.478708	0.3884403	0.03599812	0.061739677	0.440978098	0.008999953	0.026459862	0.015693382
San Bernardino (MD)	2013 Annual	T7 NNOOS	DSL	AllMyr	AllSpeeds	2683.380617	714224.4236	0	0		0.193208738	1.53901779	4.458785213	1633.170591	1616.838885	0.25763526	0.03599812	0.061739677	0.237024439	0.008999953	0.026459862	0.015581211
San Bernardino (MD)	2013 Annual	T7 NOOS	DSL	AllMyr	AllSpeeds	1010.557707	231209.8031	0	0		0.3											

Appendix B
**Protocol Trapping Surveys for Mohave Ground
Squirrel—Hinkley Compressor Station,
Hinkley, California**

**Mohave Ground Squirrel
(*Xerospermophilus mohavensis*) Trapping Results for
“Hinkley Compressor Station - Ponds 6R & 7R”
County of San Bernardino,
Town of Hinkley,
State of California**

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June 27, 2012

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Introduction:

At the request of Cardno ENTRIX, Phoenix Biological Consulting conducted a Mohave ground squirrel (MGS; *Xerospermophilus mohavensis*) trapping survey within a project site located near the city limits of Hinkley, San Bernardino County, State of California. The project proponent, Pacific Gas and Electric Company (PG&E), proposes to construct and operate two Class II surface impoundments (Ponds 6R and 7R) for evaporation of wastewater generated at the Hinkley Compressor Station. Protocol trapping, using the January 2003 Survey Guidelines, was performed to determine presence/absence of MGS at the proposed sites for Ponds 6R and 7R. The principal investigator, Ryan Young, supervised the field work which was performed by an independent field investigator, Cathy Halley, through a Memorandum of Understanding (MOU) between the California Department of Fish and Game (CDFG) and Phoenix Biological Consulting. The visual survey was conducted on April 15th by Ryan Young. The trapping survey schedule consisted of three trapping sessions: 1) April 23rd to 27th; 2) May 19th to 23rd; and 3) June 15th to 19th (Table 1). The results of the visual survey and trapping sessions were negative for MGS.

Location:

The site is located at the southeast corner of Fairview Road and Community Blvd and north of the Mojave River. The site is situated within the NW ¼, NE ¼, Section 2, Township 10 North, Range 3 West, San Bernardino Meridian, Hinkley Quadrangle 7.5 Minute Series (Topographic) Map, County of San Bernardino, State of California (Table 2; Figure 3).

Table 1: Trapping Schedule

Trap Session	First	Second	Third
	04/23/2012 to 04/27/2012	05/19/2012 to 05/23/2012	06/15/2012 to 06/19/2012
Trap Hours	57.50 hrs	36.50 hrs	35.50 hrs

Site Characterization and Current Land Use:

The current land use within the site consists of a compressor station and evaporation ponds. The vegetation within the ponds, that are not being used, is characterized as highly disturbed saltbush scrub vegetation within both ponds 6R & 7R (Figures 1 & 2). The adjacent land use consists of saltbush scrub. PG&E operates a compressor station and evaporation ponds within the survey area. The topography consists of level terrain except within the ponds. The soils consist of silty-clay with a moderate alkaline component. The elevation of site is approximately 2,199 feet.

The predominant perennial plant species within the ponds is Shadscale (*Atriplex confertifolia*). The predominant annual plant species encountered were Devil's lettuce (*Amsinkia tessellata*) and Russian thistle (*Salsola tragus*) (Table 4).

No off-highway-vehicle (OHV) use was detected during the trapping events. No feral dogs were sighted on or near the sight. Several ravens were detected each trapping day.

Mohave Ground Squirrel Natural History

The Mohave ground squirrel is small, grayish, diurnal squirrel that is currently listed under the California Endangered Species Act as a threatened species. The CDFG is the responsible agency that provides oversight through the California Environmental Quality Act (CEQA) for project related activities.

MGS occur in the western half of the Mojave Desert. Its historical range encompasses Antelope Valley to Lucerne Valley, in the south. MGS occurrences in the southern range are very rare. The northern limits of the range are near Owens Dry Lake bed and through China Lake Naval Weapons Station and portions of Death Valley National Park. The eastern limits extend to Barstow and south along the Mojave River. MGS are dormant in the fall and winter months. They emerge from hibernation in February and begin pair bonding and mating during March. If rainfall is adequate, MGS will reproduce. If rainfall levels do not provide sufficient rainfall to support significant annual plant growth then MGS will merely forage on herbaceous perennials and shrubs in order to gain enough body mass to survive another prolonged period of dormancy. They can enter dormancy as early as late May to early July. Juveniles will remain above-ground until August in order to gain sufficient fat reserves prior to entering dormancy.

Several other squirrels occur within their range; white tailed antelope ground squirrel (AGS; *Ammospermophilus leucurus*), round-tailed ground squirrel (RTGS; *Xerpermophilus tereticaudus*) and the California ground squirrel (CGS; *Xerpermophilus beecheyi*). RTGS and CGS are commonly mistaken as MGS. AGS occur throughout the range of the MGS but are easily distinguished by a lateral white stripe on each side. RTGS occur only along the Barstow area of the MGS range and throughout the eastern Mojave Desert. CGS are typically found near human habitation with scattered populations throughout the MGS range but primarily in the southern portion of the range or in irrigated areas.

Methodologies:

The visual survey was conducted on April 22nd, 2012, during mid-afternoon. All potential MGS habitat was surveyed during this visit. A list of the plant species detected during the initial visit was compiled (Table 4). The trapping procedures followed the 2003 Survey Guidelines set forth by the CDFG. Due to the limited acreage in the study area, only 80 traps were deployed at 35 meter spacing within suitable habitat. The grid consisted of two 4X10 grid arrays within each pond. Standard, small-mammal, aluminum, foldable, ventilated 12" Sherman traps was used. Cardboard boxes were used as shade covers for each trap. Traps and shade covers were placed on the north side of the nearest bush on a north-south axis to provide the greatest shade cover possible. Temperature readings were

taken and recorded every hour at a height of 1 foot and at ground level in the shade of a bush. Traps were checked every two to four hours depending on temperature and other influential factors such as potential pregnant or lactating females in traps, dogs on grids, cold weather, expected juveniles etc. Traps were open within one hour after sunrise and closed within one hour before sunset. Traps were closed when air temperature reached 90 °F, when temperature fell below 50 °F or during periods of rainy weather. The bait used consisted of crushed four-way grains with molasses and mixed with peanut butter and water.

Table 2

Grid Location:

(UTM, WGS Datum)

Grid Name	NE Corner		NW Corner		SW Corner		SE Corner	
Pond 6R	485451	3862499	485408	3862497	485408	3862437	485453	3862439
Pond 7R	485451	3862590	485405	3862593	485408	3862543	485451	3862543

Results:

MGS were not seen nor heard during the visual survey and during the three trapping sessions at this site during the field season of 2012. AGS were captured and visually detected during the field surveys.

A total of 32 small mammal captures occurred during the three trapping sessions (Table 3). No juvenile squirrels were captured during the 2012 survey period. The lack of juveniles indicates 2012 was not a reproductive year and the potential of dispersal during the second and third session was not likely. Total open-trap hours were 129.50 for the entire grid. There were no injuries to small mammals during the trapping activities. One western whiptail (*Cnemidophorus tigris*) was caught. No other incidental captures occurred. A list of all vertebrate species detected is listed on Table 5.

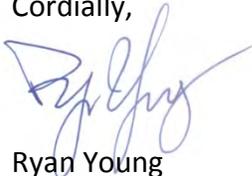
Certification:

I hereby certify that the statements furnished above and in the attached exhibits present the data and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this report was performed by me or under my direct supervision. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the project applicant or applicant's representative and that I have no financial interest in the project.

Date: June 27, 2012 Signed: 
Report Author

Field Work Performed By: 

Cordially,



Ryan Young
Phoenix Ecological Consulting
PO Box 720949
Pinon Hills, CA 92372-0949

Table 3: List of vertebrate species trapped

Mammals	Number of Trapping events
White-tailed Antelope Ground Squirrel (<i>Ammospermophilus leucurus</i>)	32
Reptiles	Number of trapping events
Western Whiptails (<i>Cnemidophorus tigris</i>)	1
Total animals trapped	33

Table 4: List of Vascular plants encountered on site

FAMILY	Species	Common Name	Habit
GYMNOSPERMS (CONIFERS)			
DICOT ANGIOSPERMS (FLOWERING PLANTS)			
BORAGINACEAE		BORAGE FAMILY	
	<i>Amsinckia tessellata</i>	Fiddleneck	Annual
	<i>Cryptantha sp.</i>		Annual
BRASSICACEAE		MUSTARD FAMILY	
	<i>Brassica tournefortii</i>	N/A	Annual
	<i>Hirschfeldia incana</i>	Moroccan mustard	Annual or perennial
CHENOPODIACEAE		GOOSEFOOT FAMILY	
	<i>Atriplex confertifolia</i>	Saltbush	Shrub
	<i>Salsola tragus</i>	Russian thistle	annual
EUPHORBIACEAE		SPURGE FAMILY	
	<i>Chamaesyce albomarginata</i>	Rattlesnake weed	herbaceous perennial
FABACEAE		PEA FAMILY	
	<i>Astragalus lentiginosus</i>	Freckled milkvetch	Annual
GERANIACEAE			
	<i>Eriodinium cicutarium</i>	Red-stemmed filaree	Annual
MONOCOT ANGIOSPERMS (FLOWERING PLANTS)			
POACEAE		GRASS FAMILY	
	<i>Achnatherum speciosum</i>	Desert needle grass	Perennial
	<i>Distichilis spiatica</i>	Salt grass	Perennial
	<i>Vulpia bromoides</i>	Fescue	annual

Table 5: List of vertebrate species visual/aurally detected on site

Mammals
black tailed jack rabbit (<i>Lepus californicus</i>)
coyote (<i>Canis latrans</i>)
desert cottontail (<i>Sylvilagus audubonii</i>)
white-tailed antelope ground squirrel (<i>Ammospermophilus leucurus</i>)
Birds
American kestrel (<i>Falco sparverius</i>)
anna's hummingbird (<i>Calypte anna</i>)
barn swallow (<i>Hirundo rustica</i>)
black-throated sparrow (<i>Amphispiza bilineata</i>)
common raven (<i>Corvus corax</i>)
cooper's hawk (<i>Accipiter cooperii</i>)
European starling (<i>Sturnus vulgaris</i>)
horned lark (<i>Eremophila alpestris</i>)
house finch (<i>Carpodacus mexicanus</i>)
killdeer (<i>Charadrius vociferus</i>)
mallard (<i>Anas platyrhynchos</i>)
mourning dove (<i>Zenaida macroura</i>)
northern mockingbird (<i>Mimus polyglottos</i>)
red-tailed hawk (<i>Buteo jamaicensis</i>)
sage sparrow (<i>Amphispiza belli</i>)
say's phoebe (<i>Sayornis saya</i>)
turkey vulture (<i>Cathartes aura</i>)
western kingbird (<i>Tyrannus verticalis</i>)
white crowned sparrow (<i>Zonotrichia leucophrys</i>)
Reptiles
side blotched lizard (<i>Uta stansburiana</i>)
western whiptail (<i>Cnemidophorus tigris</i>)

Figure 1: Corner photos Pond 6

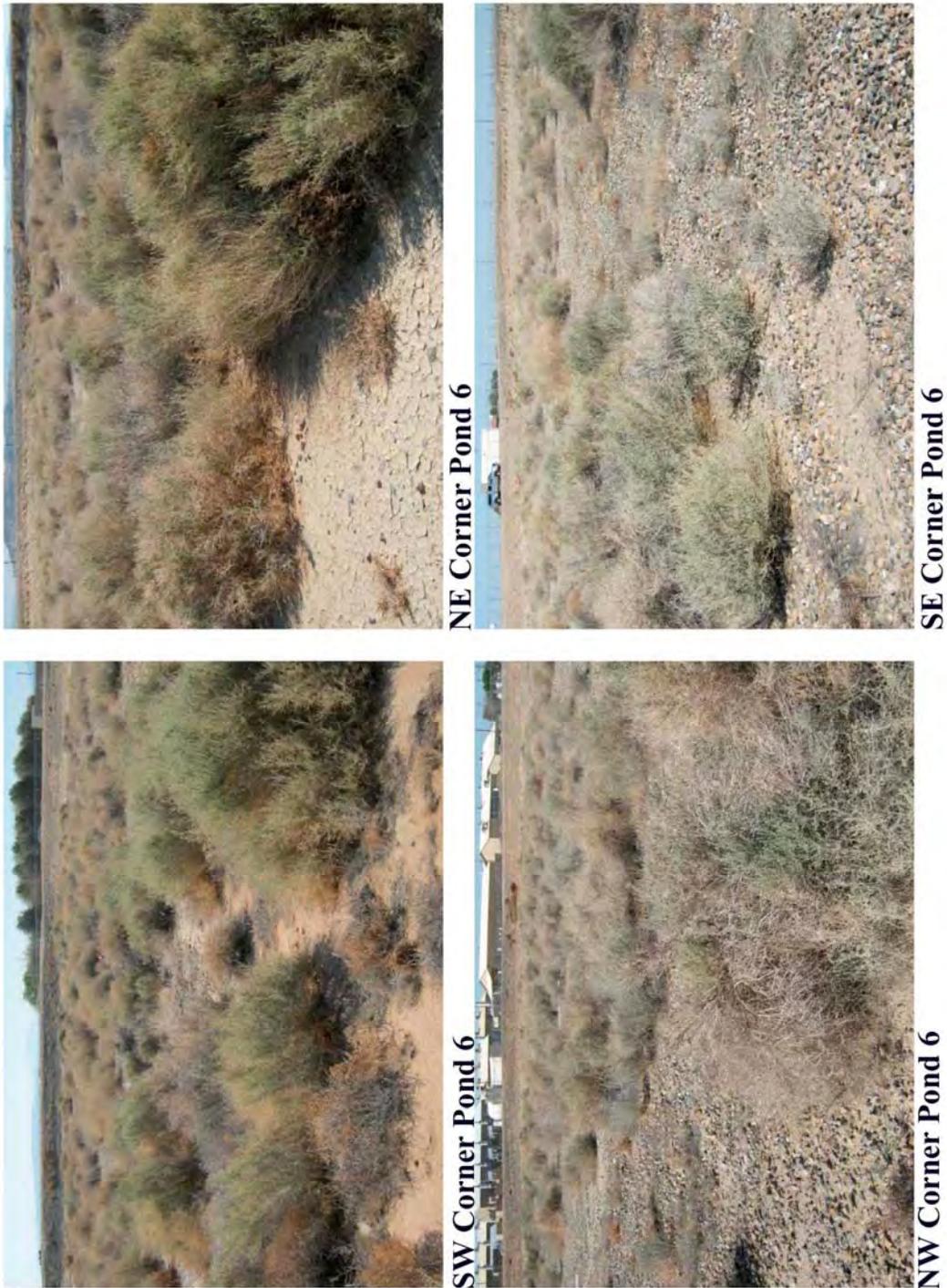


Figure 2: Corner photos Pond 7

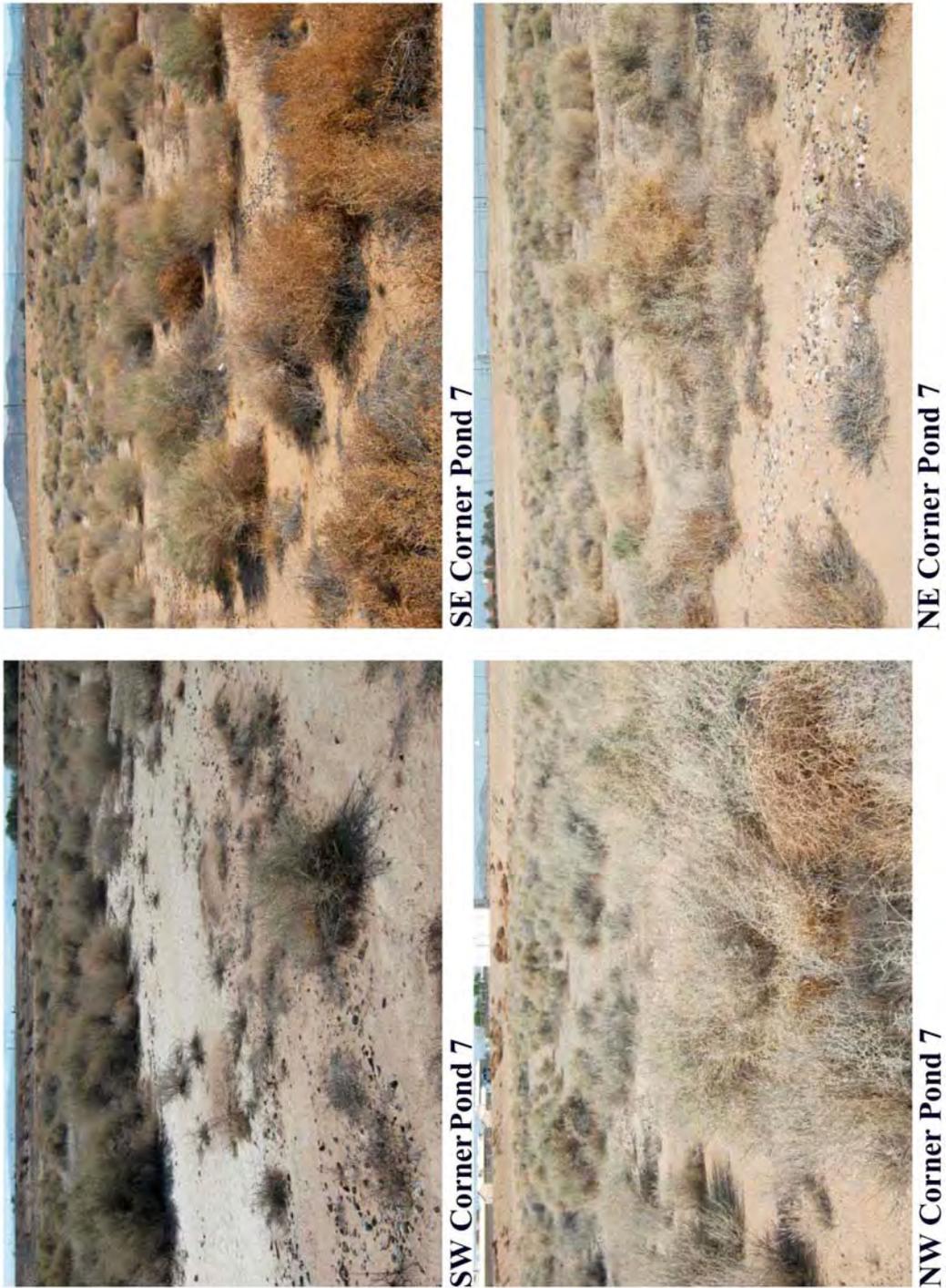
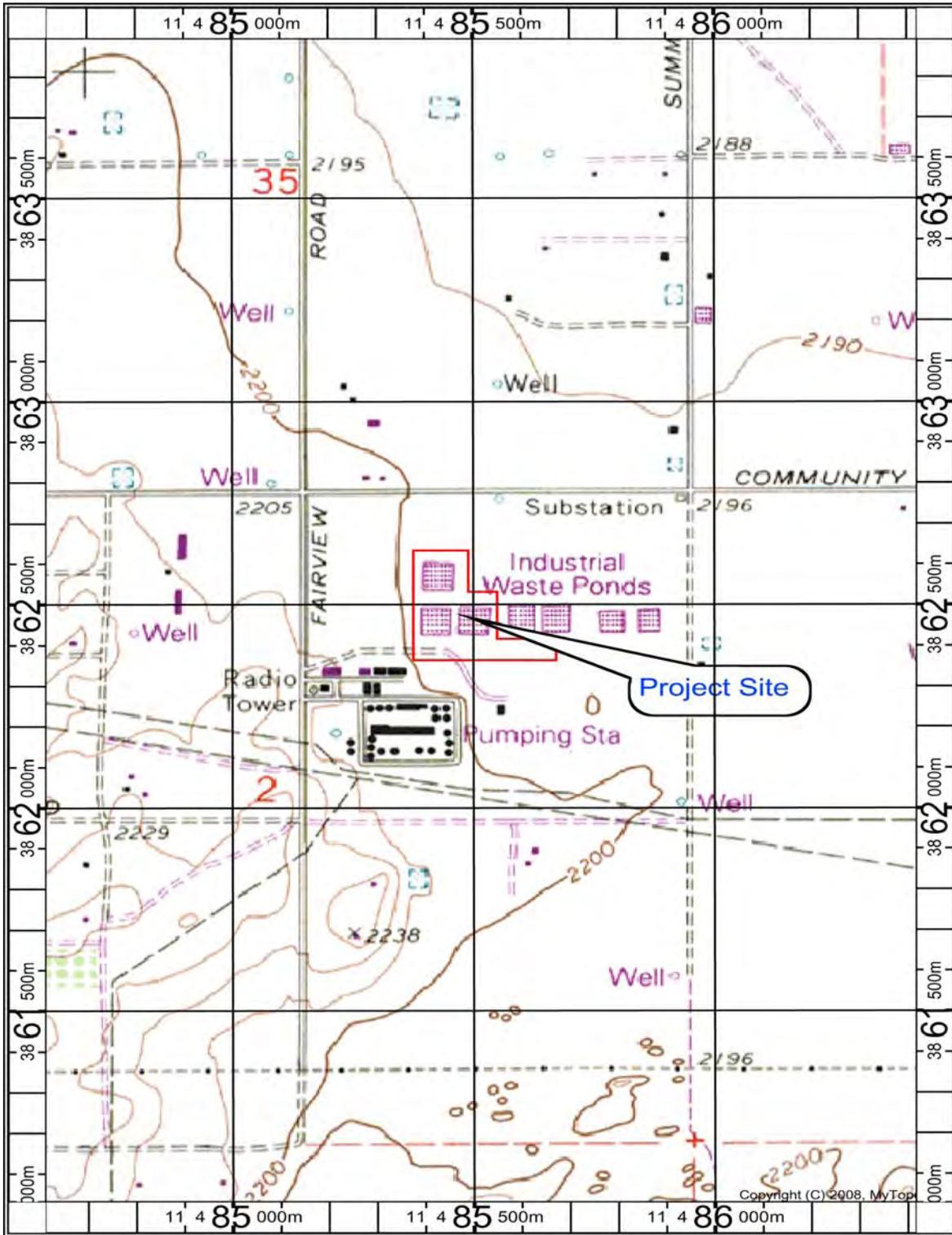


Figure 3: Vicinity Map



Appendix A: Mohave Ground Squirrel Survey Form

Mohave Ground Squirrel Survey Guidelines
January 2003

Page 5 of 5

Mohave Ground Squirrel (MGS) Survey and Trapping Form (photocopy as needed)**PART I - PROJECT INFORMATION** (use a separate form for each sampling grid)Project name: PG&E Hinkley Compressor Station Property owner: PG&ELocation: Township Pond 36 E T Range 3W Section 2; ¼ Section NEQuad map/series: Hinkley Quad UTM coordinates: See Report
GPS coordinates of trapping-grid cornersAcreage of Project Site: 10 acres Acreage of potential MGS habitat on site: 5 acresTotal acreage visually surveyed on project site: 10 acres Date(s): April 22
visual surveysVisual surveys conducted by: Ryan Young & Cathy Halley
names of all persons by date (use back of form, if needed)Total acres trapped: 5 Number of sampling grids: 2Trapping conducted by: Cathy Halley / Mike Halley
names of all persons by sampling term and sampling grid (use back of form, if needed)Dates of sampling term(s): FIRST 4/23-4/27 SECOND 5/19-5/23 THIRD 6/15-6/19
if required if required**PART II - GENERAL HABITAT DESCRIPTION** (use back of form, if needed)Vegetation: dominant perennials: Saltbrush scrub.other perennials: Amorpha

dominant annuals: _____

other annuals: _____

Land forms (mesa, bajada, wash): FlatSoils description: clay-loamElevation: 2,199 ft. Slope: 0%**PART III - WEATHER** (report measurements in the following categories for each day of visual survey and each day of trapping; using 24-hour clock, indicate time of day that each measurement was made; use a separate blank sheet for each day)Temperature: AIR minimum and maximum; SOIL minimum and maximum; Cloud Cover: % in AM and % in PM; Wind Speed: in AM and in PM

Appendix B: Weather Data

PART III – WEATHER

Project Name: PG&E Hinkley Compressor Station Pond 6&7

Property Owner: Private

Year: 2012 (Trapping Period _1_)

Grid Number: One

WEATHER (temperature = °C; cloud cover = %; wind speed = kph)

DATE:04/23/12 ACTIVITY: trapping Day 1

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	16 °C	0600
AIR TEMPERATURE, MAX.	33.3 °C	1400
SOIL TEMPERATURE, MIN.	15.5 °C	0600
SOIL TEMPERATURE, MAX.	32.3 °C	1400
CLOUD COVER, AM	0%	0800
CLOUD COVER, PM	1%	1600
WIND SPEED, AM	0	0800
WIND SPEED, PM	0	1600

DATE:04/24/12 ACTIVITY: trapping Day 2

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	13.4 °C	0600
AIR TEMPERATURE, MAX.	30.7 °C	1300
SOIL TEMPERATURE, MIN.	13.4 °C	0600
SOIL TEMPERATURE, MAX.	32.2 °C	1300
CLOUD COVER, AM	10	0800
CLOUD COVER, PM	15	1600
WIND SPEED, AM	2	0800
WIND SPEED, PM	3	1600

DATE:04/25/12 ACTIVITY: trapping Day 3

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	18.1 °C	0600
AIR TEMPERATURE, MAX.	30.4 °C	1400
SOIL TEMPERATURE, MIN.	18.6 °C	0600
SOIL TEMPERATURE, MAX.	31.4 °C	1400
CLOUD COVER, AM	100%	0800
CLOUD COVER, PM	100%	1600
WIND SPEED, AM	2 MPH	0800
WIND SPEED, PM	2 MPH	1600

DATE:04/26/12 ACTIVITY: trapping Day 4

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	11.8 °C	0600
AIR TEMPERATURE, MAX.	24.8 °C	1500
SOIL TEMPERATURE, MIN.	13.5 °C	0600
SOIL TEMPERATURE, MAX.	26.9 °C	1400
CLOUD COVER, AM	90 %	0800
CLOUD COVER, PM	90%	1600
WIND SPEED, AM	0	0800
WIND SPEED, PM	3	1600

DATE:04/27/12 ACTIVITY: trapping Day 5

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	9.9 °C	0600
AIR TEMPERATURE, MAX.	28.4 °C	1500
SOIL TEMPERATURE, MIN.	10.1 °C	0600
SOIL TEMPERATURE, MAX.	29.5 °C	1500
CLOUD COVER, AM	5%	0800
CLOUD COVER, PM	10%	1600
WIND SPEED, AM	4 MPH	0800
WIND SPEED, PM	4 MPH	1600

Appendix B: Weather Data

PART III – WEATHER

Project Name: PG&E Hinkley Compressor Station Pond 6&7

Property Owner: Private

Year: 2012 (Trapping Period _2_)

Grid Number: One

WEATHER (temperature = °C; cloud cover = %; wind speed = kph)

DATE:05/19/12 **ACTIVITY:** trapping Day 1

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	19.9 °C	0600
AIR TEMPERATURE, MAX.	30.8 °C	1400
SOIL TEMPERATURE, MIN.	20.0 °C	0600
SOIL TEMPERATURE, MAX.	32.8 °C	1400
CLOUD COVER, AM	0%	0800
CLOUD COVER, PM	0%	1600
WIND SPEED, AM	5 MPH	0800
WIND SPEED, PM	5 MPH	1600

DATE:05/20/12 **ACTIVITY:** trapping Day 2

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	16.9 °C	0600
AIR TEMPERATURE, MAX.	31.1 °C	1300
SOIL TEMPERATURE, MIN.	17.6 °C	0600
SOIL TEMPERATURE, MAX.	32.3 °C	1300
CLOUD COVER, AM	0	0800
CLOUD COVER, PM	0	1600
WIND SPEED, AM	1	0800
WIND SPEED, PM	2	1600

DATE:05/21/12 **ACTIVITY:** trapping Day 3

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	17.2 °C	0600
AIR TEMPERATURE, MAX.	33.0 °C	1400
SOIL TEMPERATURE, MIN.	17.6 °C	0600
SOIL TEMPERATURE, MAX.	33.8 °C	1400
CLOUD COVER, AM	0%	0800
CLOUD COVER, PM	2%	1600
WIND SPEED, AM	1 MPH	0800
WIND SPEED, PM	7 MPH	1600

DATE:05/22/12 **ACTIVITY:** trapping Day 4

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	19.4 °C	0600
AIR TEMPERATURE, MAX.	31.8 °C	1500
SOIL TEMPERATURE, MIN.	19.3 °C	0600
SOIL TEMPERATURE, MAX.	33.2 °C	1400
CLOUD COVER, AM	40 %	0800
CLOUD COVER, PM	15 %	1600
WIND SPEED, AM	6 MPH	0800
WIND SPEED, PM	4 MPH	1600

DATE:05/23/12 **ACTIVITY:** trapping Day 5

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	19.3 °C	0600
AIR TEMPERATURE, MAX.	31.6 °C	1500
SOIL TEMPERATURE, MIN.	18.4 °C	0600
SOIL TEMPERATURE, MAX.	32.2 °C	1500
CLOUD COVER, AM	15%	0800
CLOUD COVER, PM	15%	1600
WIND SPEED, AM	13 MPH	0800
WIND SPEED, PM	15 MPH	1600

Appendix B: Weather Data

PART III – WEATHER

Project Name: PG&E Hinkley Compressor Station Pond 6 & 7

Property Owner: Private

Year: 2012 (Trapping Period _3_)

Grid Number: One

WEATHER (temperature = °C; cloud cover = %; wind speed = kph)

DATE: 06/15/2012 **ACTIVITY: trapping Day 1**

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	22.4 °C	0630
AIR TEMPERATURE, MAX.	33.5 °C	11:45
SOIL TEMPERATURE, MIN.	21.0 °C	06:30
SOIL TEMPERATURE, MAX.	33.7 °C	11:45
CLOUD COVER, AM	4 %	0800
CLOUD COVER, PM	5 %	1600
WIND SPEED, AM	2 MPH	0800
WIND SPEED, PM	1 MPH	1600

DATE: 06/16/2012 **ACTIVITY: trapping Day 2**

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	22.1 °C	0630
AIR TEMPERATURE, MAX.	31.7 °C	11:45
SOIL TEMPERATURE, MIN.	21.7 °C	06:30
SOIL TEMPERATURE, MAX.	33.8 °C	11:45
CLOUD COVER, AM	0 %	0800
CLOUD COVER, PM	5 %	1600
WIND SPEED, AM	2 MPH	0800
WIND SPEED, PM	10 MPH	1600

DATE: 06/17/2012 **ACTIVITY: trapping Day 3**

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	21.4 °C	0630
AIR TEMPERATURE, MAX.	32.7 °C	11:45
SOIL TEMPERATURE, MIN.	21.0 °C	06:30
SOIL TEMPERATURE, MAX.	33.8 °C	11:45
CLOUD COVER, AM	0 %	0800
CLOUD COVER, PM	0 %	1600
WIND SPEED, AM	2 MPH	0800
WIND SPEED, PM	3 MPH	1600

DATE: 06/18/2012 **ACTIVITY: trapping Day 4**

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	22.4 °C	0630
AIR TEMPERATURE, MAX.	33.4 °C	11:45
SOIL TEMPERATURE, MIN.	21.5 °C	06:30
SOIL TEMPERATURE, MAX.	34.3 °C	11:45
CLOUD COVER, AM	0 %	0800
CLOUD COVER, PM	1 %	1600
WIND SPEED, AM	3 MPH	0800
WIND SPEED, PM	14 MPH	1600

DATE: 06/19/2012 **ACTIVITY: trapping Day 5**

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	23.7 °C	0630
AIR TEMPERATURE, MAX.	32.5 °C	11:45
SOIL TEMPERATURE, MIN.	22.5 °C	06:30
SOIL TEMPERATURE, MAX.	33.4 °C	11:45
CLOUD COVER, AM	0 %	0800
CLOUD COVER, PM	0 %	1600
WIND SPEED, AM	16 MPH	0800
WIND SPEED, PM	20 MPH	1600