Initial Study
and
Negative Declaration
for

Replacement of Well W390 in the Lone Pine Wellfield

Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012

August 2011

COUNTY CLERK'S USE CITY CLERK'S USE

CITY OF LOS ANGELES
OFFICE OF THE CITY CLERK
ROOM 395, CITY HALL
LOS ANGELES, CALIFORNIA 90012
CALIFORNIA ENVIRONMENTAL QUALITY ACT

PROPOSED NEGATIVE DECLARATION
(Article V, City CEQA Guidelines)

LEAD CITY AGENCY:	**COUNCIL DISTRICT**
Los Angeles Department of Water and Power (LADWP) 111 North Hope Street, Room 1044 Los Angeles, CA 90012	N/A
PROJECT TITLE:	**CASE NO.**
Replacement of Well W390 in the Lone Pine Well Field	N/A

PROJECT LOCATION:

East of Lone Pine in the NW ¼ of Section 27, Township 15 South, Range 36 East in Inyo County. Specifically, the project area is located between East Locust Street to the north and East Inyo Street to the south.

DESCRIPTION:

Well W390, located in the Lone Pine Well Field, has been drawing water at a diminished capacity due to excessive sand production. LADWP proposes to relocate and replace well W390, to increase the well's irrigation efficiency and to maintain groundwater supplies and recharge in the field that the well is irrigating.

NAME AND ADDRESS OF APPLICANT IF OTHER THAN CITY AGENCY: N/A

FINDINGS:

THE INITIAL STUDY PREPARED FOR THIS DOCUMENT IS INCLUDED.

NAME OF PERSON PREPARING THIS FORM:	**TITLE:**	**PHONE:**
Michael Mercado	Environmental Specialist, Project Manager	(213) 367-0395
ADDRESS:	**SIGNATURE (Official)**	**DATE**
111 N. Hope Street, Room 1044 Los Angeles, CA 90012	Charles C. Holloway Manager, Environmental Assessment	August 4, 2011

Form Gen. 157 (Appendix C)

CEQA Initial Study
and
Negative Declaration

Replacement of Well W390 in the Lone Pine Wellfield

August 4, 2011

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Los Angeles Department of Water and Power

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Section 1
Project and Agency Information

1.1 PROJECT TITLE AND LEAD AGENCY

Project Title:	**Replacement of Well W390 in Lone Pine Wellfield**
Lead Agency Name:	Los Angeles Department of Water and Power
Lead Agency Address:	111 N. Hope Street, room 1044, Los Angeles, CA 90012
Contact Person:	Charles Holloway
Contact Phone Number:	213-367-0285
Project Sponsor:	Los Angeles Department of Water and Power

1.2 PROJECT BACKGROUND AND OBJECTIVES

The City of Los Angeles Department of Water and Power (LADWP) owns over 100 production wells in Owens Valley. Over time, some wells fail for a variety of reasons including casing misalignment and sanding. When wells fail, the replacement wells are drilled using the current industry standards, with the goal of maximizing efficiency and minimizing potential impact on the environment.

The City of Los Angels and Inyo County entered into an agreement for long-term management of groundwater in the Owens Valley in 1991 (Agreement). Based on Section VI of the Agreement, LADWP may replace existing wells and construct new wells in areas where hydrologic conditions are favorable. Since the implementation of the Agreement, LADWP has replaced a number of failed wells throughout Owens Valley.

1.3 PROJECT LOCATION AND ENVIRONMENTAL SETTING

Well W390 is located in the Lone Pine Wellfield, the smallest of LADWP's nine wellfields in south Owens Valley. Specifically, W390 is on the east side of Lone Pine in the NW ¼ of Section 27, Township 15 South, and Range 36 East in Inyo County (Figure 1). The project area is located between East Locust Street to the north and East Inyo Street to the south. The main landmarks for Lone Pine Wellfield are the Alabama Hills to the west, the Los Angeles Aqueduct (LAA) running along the eastern slope of the Alabama Hills, the Owens River east of the wellfield, and Lone Pine Creek and Tuttle Creek running through the wellfield. Well W390 is one of the exempt wells for supplying the Van Norman Field, one of the Enhancement and Mitigation projects in the 1991 Environmental Impact Report (EIR).

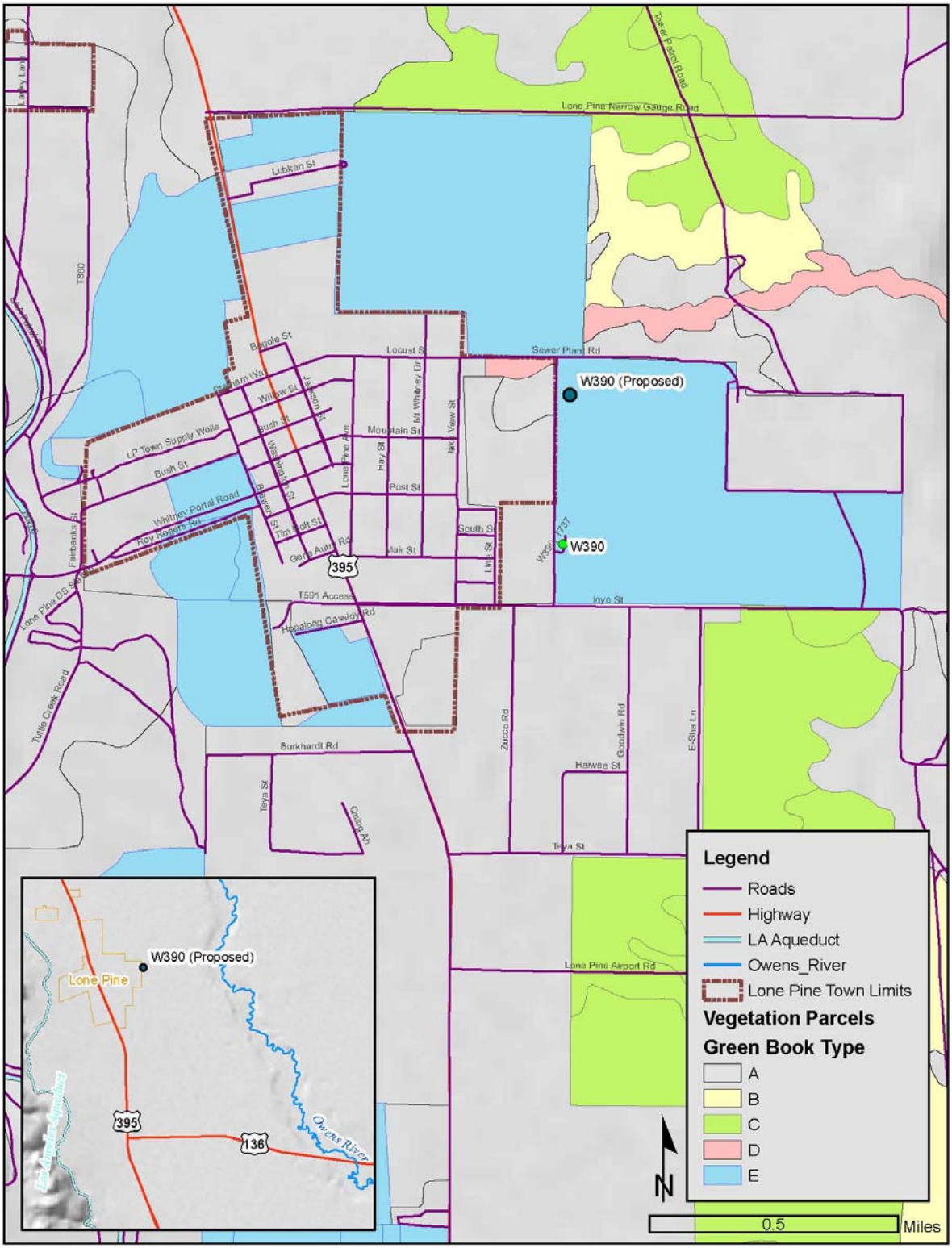

Figure 1: Area (inset) and Vicinity maps—with vegetation parcels overlaid–showing the locations of original well and proposed replacement well W390

1.4 PROJECT DESCRIPTION

Well W390 (photo, below) was drilled in 1987 to supply the Van Norman field, an enhancement/mitigation project described in the 1991 EIR (SCH #1989080705) *Water from the Owens Valley to Supply the Second Los Angeles Aqueduct, 1970 to 1990, 1990 Onward, Pursuant to a Long Term Groundwater Management Plan*, and has been in continuous operation from 1987 to 2009 (LADWP, 1991). Even though the well was drilled using new drilling technology, the well has been producing an excessive amount of sand in recent irrigation seasons. Sand production has caused the pump to fail. LADWP plans to replace well W390, paying special attention to screen-slot-size and gravel pack gradation, in order to minimize sand production.

Above–looking west at Well W390 (background) and drain pipe (foreground). Well water drains into the irrigation ditch (lower right) to irrigate fields downstream of well location.

1.5 APPLICABLE PLANS AND POLICIES

The project is located on City-owned land within Inyo County. The Inyo County General Plan designates the area as a Natural Resources planning area. The zoning overlay is Open Space; 40-acre minimum lot size.

1.6 PROJECT APPROVALS

The proposed project will be designed and constructed pursuant to the provisions of the Inyo County/LADWP Long-Term Water Agreement and California Government Code Sections 53090 and 53091.

Section 2
Environmental Analysis

2.1 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

2.2 AGENCY DETERMINATION

On the basis of this initial evaluation:

☒ I find that the project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the applicant. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the project, nothing further is required.

Signature: _____ Title: Environmental Specialist
Michael Mercado

Printed Name: Charles C. Holloway, Manager Date: August 4, 2011
Environmental Planning and Assessment

2.3 ENVIRONMENTAL CHECKLIST

2.3.1 Aesthetics

Issues and Supporting Information Sources	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?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Discussion:

a) **No Impact**. The project is in a remote location and there are no designated scenic vistas in the immediate vicinity of the proposed project or in sufficiently close proximity such that views from those vistas would be adversely affected by the proposed project. Therefore, no impacts would occur.

b) **No Impact.** The proposed project does not lie within the view shed of a state scenic highway; no scenic resources will be damaged by the proposed construction and operation of the well, which is located in a previously disturbed area. All dirt obtained from drilling operations is hauled away from the construction site. Therefore, no impacts would occur.

c) **Less than significant impact.** The project is located in a previously disturbed area, approximately 1680 feet north of the existing Well W390, and adjacent to an existing dirt access road and irrigation ditch. Well construction activity may affect the visual character or visual quality at the site, but the effects will be temporary. No impacts to either the visual character or visual quality are expected from well operations. Therefore, less than significant impacts would occur.

d) **No Impact.** Most of the structure of the water well will be located below ground. The only above-ground structures would include the well pad, well pump, and fencing which will be replacing an already existing structure in the wellfield. Above-ground components will be of a subdued color and textural finish that would diminish reflection or glare, and artificial lighting is not included in the project. The proposed project will not create a new source of substantial light or glare that would adversely affect day or nighttime views in the project area. Therefore, no impacts would occur.

2.3.2 Agriculture and Forest Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

Discussion:

The project is located on a parcel that is zoned O (Open Space, 40-acre minimum lot size), with a land use designation of NR (Natural Resources, Inyo County, 2009).

California Public Resources Code (PRC) 12220(g) defines “forest land” as “land that can support 10-percent native tree cover of any species... and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.”

California PRC 4526 defines "Timberland" as “land... which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis after consultation with the district committees and others.”

California Government Code 51104(g) defines “timberland production zone (TPZ)” as “an area which has been zoned and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses which is any use which does not significantly detract from the use of the property for, or inhibit, growing and harvesting timber.”

a) **No Impact.** No part of the proposed project is located on or near 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

(DOC, 2006). The area of the proposed project is not mapped, and is not considered Farmland (ZIMAS, 2007).

b) **No Impact.** The project is located on a parcel that is zoned O. Since Inyo County does not offer a Williamson Act program, and parcels adjacent to the project parcel are zoned O, there are no impacts associated with conflicts to agricultural zones or Williamson Act contracts.

c) **No Impact.** The project site is zoned as O, does not conflict with existing zoning, and will not cause the re-zoning of forest lands, timberlands, or timberland production zones. There are no impacts associated with zoning conflicts or zoning conversions from the project.

d) **No Impact.** The project site is zoned as O, and is not zoned as forest land. The proposed project will not result in conversion of forest land to non-forest use. There are no impacts associated with the loss or conversion of forest land.

e) **No Impact.** The proposed project is a well replacement project. The original well and its operation did not result in any conversion of farmland to non-agricultural use; the replacement well will be located in the same general area, will work in the same general capacity, and will not create changes in the existing environment that will result in any farmland or agricultural conversion.

2.3.3 Air Quality

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Discussion:

The southern Owens Valley is located in the Great Basin Unified Air Pollution Control District (GBUAPCD). The valley has been designated by the State and EPA as a non-attainment area for the state and federal 24-hour average PM_{10} standards. Wind-blown dust from the dry bed of Owens Lake is the primary cause of the PM_{10} violations. The area has been designated as attainment or unclassified for all other ambient air quality standards. Air quality is considered excellent for all criteria pollutants with the exception of PM_{10}. Large industrial sources are absent from the Owens Valley. The major sources of criteria pollutants, other than wind-blown dust, are woodstoves, fireplaces, vehicle tailpipe emissions, fugitive dust from travel on unpaved roads, prescribed burning, and gravel mining.

a) **No Impact.** The relevant air quality plan for the project area is the *Final 2008 Owens Valley PM_{10} Planning Area Demonstration of Attainment State Implementation Plan* (SIP) (GBUAPCD, 2008). The focus of this planning document is implementation of dust control measures at Owens Dry Lake, the major particulate matter sources in the valley. There is no impact on the applicable air quality plan.

b) **Less than Significant Impact.** The GBUAPCD has not established specific quantitative thresholds of significance for air emissions related to construction. However, emissions thresholds for permitting new stationary sources (GBUAPCD Rule 209-A) can be used as screening criteria to evaluate the potential significance of project emissions during construction. (Since the carbon monoxide threshold in Rule 209-A is not a numeric standard, the South Coast Air Quality Management District threshold was used for this analysis.) Emissions during project construction will result from the operation of equipment such as; a drill rig, a backhoe, a shaker, and a limited number of support vehicles. The emissions estimates for vehicles to be used in the proposed project are shown in Table 1, below:

Emissions Source		Light Duty Truck	Dump Trucks	Transport Vehicle	Drilling Rig	Backhoe / Bobcat	Shaker	Air Compressor	Generator
Vehicle type		PV	PV	HDT					
# of vehicles		2	2	2	1	1	1	1	1
travel miles/day or usage hours/day		10	10	10	20	4	1	3	3
Emissions Factor (lbs/mi or lbs/hr) (1,2, 3)	CO	0.00826	0.01693	0.01196	0.51020	0.38740	0.38740	0.36130	0.32930
	VOC	0.00091	0.01893	0.00304	0.09430	0.09380	0.09380	0.11200	0.09610
	NOx	0.00092	0.01893	0.03822	1.00830	0.62760	0.62760	0.73200	0.64400
	SOx	0.00001	0.00003	0.00004	0.00170	0.00080	0.00080	0.00070	0.00070
	PM10	0.00009	0.00070	0.00183	0.04360	0.04820	0.04820	0.05260	0.03960
	PM2.5	0.00006	0.00060	0.00160	0.04430	0.04640	0.04640	0.03520	0.03520
Estimated Peak missions (lbs/mi or lbs/hr)	CO	0.16526	0.33860	0.23910	10.20400	1.54960	0.38740	1.08390	0.98790
	VOC	0.01828	0.37860	0.06084	1.88600	0.37520	0.09380	0.33600	0.28830
	NOx	0.01836	0.37860	0.76442	20.16600	2.51040	0.62760	2.19600	1.93200
	SOx	0.00022	0.00060	0.00082	0.03400	0.00320	0.00080	0.00210	0.00210
	PM10	0.00174	0.01400	0.03662	0.87200	0.19280	0.04820	0.15780	0.11880
	PM2.5	0.00110	0.01200	0.03202	0.88600	0.18560	0.04640	0.10560	0.10560

Emission Type	CO	VOC	NOx	SOx	PM10	PM2.5
Total Emissions from Project	15.0	3.4	28.6	0.0	1.4	1.4
Significance Thresholds (4)	550.0	250.0	250.0	250.0	80.0	55.0 (5)

Notes: PV - passenger vehicles, HDT - Heavy duty trucks

Sources:

1 - SCAQMD. 2007a. EMFA2007 version 2.3 Emission Factors for On-road passenger vehicles & delivery trucks

2 - SCAQMD. 2007b. SCAB fleet average emission factors (Diesel), Scenario year 2011

3 - SCAQMD. 2006. Final - methodology to calculate Particular matter, PM 2.5 and PM 2.5 significance.

4 - GBUAPCD. 1993. Rule 209-A Standards for authorities to construct

5 - SCAQMD. 1993. CEQA Air quality handbook

Table 1: Summary of Estimated Worst-Case Peak Day construction Emissions for Well W390 replacement

Since emissions are estimated to be substantially below significance thresholds, the impact on air quality from project construction is less than significant. Since the well pump for the replacement

well will be similar in type and capacity to the well pump it is replacing, the impact on air quality from well operations is not significant.

c) **Less Than Significant Impact.** The project area is a non-attainment area for PM_{10}. Construction of the project will result in dust emissions from earth disturbance during the construction phase of well replacement. LADWP must meet GBUAPCD Rule 401, which requires that fugitive dust emission control measures be implemented to adequately prevent visible dust from the leaving the property and to maintain compliance with the PM_{10} standard. Due to the small acreage of disturbance planned and the use of water as needed to minimize the generation of dust, dust emissions related to project construction are not be anticipated to be visible off the project site. Therefore, project related impacts on PM_{10} will be less than significant.

d) **No Impact.** A limited number of vehicles will be used for well construction; therefore, pollutant generation will be limited. Due to the limited number of emissions-generating vehicles to be used in construction, there is no impact to receptors due to substantial pollutant concentrations.

e) **Less Than Significant Impact.** Project construction will result in minor odors associated with fuel used for equipment and vehicles. These localized odors are common, are not normally considered offensive, and will not be experienced by any receptors since none are immediately adjacent to the project sites.

2.3.4 Biological Resources

Issues and Supporting Information Sources	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?	☐	☐	☐	☒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Discussion:

Vegetation

The vegetation parcel map for the area near W390, inventoried for baseline conditions between 1984 and 1987 (Green Book Section IV.B.1.b), is shown in the overlay in Figure 1.These parcels were classified by management type, management areas, monitoring sites, and wells, and were designated based on water use with designations of Type A to Type E.

Well 390 is located in the Van Norman Field, an enhancement/mitigation project. This project receives all the water produced by the well for irrigation. As a consequence, the well has been classified as “exempt” from the well “On-Off” triggers through a joint decision of Inyo County Water Department and Los Angeles Department of Water and Power. The replacement well will be located in an area designated as Type E Vegetation, which is a “classification... comprised of areas where water is provided to City-owned lands for alfalfa production, pasture, recreation uses, wildlife habitats, livestock, and enhancement and mitigation projects.”

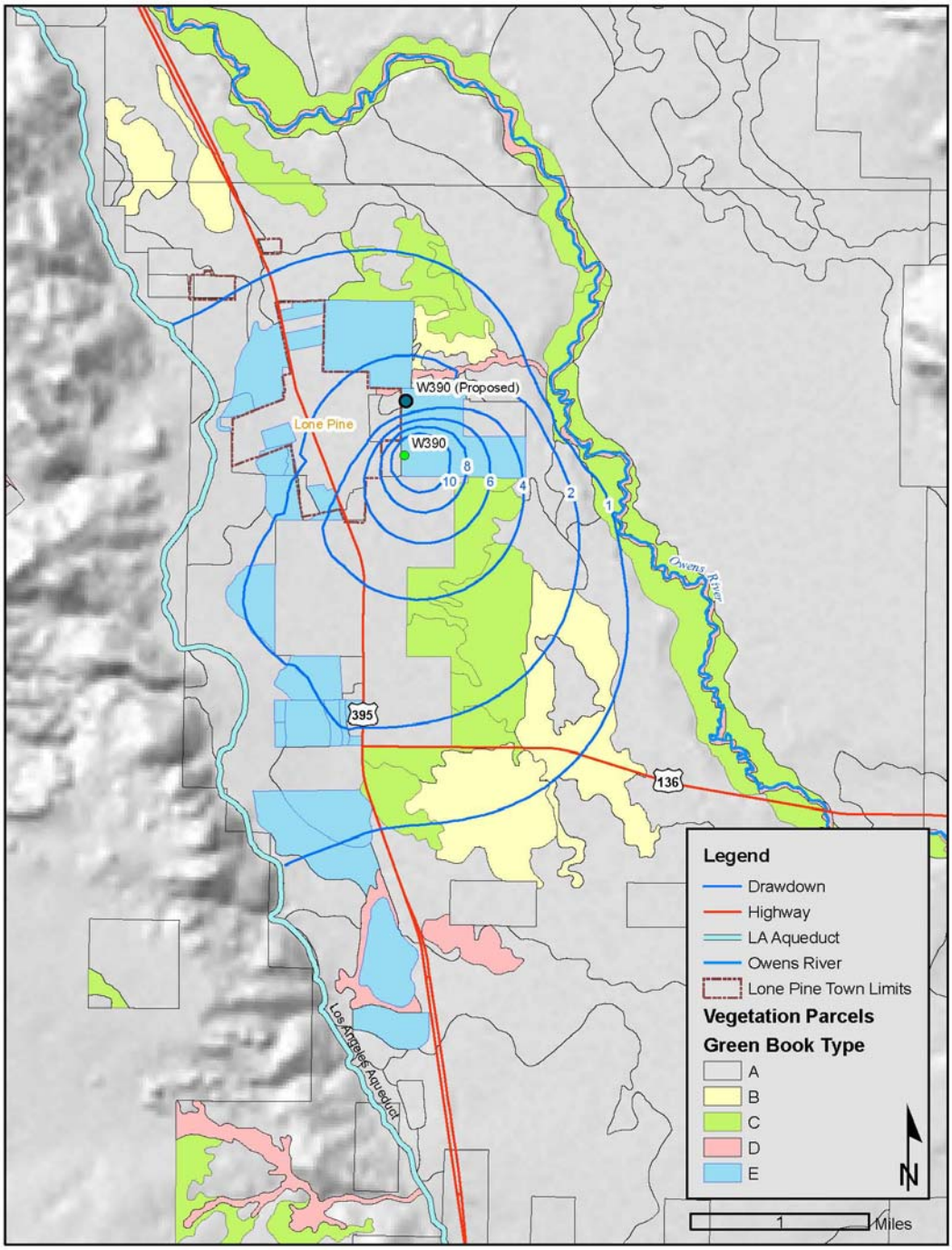

Figure 2: Vegetation parcel map and drawdown contour associated with original well W390

The drawdown expected from the new well was compared to drawdown associated with existing W390. The new well location is north of the existing well; therefore, the drawdown contours associated with the new location are also shifted north. The result is a decrease in drawdown under groundwater dependent vegetation. There is a net decrease in the acreage of Type B vegetation (groundwater dependent shrub community) within the drawdown contours of the

replacement well as compared to the existing well (see figure 3).There is also a net decrease in the acreage of Type C Vegetation (groundwater dependent meadow community) within the drawdown contours of the replacement well as compared to the existing W390. The overall difference is that the replacement well will cause less potential drawdown under groundwater dependent vegetation than the existing well.

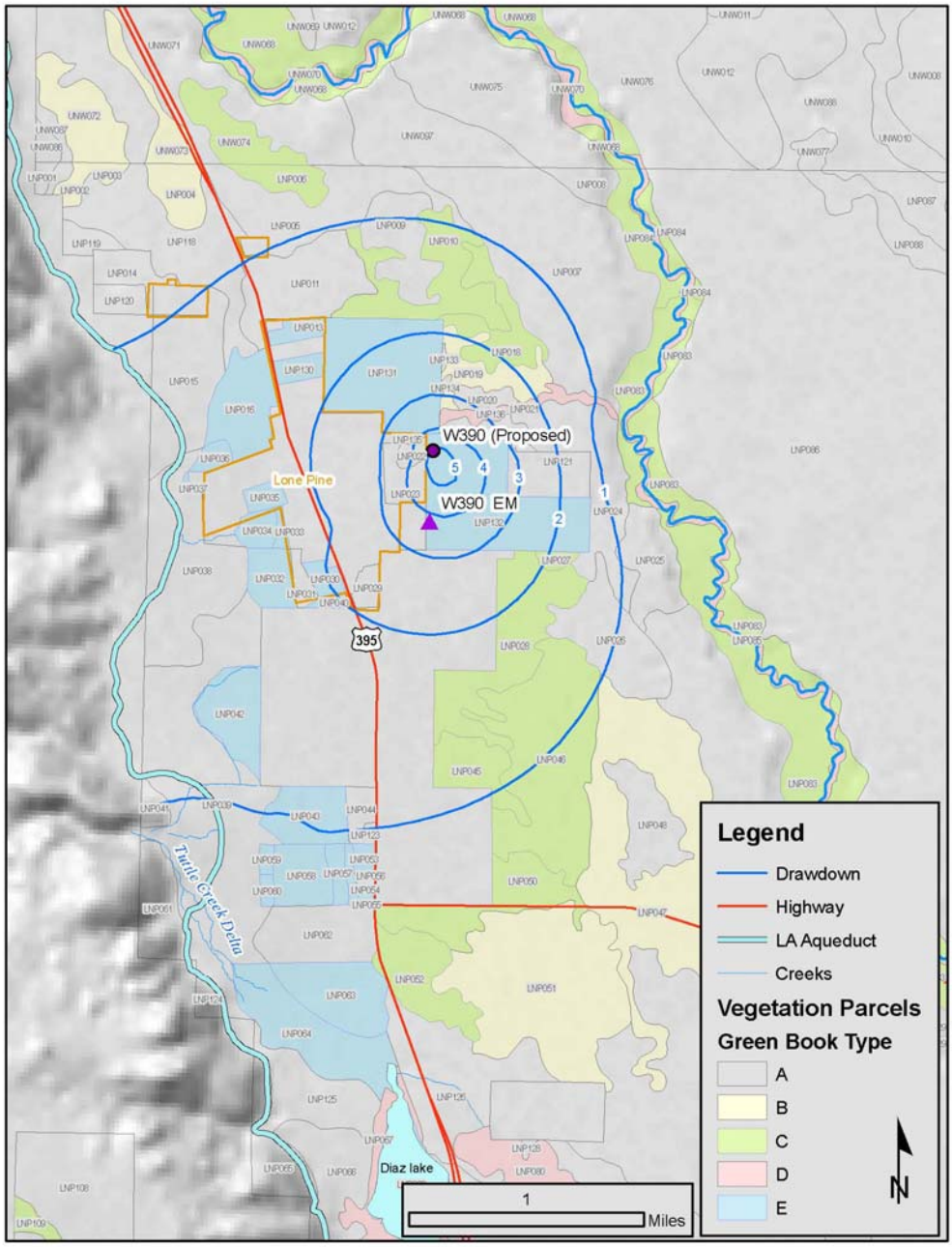

Figure 3: Vegetation parcel map and drawdown contour associated with replacement well W390

Another positive result of well replacement will be a potential increase in irrigation efficiency in the northern portion of the enhancement/mitigation project. This area was always difficult to

irrigate when the water source was near the south side of the project. The new water source will be in the area that was difficult to irrigate. This should allow for increased efficiency in the north while maintaining vegetation conditions in the south.

a) **No Impact.** The proposed project is in a parcel that is zoned O, is permitted for agriculture and agricultural use, and is in a previously disturbed area. There are no impacts to riparian habitats or other sensitive natural communities identified in local or regional plans, policies, regulations, or by CDFG or the USFWS from this project.

c) **No Impact.** There are no federally protected wetlands within the project area or its APE. Therefore, there is no impact to protected wetlands from this project.

d) **No Impact.** There are no impacts to riparian habitats from the project and therefore, no impacts to the movement of any native resident or migratory fish.

e) **No Impact.** This project does not conflict with any local policies or ordinances protecting biological resources. There are no policies for this area.

f) **No Impact.** The project site does not currently fall within any Habitat Conservation Plan, Natural Community Conservation Plan, or state habitat conservation plan. LADWP is working with the CDFG and USFWS on a Habitat Conservation Plan. The project will not conflict with the provisions of this Habitat Conservation Plan.

2.3.5 Cultural Resources

Issues and Supporting Information Sources	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 §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

Discussion: On March 9, 2011, Ms. Lori Gillem and Mr. John Hayes, Jr. of LADWP escorted Garcia and Associates' archaeologist Mr. Kruger Frank to the proposed project area to conduct a pedestrian survey of the location for the proposed well replacement project. The survey area consisted of the location of the original Well 390, the location for the proposed replacement Well 390, and an existing irrigation ditch that paralleled an existing north-south trending dirt access road. No cultural materials were collected or removed from the project area.

Archeological staff at the Eastern Information Center (EIC) of the California Historical Resources Information System (CHRIS) completed a records search on March 10, 2011 using a 1-mile radius of the project area for both studies and sites. Other sources consulted during the records search were:

- EIC base maps, United States Geological Survey (USGS) series topographic quadrangles.
- The California Department of Parks and Recreation's California Inventory of Historic Resources (1976)
- The Office of Historic Preservation's Historic Properties Directory (2007)

The Historic Properties Directory combine the cultural resources listed on the California Historical Landmarks, California Points of Historic Interest, and those listed in or determined eligible for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR).

According to the EIC, no previous cultural resource studies were identified within the boundaries of the project area. Even though the records search identified 9 prior studies and 33 previously recorded prehistoric and historic resources within a 1-mile radius of the project area, the records search did not identify any cultural resources near the existing well or within the boundaries of the proposed project area.

a) No Impact. No substantial adverse change in any historical resource is anticipated, since there are no cultural or historical resources located within the proposed project area. In the

event that cultural resources are uncovered during construction, employees shall halt work in the vicinity of a potential cultural resources discovery (all excavation and earth moving activities within 100 feet) and immediately contact their supervisor or foreman and a qualified archaeologist. The relocation or redirection of work will then be determined by the construction supervisor and archaeologist.

b) No Impact. The proposed project will not cause a substantial adverse change in the significance of an archaeological resource, given the lack of cultural material in and adjacent to the project area. Archaeological monitoring during construction activities is not necessary, unless there are any changes or an expansion of the project area that would require the new area be surveyed by an archeologist prior to the onset of work.

c) No Impact. The site does not contain unique paleontological resources or unique geologic features.

d) No Impact. There was no evidence of human remains within the project site at the time the pedestrian surveys were conducted. However, in the unexpected event that human remains are discovered, the Inyo County Coroner would be contacted, the area of the find would be protected, and provisions of State CEQA Guidelines Section 15064.5 would be followed.

2.3.6 Geology and Soils

Issues and Supporting Information Sources	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:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems, where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Discussion:

The project area lies in eastern California, east of Lone Pine in the Owens Valley. The Owens Valley of eastern California is a deep north-south trending basin, lying between the Sierra Nevada to the west and the White-Inyo Mountains to the east. The Owens Valley was formed as a fault block basin with the valley floor dropped down relative to the mountain blocks on either side.

The Owens Valley is located on the western edge of the Great Basin physiographic and hydrographic provinces where it borders on the Pacific Mountain System (D'Azevedo 1986). The Great Basin comprises about 400,000 square miles of western North America between the Sierra Nevada and the Rocky Mountains (D'Azevedo 1986). Miles and Goudy (1997:14-1) place Owens Valley within the Basin and Range geomorphic province. The geomorphology of this area consists of nearly level lake plain and basin floor and gently to moderately sloping alluvial fans (Miles and Goudy 1997:14-2). Fluvial erosion and deposition are the main geomorphic processes (Miles and Goudy 1997:14-2).The Owens Valley is the westernmost basin in this Basin and Range, a region of fault-bounded, closed basins separated by parallel

mountain ranges stretching from central Utah to the Sierra Nevada and encompassing all of the state of Nevada. Geological formations in the project areas are of Cenozoic age, chiefly Quaternary.

a) **No Impact.** The project area is located within U.S. Geological Survey quadrangles containing delineated Alquist-Priolo special studies zones (California Geological Survey). Surface rupture on these faults is also possible outside of the currently mapped active traces of these range-front faults in the vicinity of the project sites. Habitable structures will not be built as part of the proposed project; therefore, people will not be exposed to adverse effects involving seismic ground shaking. The project area has relatively little slope and stable soils which reduce any possibility of land slides, and seismic related ground failure such as liquefaction.

b) **Less than significant.** The proposed project includes minor soil disturbance related to the construction and installation of the well, well pad, and fencing. All appropriate BMPs will be utilized to prevent erosion and prevent the loss of topsoil.

c) **No Impact.** Soils within the project site have a slope of 0-2% and are classified as very deep soils. Landslides are not anticipated at the project site. Liquefaction and related lateral spreading is unlikely at the project site. Additionally, since no habitable structures will be built as part of the proposed project there is no impact.

d) **No Impact.** Habitable structures will not be built as part of the proposed project. The soils mapped in the adjacent areas have low concentrations of clay. There will be no project-related impacts from expansive soils.

e) **No Impact.** There will be no impacts to the capability of soils to support septage or wastewater disposal systems. Portable sanitary facilities will be made available to workers only during the construction phase; permanent sanitary facilities are not present or proposed for the project site.

2.3.7 Greenhouse Gas Emissions

Issues and Supporting Information Sources	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?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

Discussion:

a) **Less Than Significant Impact.** Greenhouse gases include, but are not limited to, carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Project-related emissions of greenhouse gases will be limited to air pollutants generated during construction activities, which are expected to last for 6 weeks. Operations-related air pollutant emissions will result from infrequent vehicle trips to the project site–the same as under existing conditions. Since operation of the well will not increase air pollutant emissions over existing conditions, the project will have no significant impact on climate change. As described above, construction of the project will result in less than significant combustion emissions from vehicles and equipment. The impact from the emission of greenhouse gases, and therefore climate change, will be less than significant.

b) **No Impact.** The following policies and regulations are relevant to climate change in California:

- **State of California Assembly Bill 32 –** California Global Warming Solutions Act - Assembly Bill (AB) 32, *California Global Warming Solutions Act of 2006*, was signed into law on September 27, 2006. With the Governor's signing of AB 32, the Health and Safety Code (Section 38501, Subdivision (a)) now states the following: *"Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems."*

  AB 32 requires the California Air Resources Board (CARB), in coordination with State agencies as well as members of the private and academic communities, to adopt regulations to require the reporting and verification of statewide greenhouse gas emissions and to monitor and enforce compliance

with this program. Under the provisions of the bill, by 2020, statewide greenhouse gas emissions will be limited to the equivalent emission levels in 1990. .

- **State of California Senate Bill 375 -** On September 30, 2008, Governor Arnold Schwarzenegger signed Senate Bill (SB) 375, which seeks to reduce GHG emissions by discouraging sprawl development and dependence on car travel. SB 375 helps implement the AB 32 GHG reduction goals by integrating land use, regional transportation and housing planning.

The proposed project is a well replacement project–the well pump itself is functioning normally; however, the production capacity of the original well is diminished. After construction is completed the replacement well will be functioning in the same general capacity as the well it is replacing, but production should improve. No conflict with greenhouse gas policies and regulations are expected. Therefore, there is no impact with regard to these policies and regulations.

2.3.8 Hazards and Hazardous Materials

Issues and Supporting Information Sources	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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

Discussion:

a and b) **Less Than Significant Impact.** Construction and operation of the proposed project will require the routine transport of limited quantities of fuel. Fuel will be used for vehicles and power equipment. Fuel will be contained within the manufacturer's tanks on all powered heavy equipment onsite, or in approved canisters for powered hand equipment. When necessary, a fuel/service truck will visit the site, parking at a non-sensitive location on level ground. Equipment operators will move all mobile equipment to the fuel/service truck for refueling. The drill rig will have a permanent containment system set up to prevent the potential of any impacts from fueling operations. No fuel will be stored at the project location.

As is the current practice by LADWP, use of these hazardous materials will be carefully monitored to limit exposure of humans or environmental receptors. Therefore, impacts related to release or accidental exposure to humans or the environment will be less than significant.

c) **No Impact.** Schools in the vicinity are more than ¼–mile away from the project site. Hazardous materials use will be limited to fuels and chemicals necessary for the operation of construction and accessory equipment. Since this material will be properly handled (as described above), there will be no impact on the schools from hazardous materials.

d) **No Impact.** Section 65962.5 of the California Government Code requires the California Environmental Protection Agency (Cal EPA) to update a list of known hazardous materials sites, which is also called the "Cortese List." The sites on the Cortese List are designated by the State Water Resources Control Board, the Integrated Waste Management Board, and the Department of Toxic Substances Control. The project site was not found on any of these lists. Therefore the project will not create a significant hazard to the public or the environment.

e and f) **No Impact.** The project area is not located within an airport land use plan and is not sufficiently near either a private airstrip or public airport to pose a safety risk. Lone Pine Airport is located approximately one mile south of the project area. There will be no project-related impacts on airport safety.

g) and h) **Less Than Significant Impact.** Construction related traffic will be limited to an area located in an open field east of Lone Pine. Construction workers will commute and bring equipment to and from the site over a six-week construction period. While main highways and roads are used during the commute and the transportation of equipment to the work site, vehicles and equipment will be in use at the construction site or parked at a staging area that would not normally be used for emergency access. The impact from the travel of construction workers and equipment to and from the project site will have a less than significant impact on emergency access and evacuation plans and will have a less than significant impact on people or structures as they apply to wildland fires.

2.3.9 Hydrology and Water Quality

Issues and Supporting Information Sources	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?	☐	☐	☐	☒
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of 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?	☐	☐	☐	☒
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☐	☒
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒
f) Otherwise substantially degrade water quality?	☐	☐	☐	☒
g) Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐

Discussion:

The Lone Pine wellfield is located in the southern Owens Valley, just north of Owens Lake. The main landmarks near the wellfield include the Alabama Hills to the west, Los Angeles Aqueduct (LAA) running along the eastern slope of the Alabama Hills, Owens River in the east of the wellfield, and Lone Pine Creek and Tuttle Creek running through the wellfield. Well W390 is located in the east side of Lone Pine, and is one of the exempt wells for supplying the Van Norman Field, which is one of the Enhancement and Mitigation projects in the 1991 EIR.

The main water features in the Lone Pine Wellfield include Lone Pine and Tuttle creeks flowing from west to east through the Alabama Hills, the Los Angeles Aqueduct (LAA) flowing from north to south along the east side of the Alabama Hills, and the Owens River flowing from north to south and forming the eastern boundary of the wellfield. Table 1 lists flow measurements from the water flow gauges in the vicinity of the Lone Pine Wellfield. Lone Pine Creek is the biggest creek in this wellfield with a long-term average flow of 8.6 cfs recorded at the USGS gauge just east of the Alabama Hills.

Both creeks in the Lone Pine Wellfield have gauges at the base of the Alabama Hills. The long-term average flow in Lone Pine and Tuttle Creeks are 8,600 and 5,300 acre feet respectively. The lower portion of Owens River, in the Lone Pine Area, has always had a small amount of flow as shown in Table 1. This flow ranges between 4,600 and 11,500 acre-feet per year with an average of 8,000 acre-feet per year. However, with the start of the Lower Owens River Project in December 2006, the flow in the Owens River, near the Lone Pine Area, is being maintained at a minimum of 40 cfs.

Runoff Year	OWENS RIVER @ LP NG ROAD 0357	OWENS RIVER @ KEELER BRIDGE 0076	Lone Creek @ USGS gauge 0017	Indian Ditch spillgate 0094	Tuttle Creek @ Canyon Rd. 0019
1990		4,669	6,573	2,287	3,564
1991		6,032	7,532	2,358	4,347
1992		5,522	9,206	2,230	5,089
1993		9,610	6,884	2,423	5,587
1994		7,923	13,886	2,112	4,539
1995		9,294	11,008	4,117	7,896
1996		11,029	12,223	3,152	6,511
1997		10,154	15,144	2,609	6,880
1998		11,453	7,541	2,446	8,350
1999		10,092	6,821	2,279	4,558
2000		8,926	10,293	2,147	3,868
2001		6,809	4,258	2,292	5,733
2002		6,068	7,470	1,871	3,190
2003		6,277	5,313	2,102	4,632
2004		5,763	13,967	1,796	4,304
2005		5,471	12,371	2,204	7,363
2006		9,256	3,352	2,256	6,711
2007	38,185	39,804	6,719	1,847	3,061
2008	33,774	35,428	6,155	2,567	4,287
2009			6,155	2,514	3,911
Average	**35,980**	**11,031**	**8,644**	**2,385**	**5,306**

Table 1: Average Annual flow, in acre-feet, from surface gauges, Lone Pine Wellfield

The weather station, located at the Lone Pine Yard, indicates a long-term precipitation of 4 inches per year, lower than the precipitation in other parts of the Owens Valley.

a) **No Impact.** The proposed project will not violate any water quality standards or waste discharge requirements. LADWP will obtain a General Waste Discharge Permit for Discharges to Land with a Low Threat to Water Quality for the installation of the replacement well from the State Water Resources Control Board. All drilling waste generated during the installation of the well will be properly handled and stored during drilling operations and disposed of at an appropriate off site location.

b) **No impact.** Well W390 is one of the exempt wells that supply the Van Norman field. Water drawn from this well is used to irrigate the open field that it resides in. Similarly, the replacement well will work in the same general capacity to provide the same purpose for the local community, drawing water from the most productive zone for irrigation and to maintain groundwater supplies and recharge.

c) and d) **No impact.** The installation of the replacement well will not substantially alter the existing drainage pattern of the site or area. The project will require the installation of a well pad, electronics, and fencing. The drainage pattern of the site and the amount of surface runoff will not be altered as a result of the proposed project or installation of the well and its components.

e) **No Impact**. Storm water flows across the project site and infiltrates or enters existing surface water features. The proposed project will not contribute to stormwater runoff, and will not alter the volume of storm flows. There are no engineered storm drains present on the project site and none are proposed, so there are no impacts to stormwater drainage systems, nor will the project provide additional substantial new sources of polluted runoff.

f) **No Impact**. The installation of the replacement well will not substantially degrade water quality. Straw wattles will be installed between the drill rig and the edge of the irrigation ditch prior to the drilling of the replacement well. Any drilling spoils will be retained on-site and will be disposed of appropriately.

g), h) and i) **No Impact**. The proposed project will not place housing or structures that will impede flows within the flood plain, or create levees or dams No levees or dams are present on the project sites and no off-site levees or dams will be modified as part of project implementation. The project will have no impact on housing or structures in a 100 year flood hazard area.

j) **Less than Significant Impact.** Due to the distance to large surface water features from the project site, seiche, and tsunami are not relevant for the proposed project. However, mudflows originating at higher elevations above the project area and then moving across the site are a possible phenomenon. Since no habitable structures are planned as part of the project, people will not be exposed to injury or death from mudflows. Since the damage can be readily repaired by re-installing the facilities, the impact will be less than significant.

2.3.10 Land Use and Planning

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Discussion:

a) **No Impact.** The proposed project is located in an area zoned for open space and used for agriculture, wildlife habitat, and recreation. No habitable structures are located on or immediately adjacent to the properties, and none are planned as part of the proposed project. Therefore, there will be no project-related impacts on established communities.

b) **No Impact.** The Inyo County General Plan (2001) includes Goal BIO-1: Maintain and enhance biological diversity and healthy ecosystems through the County. Policy BIO-1.2 calls for the preservation of riparian habitat and wetlands and Policy BIO-1.3 calls for the restoration of biodiversity. Accordingly, there will be no adverse impacts on applicable land use plans and policies.

c) **No Impact.** There are no adopted habitat conservation plans or natural community conservation plans for this site. LADWP is currently working with USFWS and CDFG on a Habitat Conservation Plan. Implementation of the project will not conflict with the provisions of the Habitat Conservation Plan. Therefore, there will be no impact on any other adopted habitat plan or natural community conservation plan.

2.3.11 Mineral Resources

Issues and Supporting Information Sources	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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Discussion:

a) and b) **No Impact.** There is no existing mining activity at the project site. The project site is not a locally-important mineral resource recovery sites. These actions will not limit future mineral recovery activities or result in the loss of availability of known mineral resources. There will be no project-related impacts on mineral resources.

2.3.12 Noise

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

Discussion:

a) and d) **Less Than Significant Impact.** No habitable structures are located adjacent to the property, with the nearest residences approximately 1000 feet west of the construction site. The nearest school is approximately one-half mile west of the project area. Given the distance of the project from residences and schools, noise impacts during construction will be less than significant.

b) **Less Than Significant Impact.** Heavy equipment and the well drilling rig used for well installation may create minor groundborne vibration or groundborne noise. Since the closest buildings to the project site are roughly 1000 feet away, impacts related to temporary vibration or noise will be less than significant.

c) **No Impact.** Noise generated during project construction includes noise from intermittent vehicle travel, and drilling rig and construction vehicle and equipment operations. However, there will be no permanent increase in ambient noise levels related to the project.

e) and f) No **Impact.** The project area is not located sufficiently near either a private airstrip or public airport to expose people residing or working in the area to experience excessive noise

levels. Lone Pine airport is roughly one mile south of the project area. There will be no project-related impacts on noise near an active airport/airstrip.

2.3.13 Population and Housing

Issues and Supporting Information Sources	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 (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion:

a), b) and c) **No Impact.** The proposed project is a well replacement project that will not induce growth or require infrastructure improvements. No displacement or relocation will occur; there are no impacts.

2.3.14 Public Services

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?	☐	☐	☐	☒
ii) Police protection?	☐	☐	☐	☒
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

Discussion:

a) **No Impact.** Habitable structures are not present on the project site and none are proposed as part of the project. Recreation use and the subsequent need for police services will be the same as existing conditions. The project is not growth inducing and does not create structures that would require additional fire protection. Therefore, there will be no project-related impacts on fire protection, police protection, schools, parks, or other public facilities.

2.3.15 Recreation

	Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Discussion:

a) and b) **No Impact.** Habitable structures and recreational facilities are not present on the project site and none are proposed as part of the project. Therefore, the project will not result in population increases that will subsequently increase the use of park and recreational facilities. Therefore, the project will result in no impact to recreation or recreational facilities.

2.3.16 Transportation and Traffic

Issues and Supporting Information Sources	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?	☐	☐	☒	☐
b) Conflict with an applicable congestion management program, including but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c) 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?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

Discussion:

a) and b) **Less Than Significant Impact.** Construction of the project will result in a minimal number of construction vehicles and workers traveling to the project site. Additionally, the project site is in an area where the road is seldom used for daily local travel. There will be no impact on traffic patterns in Lone Pine, and the project does not conflict with any applicable traffic plan. The temporary increase in traffic in and around the project site is less than significant.

c) **No Impact.** The project area is not located sufficiently near either a private airstrip or public airport, nor does the project contain features that will alter air traffic patterns. The Lone Pine Airport is located 1 mile south of the project site. No impacts on air safety will occur.

d) **No Impact** Minor grooming of service roads may be needed to allow service vehicles to reach and work at the project site; otherwise, substantial roadway alterations are not proposed as part of the project. The existing roadways will continue to be suitable for their

existing use – no roadway hazards will be created and no impacts to road use will be created by the project.

e) **No Impact.** The project site is in an open field away from populated areas; service roads to and from the project site are infrequently used and are not normally used by emergency service vehicles. Additionally, all work on the replacement well will occur at a location off a spur road or patrol road away from normally travelled local roads. There are no impacts to emergency services access.

f) **No Impact.** The project does not include housing, employment, or roadway improvements relevant to alternative transportation measures. Therefore, there are no project-related impacts on alternative transportation

2.3.17 Utilities and Service Systems

Issues and Supporting Information Sources	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?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statues and regulations related to solid waste?	☐	☐	☐	☒

Discussion:

a) through c) and e) through g) **No Impact.** The project will not include or induce housing or employment that will affect local wastewater treatment requirements, or result in the construction of additional public services infrastructure. The project site does not contain water, sewage, or solid waste infrastructure, nor are any proposed under the project. There will be no project-related impacts on public utilities and service systems.

d) **No Impact.** There is no plumbed potable water serving the project site. The project will have no impact on water utility service.

2.3.18 Mandatory Findings of Significance

	Issues and Supporting Information Sources	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, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
b)	Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	☐	☐	☒	☐
c)	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, effects of other current projects, and the effects of probable future projects.)?	☐	☐	☒	☐
d)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

Discussion:

a) **Less than significant.** Replacement well W390 will not degrade the quality of the environment, reduce the habitat of a fish or wildlife species, cause fish or wildlife populations to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California History or prehistory. Well drilling and construction are short-term activities and will have no significant impacts. The project is located in a previously disturbed site and best management practices will be followed to reduce the potential of construction related impacts

b) **Less than significant.** The original well W390 and its replacement well are part of the enhancement and mitigation programs in the Technical Agreement. The failure of the well pump and the decrease in water production due to excessive sand is being corrected by the relocation and replacement of well W390, so that both short- and long-term enhancement and mitigation objectives of the Agreement are met.

c) **Less than significant.** While there are a few projects in Inyo County, none are in the immediate area of the project site, and none will have overlapping construction schedules with the proposed project. Therefore, cumulative construction-related impacts on air quality, noise, and traffic will be less than significant.

d) **No impact.** The proposed project will not have environmental effects which will cause substantial adverse effects on human beings.

Section 3
References, Abbreviations and Report Preparation

3.1 REFERENCES AND BIBLIOGRAPHY

Environmental Impact Report, State Clearinghouse No. 1989080705, January, 1991. *Increased Pumping of the Owens Valley Ground Water Basin.* Los Angeles Department of Water and Power, Los Angeles, CA

Inyo County and City of Los Angeles. 1990. *Green Book for Long-Term Groundwater Management Plan for the Owens Valley and Inyo County.* Los Angeles Department of Water and Power. Bishop, CA

City of Los Angeles vs. County of Inyo. 1991. *Agreement Between the County of Inyo and the City of Los Angeles and Its Department of Water and Power on a Long Term Groundwater Management Plan for Owens Valley and Inyo County.* Case No. 12908. Stipulation and Order for Judgment.

MOU. 1997. Memorandum of Understanding Between the City of Los Angeles Department of Water and Power, the County of Inyo, the California Department of Fish and Game, the California State Lands Commission, the Sierra Club, the Owens Valley Committee, and Carla Scheidlinger. Los Angeles Department of Water and Power. Bishop, Ca.

Cal EPA. 2009. Sites identified with waste constituents above hazardous waste levels outside the waste management unit. Available: http://www.calepa.ca.gov/SiteCleanup/CorteseList/CurrentList.pdf.

California Department of Toxic Substances and Control (DTSC). 2009. Hazardous waste and substances sites (EnviroStor) database. Available: http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm.

California Department of Transportation (Caltrans). 2008. Eligible (E) and Officially Designated (OD) Scenic Highways. Available: http://www.dot.ca.gov/hq/LandArch/scenic/cahisys4.htm.

California Geological Survey. *Alquist-Priolo Earthquake Fault Zones.* Index to Official Maps of Earthquake Fault Zones. Available: http://www.conservation.ca.gov/cgs/rghm/ap/Map_index/Pages/F4I.aspx.

Great Basin Unified Air Pollution Control District (GBUAPCD). 2008. *Final 2008 Owens Valley PM10 Planning Area Demonstration of Attainment State Implementation Plan* (SIP).

Inyo County. 2001. *Inyo County General Plan Goals and Policies Report.*

Los Angeles Department of Water and Power, the County of Inyo, the California Department of Fish and Game, the California State Lands Commission, the Sierra Club, the Owens

Valley Committee. 1997. Memorandum of Understanding between the City of Los Angeles Department of Water and Power the County of Inyo, the California Department of Fish and Game, the California State Lands Commission, the Sierra Club, the Owens Valley Committee. Los Angeles Department of Water and Power, Bishop, California.

Miles, S. R. and C. B. Goudy. 1997. *Ecological Subregions of California.* USDA, Forest Service Pacific Southwest Region, San Francisco.

Ross, D.C. 1964. *Geologic Map and Sections of the Independence Quadrangle, Inyo County, California.* USGS. Menlo Park, California.

3.2 ACRONYMS AND ABBREVIATIONS

APE	Area of Potential Effect
AQMP	Air Quality Management Plan
BMPs	Best Management Practices
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CAT	Climate Action Team
CCRI	Climate Change Research Initiative
CDFG	California Department of Fish and Game
CEC	California Energy Commission
CEQA	California Environmental Quality Act
City	City of Los Angeles
DWR	Department of Water Resources
Farmland	Prime Farmland, Unique Farmland, or Farmland of Statewide Importance
GCDIS	Global Change Data and Information System
GCRIO	Global Change Research Information Office
GBUAPCD	Great Basin Unified Air Pollution Control District
HCP	Habitat Conservation Plan
IS	Initial Study
LADWP	(City of) Los Angeles Department of Water and Power
MOU	Memorandum of Understanding
NAST	National Assessment and Synthesis Team
ND	Negative Declaration
PM_{10}	particulate matter 10 microns or less in diameter
SIP	state implementation plan
SCAQMD	South Coast Air Quality Management District
SNA	Significant Natural Areas
SWRCB	State Water Resources Control Board
USCCSP	U.S. Climate Change Science Program
USFWS	U.S. Fish and Wildlife Service
USGCRP	U.S. Global Change Research Program
USGS	U.S. Geological Survey

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