

**STATE WATER RESOURCES CONTROL BOARD
WATER QUALITY ORDER NO. 2015-0068-DWQ
WASTE DISCHARGE REQUIREMENTS AND
A WATER QUALITY CERTIFICATION
FOR**

LOS ANGELES DEPARTMENT OF WATER AND POWER

The State Water Resources Control Board (State Water Board) finds:

1. Discharger

On July 1, 2014 Los Angeles Department of Water and Power (LADWP) submitted a report of waste discharge for the installation of 61 miles of new double-circuit 230 kilovolt (kV) transmission line from the Barren Ridge Switching Station to the Haskell Canyon Switching Station and reconductoring of 76 miles of existing 230 kV transmission line from the Barren Ridge Switching Station to the Rinaldi Substation (Project). On July 24, 2014 the State Water Board notified LADWP that the application was incomplete because it lacked required application information. The remaining application information was submitted by LADWP and the application was deemed complete on February 25, 2015.

2. Project Description and Purpose

The Project consists of installing a new double-circuit 230 kV transmission line from the Barren Ridge Switching Station to the Haskell Canyon Switching Station and reconductoring an existing 230 kV transmission line between Barren Ridge Switching station and Rinaldi substation. The Project description in the application submitted by LADWP included installation of new circuits between Castaic Power Plant; however the application did not identify the specific locations of impacts to waters of the state for this portion of the project, therefore this Order does not authorize discharges associated with the installation of new circuits between Castaic Power Plant and Haskell Canyon Switching Station.

For the majority of the new double-circuit 230 kV transmission line, two new 230 kV circuits will be placed on new double-circuit transmission towers, except for an approximately 1.5 mile-segment just north of the Haskell Canyon Switching Station. The circuits for this 1.5 mile-segment will be placed on existing four-circuit structures that have three vacant positions. For the reconductoring portion of the Project, existing conductors (954/2,312 thousand circular mil (kcmil)) will be replaced with new 1,433.6 kcmil "Merrimack" ACSS/TW/HS (aluminum conductor steel supported/trapezoidal wires/high strength) conductors. The larger diameter of the new conductors allows for greater electrical capacity.

The purpose of the Project is to maximize the delivery of renewable wind and solar energy from the Tehachapi Mountains and Mojave Desert areas to the City of Los Angeles. The Project would allow energy generated by wind and solar resources to be transmitted to the Los Angeles Basin. Combined with the existing 7 percent of wind and solar energy (or 518 megawatts (MW)) currently in LADWP's resource mix, the Project could add an additional 1,400 MW of wind and solar energy, thereby bringing the total percentage of wind and solar energy in LADWP's resource mix to approximately 22 percent. Additionally, implementation of the Project would

assist LADWP meet peak electrical demand, interconnect and expand LADWP's renewable energy system, and provide increased reliability and flexibility of renewable energy resources.

3. Project Location

A map depicting the location of the Project is shown in Attachment A. The new 230 kV double-circuit transmission line is 61 miles long and runs from the Barren Ridge Switching Station to the Haskell Canyon Switching Station, paralleling LADWP's existing Barren Ridge-Rinaldi 230 kV transmission line. The reconductoring portion of the Project will reconductor the existing Barren Ridge-Rinaldi 230 kV transmission line. The Barren Ridge-Rinaldi transmission line extends past the Haskell Canyon Switching Station by 15 miles to the Rinaldi Substation.

The Project is located in Kern and Los Angeles Counties. It begins about 12 miles north of the unincorporated community of Mojave at the Barren Ridge Switching Station, slightly west of highway 14 off Pine Tree Canyon Road. The Project extends southwest through Fremont and Antelope Valleys, east of Barren Ridge and the Tehachapi Mountains. It continues into Angeles National Forest north of Santa Clarita, and terminates at the Rinaldi Substation. Overall, it traverses four miles of Bureau of Land Management (BLM)-managed lands, 13 miles of National Forest Service (NFS) lands, and 44 miles of private property.

4. Site Description

Approximately half of the Project lies within the Freemont-Antelope Valley watershed, and the other half lies within the Santa Clara River and Los Angeles Watersheds. The Antelope Valley watershed is a large, closed basin in the western Mojave Desert with a drainage area of 3,387 square miles. Surface water drains into the watershed by way of tributaries in the San Gabriel Mountains, the Tehachapi Mountains. With no outlet to the ocean, surface water flowing into Antelope Valley either infiltrates into the groundwater basin, flows toward three playas located east of the Project, or is lost through evapotranspiration. Due to the arid climate, more surface water is lost to evapotranspiration than either infiltrates to groundwater storage or discharges to the existing playas in the Antelope Valley (BR RTP Water Resources Technical Report, FEIR/EIS, 2012).

The Santa Clara River watershed drains approximately 1,634 square miles. The Santa Clara River has its headwaters at Pacifico Mountain in the San Gabriel Mountains, and flows southwest to drain into the Pacific Ocean between the Cities of San Ventura and Oxnard, California. The river is divided into two sections: the upper Santa Clara River, comprised of the main course of the river upstream of the Los Angeles – Ventura County line, and the Lower Santa Clara River. The Project is within the Santa Clara watershed in the vicinity of the Upper Santa Clara River. Major tributaries include Castaic Creek and San Francisquito Creek (BR RTP Water Resources Technical Report, FEIR/EIS, 2012).

The Los Angeles (LA) River Watershed is 824 square miles; the river is 55 miles long. It is one of the most diverse watersheds in the region in terms of land use patterns. Approximately 324 square miles of the watershed are covered by forest or open space land including the area near

the headwaters which originate in the Santa Monica, Santa Susana, and San Gabriel Mountains. The rest of the watershed is highly developed. Major tributaries to the river in the San Fernando Valley are the Pacoima Wash, Tujunga Wash (both drain portions of the Angeles National Forest in the San Gabriel Mountains), Burbank Western Channel and Verdugo Wash (both drain the Verdugo Mountains).¹

5. Receiving Waters Information

The Project is located within the jurisdictions of the Lahontan Regional Water Quality Control Board and the Los Angeles Regional Water Quality Control Board (Regional Water Boards). Receiving waters and groundwater potentially impacted by this Project are protected in accordance with the water quality control plans (Basin Plan) for the regions and other plans and policies which may be accessed online at: http://www.waterboards.ca.gov/plans_policies/. The Basin Plans include water quality standards which consist of beneficial uses of waters of the state² and water quality objectives to protect those uses. Attachment C lists the receiving waters and beneficial uses of waters of the state impacted by the Project.

6. Impacts to Waters of the State

The Project involves the proposed discharge of structural materials and/or earthen wastes (fill) to numerous ephemeral and intermittent drainages. These impacts could occur during construction, operation, maintenance, and decommissioning of the Project. Activities that could cause direct and indirect, and permanent and temporary impacts, include: improving existing access and spur roads; creating new access and spur roads; creating and using staging areas and disposal sites; clearing right-of-ways, clearing tower sites; installing conductors on existing towers (due to ground disturbances at tensioning and pulling sites); assembling and installing new towers; installing counterpoise and other grounding practices; and, creating impervious surfaces. Direct impacts occur when any Project activities occur directly in waters of the state. Indirect impacts occur to waters immediately outside of the direct impact area or when Project activities occur outside of waters of the state, but close enough where they could still impact waters of the state.

Impacts from the Project may cause adverse effects to waters of the state by increasing erosion and sedimentation from hydro-modification of streams (i.e., any activity or structure that increases the velocity and volume (flow rate) and/or the timing of runoff); reducing base flows of streams due to decreased groundwater recharge from new impervious surfaces; introducing potential new sources of polluted stormwater runoff and hazardous; loss of waters from direct removal and/or filling of waters of the state (i.e., tower foundations); and, generation of flooding

¹ http://www.waterboards.ca.gov/rwqcb4/water_issues/programs/regional_program/Water_Quality_and_Watersheds/los_angeles_river_watershed/la_summary.shtml.

² "Waters of the United States" means surface water and water bodies as defined by United States Environmental Protection Agency (U.S. EPA) regulations (see 40 C.F.R. § 122.2). This definition, which establishes the limits of federal jurisdiction over state waters, does exclude some surface water and water body types recognized under the California Water Code. The latter defines "waters of the state" more broadly as "any surface water or ground water, including saline waters, within the boundaries of the state." [Wat. Code, § 13050, subd. (e)]. Waters of the state that fall outside of federal jurisdiction are nonetheless fully protected under the Water Code.

from alteration of existing drainage patterns (e.g., placement of structures within a 100-year floodplain). Individual impact locations and quantities are shown in table 2 of Attachment C. Total impacts are summarized in Table 1 below.

Table 1: Total Project Fill/Excavation Quantity³						
Aquatic Resource Type	Temporary Impact			Permanent Impact		
	Acres	YD ³	LF	Acres	YD ³	LF
Stream Channel	11.01	0	11,876	1.71	378	4,957

7. Avoidance and Minimization

Projects authorized by the State Water Board that include impacts to waters of the state must demonstrate that the Project design has first avoided and then minimized impacts to waters of the state to the maximum extent practicable. After all opportunities to avoid and minimize impacts to waters of the state have been implemented, any remaining, unavoidable impacts to waters of the state must be offset by compensatory mitigation.

LADWP avoided direct impacts to waters of the state by selecting the environmentally preferred alternative as discussed in the Project's Final Environmental Impact Report/Environmental Impact Statement (FEIR/S). This alternative has the shortest distance of all alternatives analyzed in the FEIR/S and results in fewer stream crossings. It also crosses fewer miles of steep slopes, which reduces the risk of erosion-related impacts. LADWP will minimize impacts by incorporating General Practices (GPs) into the design of the Project (see pages 2-91 through 2-96 of the FEIR/S). Examples of GPs include using existing paved and unpaved highways and roads where possible; leaving all existing roads in a condition equal to or better than their condition prior to the construction of the transmission line; crushing vegetation instead of clearing and clearing only when necessary; revegetating; keeping all construction sites, material storage yards, and access roads in orderly condition; cleaning trash daily; and, containerizing petroleum products. Also, LADWP incorporated seven mitigation measures (HYD-1 through HYD-7) that are specific to water resource impacts. More information concerning these and other mitigation measures are in Attachment E.

8. Compensatory Mitigation

LADWP has proposed to purchase mitigation credits from the Peterson Ranch Mitigation Bank/Elizabeth Lake Bank in the Santa Clara Watershed at a 1:1 ratio of permanent impacts to mitigation for permanent, unavoidable impacts.

9. Regulatory Authority and Reason for Action

LADWP prepared a delineation report on November 19, 2014, showing waters of the state in the Project area that would likely be subject to regulation by the U.S. Army Corps of Engineers (Corps) under section 404 of the federal Clean Water Act (33 U.S.C. § 1344). The delineation

³ Cubic Yards (YD³); Linear Feet (LF)

report indicated that the northern half of the Project is located within the Antelope Valley watershed, which is a closed basin and therefore does not contain waters subject to federal jurisdiction. Nonetheless, these drainages are waters of the state, as defined by section 13050 of the California Water Code, and are therefore subject to state requirements. This Order shall be defined as and serve as both a water quality certification (Certification) issued pursuant to section 401 of the federal Clean Water Act (33 U.S.C. § 1341) for waters subject to federal jurisdiction, and waste discharge requirements (WDRs) issued pursuant to Water Code section 13263 to regulate discharges to waters of the state outside of federal jurisdiction.

This Order regulates the proposed discharge of fill material, including structural material and/or earthen wastes associated with the construction and operation of the Project to waters of the state. WDRs ensure that the Project's construction and operation will comply with all relevant Basin Plans, other applicable water quality control plans, applicable water quality standards, and appropriate requirements of state law.

The Discharger filed a Notice of Intent to comply with [State Water Board Order No. 2009-0009-DWQ](#), Waste Discharge Requirements For Discharges of Stormwater Runoff Associated With Construction Activity (Construction General Permit), National Pollutant Discharge Elimination System (NPDES) permit (southern portion, WDID# 4 19C371403 [Los Angeles Water Board], and northern portion, WDID# 6B19C371324 [Lahontan Water Board]). This Order also regulates waste discharges to non-federal waters from stormwater runoff, other discharges associated with Project construction activity, and post-construction stormwater runoff.

10. Fees⁴

An initial application fee of \$1097 was received on October 29, 2014, as required by California Code of Regulations, title 23, sections 3833(b). An additional fee, estimated at this time to be \$72,009, will be collected after adoption of this Order in accordance with the current fee schedule, but prior to the initiation of construction activities authorized in this Order. Annual active discharge and post discharge monitoring fees will be based on the current dredge and fill fee schedule at time of billing.

11. California Environmental Quality Act (CEQA) Findings

On September 12, 2012, LADWP, as lead agency for CEQA, adopted the FEIR/S (State Clearinghouse (SCH) No. 2008041038) for the Project and filed a Notice of Determination (NOD) at the SCH on September 26, 2012. Pursuant to CEQA, the State Water Board has

⁴ Additional, annual fees will be billed to LADWP based on the fee schedule that is current on the date the invoice is generated and Project phase (e.g., construction, or monitoring). Dischargers shall pay an annual active discharge fee of \$600 each fiscal year or portion of a fiscal year during which discharges occur until the State Water Board issues a Notice of Completion of Discharges Letter to LADWP. LADWP shall pay an annual post-discharge monitoring fee each fiscal year or portion of a fiscal year commencing with the first fiscal year following the fiscal year in which the State Water Board issued a Notice of Completion of Discharges Letter to LADWP, when continued water quality monitoring or compensatory mitigation monitoring is required. LADWP shall pay the annual post-discharge monitoring fee each fiscal year until the State Water Board issues a Notice of Project Complete Letter to LADWP.

made Findings of Facts (Findings) which support the issuance of this Order and are included in Attachment D.

12. Public Notice

The State Water Board provided public notice and an opportunity for public comment of the draft Order as set forth in Water Code section 13167.5 beginning on April 17, 2015. The public comment period ended on May 18, 2015.

THEREFORE, IT IS HEREBY ORDERED that, pursuant to Water Code sections 13160 and 13263:

A. Notification and Reporting Conditions

The following notifications and reports shall include the cover sheet in Attachment G which must be signed by the authorized representative of the LADWP.

1. Notifications

- a. Commencement of Construction:** LADWP shall submit Report Type 1, Commencement of Construction, as specified in Attachment G at least seven (7) days prior to start of initial ground disturbance activities.
- b. Request for Notice of Completion of Discharges Letter:** LADWP shall submit Report Type 2, Request for Notice of Completion of Discharges Letter, as specified in Attachment G, to the State Water Board at least thirty (30) days prior to the anticipated completion of all Project construction activities. Upon approval of the request the State Water Board shall issue a Notice of Completion of Discharges Letter to LADWP which will end the active discharge period and associated annual fees.
- c. Request for Notice of Project Complete Letter:** If post-discharge monitoring is required, LADWP shall submit Report Type 3, Request for Notice of Project Complete Letter, as specified in Attachment G, to the State Water Board at least thirty (30) days prior to the anticipated completion of all Project monitoring activities. Upon approval of the request the State Water Board shall issue a Notice of Project Complete Letter to LADWP which will end the post discharge monitoring period and associated annual fees.

2. Annual Reporting

LADWP shall submit Report Type 7, Annual Report, as specified in Attachment G, commencing with the anniversary of the effective date of this Order and continuing each year the Project has reached its performance standards for all compensatory mitigation and restoration requirements.

3. Conditional Reporting

LADWP shall submit the following reports on a case by case basis for noncompliance, accidental discharges, or notification of in-water work.

a. Noncompliance and Accidental Discharge

- i. LADWP shall notify the State Water Board of any accidental discharge or noncompliance with any condition of this Order, as soon as (A) LADWP has knowledge of the discharge or noncompliance, (B) notification is possible, and (C) notification can be provided without substantially impeding cleanup or other emergency measures. Notification may be via telephone, e-mail, delivered written notice, or other verifiable means.
- ii. For noncompliance, this notification must be followed within three (3) business days by submission of all of the required information as described in Report Type 4, Noncompliance Report, as specified in Attachment G.
- iii. For an accidental discharge, this notification must be followed within three (3) business days by submission of all of the required information as described in Report Type 6, Accidental Discharge Water Quality Monitoring Report.

b. In-Water Work

- i. LADWP shall notify the State Water Board at least forty-eight (48) hours prior to initiating in-water work or stream diversions. Notification may be via telephone, e-mail, delivered written notice, or other verifiable means.
- ii. This notification must be followed within three (3) business days by submission of all of the required information as described in Report Type 5, In-Water Work/Diversions Water Quality Monitoring Report, as described in Attachment G.

4. Report Submittal Information

Written notice shall be submitted to State Water Board and the appropriate Regional Water Board at the following addresses:

	State Water Board
Phone	(916) 323-2871
Fax	(916) 341-5584
Email	Jeanie.Mascia@waterboards.ca.gov
Address	ATTN: 401 Certification Program Division of Water Quality State Water Resources Control Board 1001 I Street 15 th Floor Sacramento, CA 95814

	Los Angeles Regional Water Board
Phone	(213) 576-6785
Fax	(213) 576-6640
Email	Inye@waterboards.ca.gov
Address	ATTN: 401 Certification Program 320 West Fourth Street, Suite 200 Los Angeles, CA 90013

	South Lahontan Regional Water Board
Phone	(760) 241-7376
Fax	(760) 241-7308
Email	Jan.Zimmerman@waterboards.ca.gov
Address	ATTN: 401 Certification Program 1440 Civic Drive, Suite 200 Victorville, CA 92392

B. Monitoring Conditions

1. General: Continuous visual surface water monitoring shall be conducted to detect accidental discharge of construction related pollutants (e.g. oil and grease, turbidity plume, or uncured concrete).
2. Accidental Discharge: Upon notification of and accidental discharge, the State Water Board may require water quality monitoring. The sources of accidental discharges must be eliminated as soon as practicable.

C. Standard Conditions

1. This Order is subject to modification or revocation upon judicial review, including review and amendment pursuant to Water Code section 13330.
2. This Order is not intended and shall not be construed to apply to any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license, unless the pertinent Certification application was filed pursuant California Code of Regulations, title 23, section 3855, subdivision (b), and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
3. In the event of any violation or threatened violation of the conditions of this Order, the violation or threatened violation shall be subject to any remedies, penalties, process, or sanctions as provided for under state and federal law. For purposes of Clean Water Act, section 401(d), the applicability of any state law authorizing remedies, penalties, processes, or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this Order.

D. General Compliance Conditions

1. Failure to comply with any condition of this Order shall constitute a violation of the Clean Water Act and the Porter-Cologne Water Quality Control Act (Wat. Code, § 13000 et seq.). Any such Order previously granted shall immediately be revoked, and any or all discharges shall cease. LADWP may then be subject to administrative and/or civil liability pursuant to Water Code sections 13350 and/or 13385.
2. Permitted actions must not cause a violation of any applicable water quality standards, including impairment of designated beneficial uses for receiving waters as adopted in the Basin Plans by any the applicable Regional Water Board or any applicable State Water Board water quality control plan or policy.

3. In response to a suspected violation of any condition of this Order, the State Water Board may require LADWP to furnish, under penalty of perjury, any technical or monitoring reports the State Water Board deems appropriate, provide that the burden, including costs, of the reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. The additional monitoring requirements ensure that permitted discharges and activities comport with any applicable effluent limitations, water quality standards, and/or other appropriate requirement of state law.
4. LADWP must, at all times, fully comply with engineering plans, specifications, and technical reports submitted to support this Order; and all subsequent submittals required as part of this Order. The conditions within this Order and attachments supersede conflicting provisions within LADWP submittals.
5. This Order and all of its conditions contained herein are not subject to the expiration or retraction of the Clean Water Act section 404 (33 U.S.C. § 1344) permit issued by the Corps for this Project. This Order and all of its conditions contained herein shall remain in full effect, and are enforceable until deemed complete by the State Water Board. For purposes of Clean Water Act, section 401(d), the completion of all conditions contained in this Order constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements of state law.
6. LADWP shall adhere to all requirements in the mitigation monitoring and reporting program (MMRP) as required by CEQA and is incorporated herein by reference.

E. Administrative Conditions

1. Signatory requirements for all document submittals required by this Order are presented in Attachment B.
2. The Executive Director of the State Water Board may suspend, cancel, or modify this Order, after providing notice to LADWP, if the Executive Director determines that the Project fails to comply with any of the terms or conditions of this Order.
3. The Executive Director may add to or modify the conditions of this Order, as appropriate, to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or Clean Water Act section 303 (33 U.S.C. § 1313).
4. LADWP shall give advance notice to State Water Board staff if Project implementation as described in LADWP's application is altered in any way or by the imposition of subsequent permit conditions by any local, state or federal regulatory authority. LADWP shall inform State Water Board staff of any modifications that interfere with compliance with this Order.
5. This Order does not authorize any act which results in the taking of a threatened, endangered or candidate species or any act, which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish & G. Code, §§ 2050-2097) or the federal Endangered Species Act (16 U.S.C. §§ 1531-1544). If a "take" will result from any act authorized under this Order held by LADWP, LADWP must obtain authorization for the take prior to any construction or operation of the portion

of the Project that may result in a take. LADWP is responsible for meeting all requirements of the applicable endangered species act for the Project authorized under this Order.

6. LADWP shall grant Water Boards staff, or an authorized representative (including an authorized contractor acting as a State Water Board representative), upon presentation of credentials and other documents as may be required by law, permission to:
 - a. Enter upon the Project or compensatory mitigation site(s) premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order.
 - b. Have access to and copy any records that must be kept under the conditions of this Order.
 - c. Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order.
 - d. Sample or monitor for the purposes of assuring Order compliance.
7. This Order is not transferable in its entirety or in part to any person or organization except after notice to the State Water Board in accordance with the following terms:
 - a. **Transfer of Property Ownership:** LADWP must notify the State Water Board of any change in ownership of the Project area, prior to transferring ownership of the Project area. Notification of change in ownership must include, but not be limited to, a statement that LADWP has provided the purchaser with a copy of this Order and that the purchaser understands and accepts the Order requirements and the obligation to implement them or be subject to liability for failure to do so; the seller and purchaser must sign and date the notification and provide such notification to the State Water Board no less than thirty (30) days prior to the transfer of ownership.
 - b. **Transferee Responsibilities:** Upon properly noticed transfers of responsibility, the transferee assumes responsibility for compliance with this Order and references in this Order to LADWP will be interpreted to refer to the transferee as appropriate. Transfer of responsibility does not necessarily relieve LADWP of all responsibilities in the event that a transferee fails to fully comply with the conditions of this Order.
 - c. **Transfer of Post-Construction BMP Maintenance Responsibility:** The transferee is required to assume responsibility for the inspection and maintenance of all post-construction structural BMPs until such responsibility is legally transferred to another entity. At the time maintenance responsibility for post-construction BMPs is legally transferred the LADWP and the transferee must submit to the State Water Board a copy of such documentation, and the LADWP shall provide the transferee with a copy of a long-term BMP maintenance plan that complies with manufacturer specifications and/or standard industry practices. The LADWP shall provide such notification to the State Water Board no later than thirty (30) days prior to the transfer of BMP maintenance responsibility.
8. A copy of this Order shall be provided to any contractor and all subcontractors conducting the construction and restoration work, and copies shall remain in their possession at the Project site until LADWP receives a Notice of Project Complete Letter from the State Water Board. LADWP shall be responsible for work conducted by its contractor and any subcontractors.

9. A copy of this Order must be available at the Project site(s) during construction and restoration for review by site personnel and agencies who may not be involved in construction. All personnel performing work on the Project shall be familiar with the content of this Order and its posted location at the Project site.
10. Lake and Streambed Alteration Agreement: LADWP shall submit a signed copy of the Department of Fish and Wildlife's (CDFW) lake and streambed alteration agreement to the State Water Board immediately upon execution and prior to any discharge to waters of the state.

F. Construction Conditions

Good Site Management "Housekeeping"

1. All activities and best management practices (BMPs) shall be implemented according to LADWP's application and the conditions in this Order. BMPs for erosion, sediment, and turbidity control shall be implemented and in place at commencement of, during, and after any ground clearing activities or any other Project activities that could result in erosion or sediment discharges to surface water.
2. Measures shall be employed to minimize disturbances along stream channels that will adversely impact the water quality of waters of the state. Disturbance or removal of vegetation shall not exceed the minimum necessary to complete Project implementation.
3. LADWP shall oversee the work of the contractor during implementation of the Project, to ensure that the work is being done in accordance with the plans.
4. LADWP shall implement all necessary control measures to prevent the degradation of water quality from the Project in order to maintain compliance with the Lahontan and Los Angeles Basin Plans, specifically for pH, temperature, dissolved oxygen, total suspended solids (TSS), and turbidity (Table 2). The discharge shall meet all effluent limitations and toxic and effluent standards established by the Los Angeles and Lahontan Regional Water Boards to comply with the provisions of sections 301, 302, 303, 306, and 307 of the Clean Water Act.
5. Waste discharges associated with the Project shall not: a) degrade surface water communities and populations including vertebrate, invertebrate, and plant species; b) promote the breeding of mosquitoes, gnats, black flies, midges, or other pests; c) alter the color, create visual contrast with the natural appearance, nor cause aesthetically undesirable discoloration of the receiving waters; d) cause the formation of sludge deposits; or e) adversely affect any designated beneficial uses of waters of the state.

Table 2: Water Quality Objectives

Constituent	Los Angeles Regional Water Board Limit	Lahontan Regional Water Board Limit
pH	The pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharges. Ambient pH levels shall not be changed more than 0.5	In fresh waters with designated beneficial uses of COLD or WARM, changes in normal ambient pH levels shall not exceed 0.5 pH units. For all other waters of the Lahontan Region, the pH shall not be

Constituent	Los Angeles Regional Water Board Limit	Lahontan Regional Water Board Limit
	<p>units from natural conditions as a result of waste discharge.</p> <p>(Los Angeles Regional Water Quality Control Board, Water Quality Control Plan for the Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties - Region 4 (2013), Chapter 3 <i>Water Quality Objectives</i>, p. 35.)</p>	<p>depressed below 6.5 nor raised above 8.5.</p> <p>The Lahontan Regional Water Board recognizes that some waters of the Lahontan Region may have natural pH levels outside of the 6.5 to 8.5 range. Compliance with the pH objective for these waters will be determined on a case-by-case basis.</p> <p>(Lahontan Regional Water Quality Control Board, Water Quality Control Plan for the Lahontan Region (Basin Plan) - Region 6 (1995), Chapter 3 <i>Water Quality Objectives</i>, p. 5)</p>
Temperature	<p>The natural receiving water temperature of all waters within the Los Angeles Region shall not be altered unless it can be demonstrated to the satisfaction of the Los Angeles Regional Water Board that such alteration in temperature does not adversely affect beneficial uses. Alterations that are allowed must meet the requirements below.</p> <p>For waters designated WARM, water temperature shall not be altered by more than 5° F above the natural temperature. At no time shall these WARM-designated waters be raised above 80° F as a result of waste discharges.</p> <p>For waters designated COLD, water temperature shall not be altered by more than 5° F above the natural temperature.</p> <p>(Los Angeles Regional Water Quality Control Board, Water Quality Control Plan for the Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties - Region 4 (1994), Chapter 3 <i>Water Quality Objectives</i>, p. 37, 38.)</p>	<p>The natural receiving water temperature of all waters shall not be altered unless it can be demonstrated to the satisfaction of the Lahontan Regional Water Board that such an alteration in temperature does not adversely affect the water for beneficial uses.</p> <p>For waters designated WARM, water temperature shall not be altered by more than five degrees Fahrenheit (5° F) above or below the natural temperature. For waters designated COLD, the temperature shall not be altered.</p> <p>(Lahontan Regional Water Quality Control Board, Water Quality Control Plan for the Lahontan Region (Basin Plan) - Region 6 (1995), Chapter 3 <i>Water Quality Objectives</i>, p. 6)</p>
Dissolved Oxygen	<p>At a minimum, the mean annual dissolved oxygen concentration of all waters shall be greater than 7 milligrams per liter (mg/L), and no single determination shall be less than 5.0 mg/L, except when natural conditions cause lesser concentrations.</p> <p>The dissolved oxygen content of all surface waters designated as WARM shall not be depressed below 5 mg/L as a result of waste discharges.</p>	<p>The dissolved oxygen concentration, as percent saturation, shall not be depressed by more than 10 percent, nor shall the minimum dissolved oxygen concentration be less than 80 percent of saturation.</p> <p>For waters with the beneficial uses of COLD, COLD with SPWN, WARM, and WARM with SPWN, the minimum dissolved oxygen concentration shall not be less than that specified below.</p>

Constituent	Los Angeles Regional Water Board Limit	Lahontan Regional Water Board Limit																														
	<p>The dissolved oxygen content of all surface waters designated as COLD shall not be depressed below 6 mg/L as a result of waste discharges.</p> <p>The dissolved oxygen content of all surface waters designated as COLD and SPWN shall not be depressed below 7 mg/L as a result of waste discharges.</p> <p>(Los Angeles Regional Water Quality Control Board, Water Quality Control Plan for the Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties - Region 4 (2013), Chapter 3 <i>Water Quality Objectives</i>, p. 29)</p>	<p>Water Quality Criteria for Ambient Dissolved Oxygen Cocentration^{1,2}</p> <table><tr><th></th><th colspan="4">Beneficial Use Class</th></tr><tr><th></th><th>COLD & SPWN³</th><th>COLD</th><th>WARM & SPWN³</th><th>WARM</th></tr><tr><td>30 Day Mean</td><td>NA⁴</td><td>6.5</td><td>NA</td><td>5.5</td></tr><tr><td>7 Day Mean</td><td>9.5 (6.5)</td><td>NA</td><td>6.0</td><td>NA</td></tr><tr><td>7 Day Mean Minimum</td><td>NA</td><td>5.0</td><td>NA</td><td>4.0</td></tr><tr><td>1 Day Minimum^{5,6}</td><td>8.0 (5.0)</td><td>4.0</td><td>5.0</td><td>3.0</td></tr></table> <p>1. From: USEPA. 1986. Ambient water quality criteria for dissolved oxygen. Values are in mg/L</p> <p>2. These are water column concentrations recommended to achieve the required intergravel dissolved oxygen concentration shown in parentheses. For species that have early life stages exposed directly to the water column (SPWN), the figures in parentheses apply.</p> <p>3. Includes all embryonic and larval stages and all juvenile forms to 30-days following hatching (SPWN).</p> <p>4. NA (Not Applicable)</p> <p>5. For highly manipulatable discharges, further restrictions apply.</p> <p>6. All minima should be considered as instantaneous concentrations to be achieved at all times.</p> <p>(Lahontan Regional Water Quality Control Board, Water Quality Control Plan for the Lahontan Region (Basin Plan) - Region 6 (1995), Chapter 3 <i>Water Quality Objectives</i>, p. 4, 24)</p>		Beneficial Use Class					COLD & SPWN ³	COLD	WARM & SPWN ³	WARM	30 Day Mean	NA ⁴	6.5	NA	5.5	7 Day Mean	9.5 (6.5)	NA	6.0	NA	7 Day Mean Minimum	NA	5.0	NA	4.0	1 Day Minimum ^{5,6}	8.0 (5.0)	4.0	5.0	3.0
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Total Suspended Solids (TSS)	<p>Waters shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses.</p> <p>(Los Angeles Regional Water Quality Control Board, Water Quality Control Plan for the Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties - Region 4 (2013), Chapter 3 <i>Water Quality Objectives</i>, p. 37)</p>	<p>Waters shall not contain suspended materials in concentrations that cause nuisance or that adversely affects the water for beneficial uses. For natural high quality waters, the concentration of total suspended materials shall not be altered to the extent that such alterations are discernible at the 10 percent significance level.</p> <p>(Lahontan Regional Water Quality Control Board, Water Quality Control Plan for the Lahontan Region (Basin Plan) - Region 6 (1995), Chapter 3 <i>Water Quality Objectives</i>, p. 6)</p>																														

Constituent	Los Angeles Regional Water Board Limit	Lahontan Regional Water Board Limit
Turbidity	<p>Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases in natural turbidity attributable to controllable water quality factors shall not exceed the following limits:</p> <p>Where natural turbidity is between 0 and 50 Nephelometric Turbidity Units (NTU), increases shall not exceed 20%.</p> <p>Where natural turbidity is greater than 50 NTU, increases shall not exceed 10%.</p> <p>(Los Angeles Regional Water Quality Control Board, Water Quality Control Plan for the Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties - Region 4 (2013), Chapter 3 <i>Water Quality Objectives</i>, p. 38, 39)</p>	<p>Waters shall be free of changes in turbidity that cause nuisance or adversely affect the water for beneficial uses. Increases in turbidity shall not exceed natural levels by more than 10 percent.</p> <p>(Lahontan Regional Water Quality Control Board, Water Quality Control Plan for the Lahontan Region (Basin Plan) - Region 6 (1995), Chapter 3 <i>Water Quality Objectives</i>, p. 6)</p>

Dewatering

6. All surface waters, including ponded waters, shall be diverted away from areas undergoing grading, construction, excavation, vegetation removal, and/or any other activity which may result in a discharge to the receiving water.
7. No activities shall involve wet excavations (i.e., no excavations shall occur below the seasonal high water table). A minimum 5-foot buffer zone shall be maintained above the existing groundwater level.
8. Diversion activities shall not result in the degradation of beneficial uses or exceedance of water quality objectives of the receiving waters. Downstream total suspended solids (TSS) and turbidity may not exceed the limits in Table 2. Any such violations may result in corrective and/or enforcement actions, including increased monitoring and sample collection.
9. All temporary dewatering methods shall be designed to have the minimum necessary impacts to waters of the state to isolate the immediate work area. All dewatering methods shall be installed such that natural flow is maintained upstream and downstream of the Project area. Any temporary dams or diversions shall be installed such that the diversion does not cause sedimentation, siltation, or erosion upstream or downstream of the Project area. All dewatering methods shall be removed immediately upon completion of Project activities.

Fugitive Dust Control

10. Dust control measures, including pre-watering of excavation/grading sites, use of water trucks, track-out prevention, washing down vehicles/equipment before leaving site, and prohibiting grading/excavation activities during windy periods, should be implemented as appropriate and in accordance with any mandated drought restrictions.
11. Dust control activities shall be conducted in such a manner that will not produce downstream runoff.
12. Dust control activities shall be conducted in compliance with any restrictions on use of potable water as required by Rule No. 14.1-SO, Voluntary Water Conservation Plan, Southern Division of the California-American Water Company, date effective: April 17, 2014, and as shown below:
 - a. Use of potable water for watering streets with trucks, except for initial wash-down for construction purposes (if street sweeping is not feasible), or to protect the health and safety of the public;
 - b. Use of potable water for construction purposes, such as consolidation of backfill, dust control, or other uses unless no other source of water or other method can be used; and,
 - c. Use of potable water for construction purposes unless no other source of water or other method can be used.

Construction Materials and Equipment

13. No equipment shall be operated in areas of flowing or standing water unless dewatering measures are implemented per Construction Condition numbers 6 – 9.
14. At no time shall LADWP use any vehicle or equipment which leaks any substance that may impact water quality.
 - a. LADWP shall designate a staging area for equipment and vehicle fueling, maintenance, and storage at least one-hundred (100) feet away from waters, in a location where fluids or accidental discharges cannot flow into waters. Any maintenance or refueling of vehicles or equipment occurring on-site shall be done in a designated area with secondary containment including drip pans and/or placement of absorbent material, located away from drainage courses to prevent the runoff of storm water and the runoff of spills.
 - b. Stationary equipment (motors, pumps, generator, etc.) and vehicles not in use shall be positioned over drip pans or other types of containment.
 - c. Spill and containment equipment (oil spill booms, sorbent pads, etc.) shall be maintained onsite at all locations where equipment is used or staged.

15. Except as provided in Construction Conditions 16 and 17, fueling, refueling, lubrication, maintenance, operation, and storage of vehicles and equipment shall not result in a discharge or a threatened discharge to waters of the state, and is prohibited within the floodplain or within one-hundred (100) feet of the waterway. Exceptions to the 100-foot limit shall be approved by State Water Board staff on a case-by-case basis provided LADWP first submits a request in writing 30 days in advance of any of these activities that explains why the exception is necessary, the proposed BMPs to contain any hazardous spills, and location information.
16. If critical equipment must be refueled within one-hundred (100) feet of a water of the state, spill prevention and countermeasures must be implemented to avoid spills and refueling areas shall be provided with secondary containment including drip pans and/or placement of absorbent material.
17. Fueling of individual equipment types within waters of the state may be authorized if LADWP first prepares a fueling plan that:
 - a. Identifies the specific piece of machinery that may require fueling within waters of the state;
 - b. Provides justification for the need to refuel within waters of the state. The justification shall describe why fueling outside waters of the state is infeasible; and,
 - c. Includes a narrative of specific BMPs that shall be employed to prevent and capture fuel releases.
18. All equipment must be washed prior to transport to the Project site and must be free of sediment, debris, and foreign matter.
19. All imported fill material shall be clean and free of pollutants. All fill material shall be imported from a source that has the appropriate environmental clearances and permits. The reuse of low-level contaminated solids as fill on-site shall be performed in accordance with all state and federal policies and established guidelines.
20. All imported riprap, rocks, and gravels used for construction shall be pre-washed.
21. Surface water shall be diverted such that it will not flow over concrete within thirty (30) days after it is poured/sprayed. During that time, if the concrete must be kept moist, then the runoff from the concrete shall not be allowed to enter waters of the state. Commercial sealants, subject to State Water Board or CDFW approval, may be applied to the concrete surface where difficulty in excluding flow for a long period may occur. If sealant is used, water shall be excluded from the site until the sealant is cured and until no detrimental impacts to water quality shall occur. If groundwater comes into contact with fresh concrete, it shall be prevented from flowing to surface water. Surface water that contacts wet concrete must be pumped out and disposed of at an appropriate off-site commercial facility that is authorized to accept concrete wastes.
22. Asphalt-concrete grindings shall not be placed in any location where it may, at any time, be directly exposed to stormwater or seasonally-high ground water, except asphalt-concrete grinding may be re-used and incorporated into impervious asphalt mixes.

Hazardous Materials and Waste

23. LADWP shall not discharge substances in concentrations toxic to human, plant, animal, or aquatic life or that produce detrimental physiological responses.
24. All equipment using gas, oil, hydraulic fluid, or other petroleum products shall be well-maintained and inspected daily for fuel, oil, and hydraulic fluid leaks or other problems that could result in spills of toxic materials prior to use.
25. LADWP shall not discharge waste classified as "hazardous waste discharge" as defined in California Code of Regulations, title 22, section 66260.10, or "designated waste" as defined in Water Code section 13173.
26. Onsite containment for storage of chemicals classified as hazardous shall include secondary containment and appropriate management as specified in California Code of Regulations, title 27, section 20320.
27. Asphalt, drilling fluids, lubricants, paints, coating material, oil, petroleum products, or any other substances which could be hazardous to fish and wildlife resulting from or disturbed by Project-related activities, shall be prevented from contaminating the soil and/or entering waters of the state.
28. Activities shall not cause visible oil, grease, or foam in the work area or downstream.
29. Any oil or grease leaks shall be cleaned up immediately.
30. An emergency spill kit must be at the Project site at all times.
31. No hazardous materials, pesticides, fuels, lubricants, oils, hydraulic fluids, or other construction-related potentially hazardous substances should be stored within a floodplain or within one-hundred (100) feet of a water of the state.
32. If authorized, application of pesticides must be supervised by a certified applicator and be in conformance with manufacturer's specifications for use. Compounds used must be appropriate to the target species and habitat. All pesticides directed toward aquatic species must be approved by the State Water Board. Pesticide utilization shall be in accordance with State Water Resources Control Board Water Quality Order [Nos. 2011-0002-DWQ](#) (NPDES Permit For Biological And Residual Pesticide Discharges To Waters Of The United States From Vector Control Applications - General Permit No. CAG 990004) and [2004-0009-DWQ](#) (NPDES Permit for Discharge of Aquatic Pesticide/Weed Control).

Access Roads

33. The number of access routes, number and size of staging areas, and the total area of the activity will be limited to the minimum necessary to achieve the Project goal. Routes and boundaries will be clearly demarcated, and these areas will be outside of riparian and wetland areas.

34. LADWP shall use existing paved and unpaved highways and roads where possible, and roads along existing utility corridors.
35. Wherever possible, roads shall be built at right angles to streams and washes. Culverts or other drainage structures will be installed as necessary across drainages, but the roads should follow natural grade.
36. All existing roads shall be left in a condition equal to or better than their condition prior to the construction of the transmission line without changing their service level.
37. Gates shall be installed where required at fenced property lines to restrict general vehicular access from or to the rights of way (ROW).
38. Sediment barriers shall be installed (e.g., silt fences and/or staked hay or straw bales, or sandbags) at the base of disturbed slopes adjacent to road crossings. These barriers shall be installed to prevent siltation into water bodies or wetlands crossed by or near the construction work area, and will remain in place until re-vegetation is successful.
39. Bridges, culverts, dip crossings, or other structures shall be installed so that water flow is not impaired. Bottoms of temporary culverts shall be placed at water body grade and bottoms of permanent culverts shall be placed at or below water body grade.
40. Storm drain lines/culverts, outfall structure, and other water body crossing structures shall be properly aligned within the water body and otherwise engineered, installed, and maintained, to assure resistance to washout, and to prevent erosion and/or fill of the water body. Water velocity shall be dissipated at outfalls to reduce erosion.
41. During installation of any permanent bridge or temporary crossing, a method of containment must be used below the bridge or crossing to prevent debris from falling into the water body.

Trash and Other Waste

42. LADWP is prohibited from discharging waste materials to waters of the state, unless explicitly authorized by this Order. Waste materials include, but are not limited to, spoils, debris, or any other substances associated with the Project, such as soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washings, broken concrete/cement, welding slag, unset cement, concrete, grout, damaged concrete spoils, wash water used to clean concrete surfaces, leachate from truck or grout mixer cleaning stations, or other organic or earthen material.
43. Designated spoil and waste areas shall be visually marked prior to any excavation and/or construction activity, and storage of the materials shall be confined to these areas. All waste or dredged material removed shall be relocated to a legal point of disposal if applicable. A legal point of disposal is defined as one for which waste discharge requirements have been established by a Regional Water Quality Control Board or the State Water Board, and is in full compliance with its authorized WDRs.

44. All Project-generated waste shall be handled, transported, and disposed in strict compliance with all applicable state and federal laws and regulations. When disposing of Project-generated waste, LADWP and its contractors shall:
 - a. Make appropriate arrangements to dispose of the material, including, but not limited to, property owner agreements, permits, licenses, and environmental clearances;
 - b. Obtain satisfactory evidence that the work in this condition has been completed;
 - c. Ensure the Resident Engineer has given written permission for disposal; and
 - d. Obtain a dated, signed manifest from the disposal site owner, or authorized representative, that identifies the type and quantity of disposed waste.
45. LADWP may temporarily stockpile excavated sediment prior to disposal or reuse, provided that appropriate state and federal regulations are met and BMPs are implemented to protect water quality and beneficial uses. The excavated sediment may be stockpiled on site so that it can be loaded into trucks for offsite disposal within seven calendar days of the completion of active work. Onsite stockpiled materials shall be fully contained to prevent any wind or water transport. The excavated sediment may also be temporarily stockpiled at an offsite location. Offsite stockpiles shall be covered and surrounded with perimeter sediment control BMPs to ensure that excavated materials remain stable. Runoff, sediment, or decant water from excavated materials shall not contact waters of the state. Any material stockpiled that is not actively being used during construction shall be covered with plastic unless reserved for seed banking, which requires alternative erosion and dust control BMPs.
46. Except for temporary stockpiling of waste generated during demolition operations ("temporary" in this instance means generated and removed during the same working day), waste materials shall not be placed in a manner where the materials may be transported into waters of the state. Waste materials shall not be placed within 100 linear feet of the ordinary high-water mark of waters of the state. Exceptions to the 100-foot limit may be granted on a case-by-case basis provided LADWP first submits a proposal in writing that is found acceptable by State Water Board staff.
47. Soil, silt, or other organic materials shall not be placed where such materials could pass into surface water or surface water drainage courses.
48. LADWP shall develop and maintain onsite a Project-specific Spill Prevention, Containment and Cleanup Plan outlining the practices to prevent, minimize, and/or clean up potential spills during construction of the Project. The plan must detail the Project elements, construction equipment types and location, access and staging, and construction sequence. The Plan must also address spill response and prevention measures for potential spills that may occur within the Project site.
49. LADWP is not authorized to discharge wastewater (e.g., water that has contacted uncured concrete or cement, or related washout) to surface waters, ground waters, or land. All wash water shall be contained and disposed of in compliance with state and local laws, ordinances, and regulations. If concrete washout is necessary at the site, LADWP shall use washout containment to prevent any discharge. Wastewater may

only be disposed of to a sanitary waste water collection system/facility (with authorization from the facility's owner or operator) or a properly-licensed disposal or reuse facility.

50. Hardened concrete or grout shall be disposed at an authorized landfill, in compliance with state and local laws, ordinances, and regulations.
51. All construction debris and trash shall be contained and regularly removed from the work area to the staging area during construction activities.
52. To prevent sediment-laden water from being released back into waters of the state during transport of spoils to disposal or reuse locations, truck beds shall be lined with an impervious material (e.g., plastic), or the tailgate shall be blocked with wattles or other appropriate filtration material.
53. All construction-related equipment, materials, and any temporary BMPs no longer needed, shall be removed and cleaned from the site upon completion of the Project.
54. Upon completion of construction, all Project-generated debris, building materials, excess material, waste, and trash shall be removed from all the Project sites for disposal at an authorized landfill or other disposal site in compliance with state and local laws, ordinances, and regulations.

Erosion and Sediment Control; Stabilization

55. LADWP shall implement and maintain erosion control measures and sediment controls (e.g. jute, weed-free straw, coconut fiber erosion control fabric, coir logs, re-vegetation, fiber rolls, erosion control blankets, hydromulching, compost, weed-free straw with tackifiers, temporary basins etc.) at all disturbed areas of the Project site that drain to waters of the state through the entire duration of the Project. These measures shall be constructed and maintained to prevent the discharge of earthen materials to waters of the state, including all ephemeral and intermittent drainages, seasonal swales, storm drain systems, and tributaries to waters of the state, from disturbed areas during all periods of ground clearing, site grading, and construction, as well as after completion of construction.
56. Erosion and sediment control measures shall be on site prior to the start of construction and kept on site at all times so they are immediately available for installation in anticipation of rain events.
57. Erosion and sediment control measures and other construction BMPs shall be implemented and maintained in accordance with all specifications governing their proper design, installation, operation, and maintenance.
58. Where areas of bare soil are exposed during the rainy season, silt control measures shall be used where silt and/or earthen fill threaten waters of the state. Silt control structures shall be monitored for effectiveness and shall be repaired or replaced as needed. Buildup of soil behind silt fences shall be removed promptly and any breaches or undermined areas repaired at once.

59. After sediment removal, LADWP shall grade channels so that the transition between the work area and the existing channel, both upstream and downstream, is smooth and continuous, and does not present a "wall" of sediment or other blockage that could erode or cause erosion once flows are restored.
60. The grading, stabilization and re-vegetation will be phased to limit the exposed or working face such that the graded area can be stabilized within twenty-four (24) hours after the first prediction of rain during the five (5) day forecast or within twenty-four (24) hours after final grading of the phased area.
61. Where bank stabilization activities may result in modifications to channel cross-sections and/or profiles, the banks shall be re-contoured to match the adjacent bank slope.
62. All areas that have 14 or more days of inactivity must be stabilized within 14 days of the last activity. LADWP is responsible for implementing and maintaining BMPs to prevent erosion of the rough graded areas.
63. LADWP shall prioritize the use of wildlife-friendly biodegradable (not photodegradable) erosion control products wherever feasible. LADWP shall not use or allow the use of erosion control products that contain synthetic netting for permanent erosion control (i.e., erosion control materials to be left in place for two years or after the completion date of the project). If LADWP finds that erosion control netting or products have entrapped or harmed wildlife, personnel shall remove the netting or product and replace it with wildlife-friendly biodegradable products.

Vegetation Management

64. LADWP shall prepare and implement a comprehensive, adaptive Weed Control Plan for pre-construction and construction invasive weed abatement (see mitigation measure BIO-2a of FEIR/S for this Project).
65. Equipment and machinery used in Project construction shall be inspected and cleaned of non-native, invasive vegetation prior to on-site use.
66. Best management practices to stabilize disturbed soils must include the use of native plant species whenever feasible.
67. LADWP must prevent the introduction or spread of noxious/invasive weeds or aquatic invasive species within the Project and staging areas. Measures may include, but are not limited to, the treatment of on-site infestations and the cleaning of all equipment and gear that has been at an infested site.

Special Status Species

68. Prior to construction, LADWP shall hold a mandatory environmental education program for all construction personnel, which shall be conducted by LADWP's biologist. As new construction personnel are added to the Project, the crew foreman shall schedule training sessions with the Engineer and LADWP's biologist prior to the start of work by new personnel. The program shall cover all plant and animal special status species that could potentially occur on-site (e.g., California red-legged frog) and the protection

measures to be implemented throughout construction. The environmental education program shall include a description, representative photographs, and legal status of each special status species; terms and conditions of the biological opinion; and the penalties for not complying with biological mitigation and permit requirements. The program shall outline the environmental restrictions and guidelines set forth in the mitigation measures and Project permits that must be followed by all construction personnel to avoid or reduce effects on special status species and their habitat during Project implementation. The Contractor shall ensure that all construction personnel are in compliance with guidelines and restrictions set forth in the environmental training and Project permits.

69. LADWP shall adhere to the Conservation Measures, Reasonable and Prudent Conditions, and the Terms and Conditions of the Endangered Species Act Section 7 Consultation Biological Opinion (*Biological Opinion for the Barren Ridge Renewable Transmission Project, Los Angeles and Kern Counties, California (8-8-12-F-20) (2830-31(P) CAD000.06 CACA-048871)*, dated September 17, 2002).

Storm Water

70. LADWP shall follow all relevant conditions of the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, including Attachment A: Linear Underground/Overhead Requirements, for the entire geographical area of the Project.
71. The Application shall maintain compliance with the Stormwater Pollution Prevention Plans prepared and submitted to the Water Boards for the Project (NPDES No. CAS000002; WDIDs 4 19C371403 and 6B19C371324).

G. Restoration Conditions

1. After completion of grading, all areas must be revegetated with native species appropriate for the area. The revegetation palette must not contain any plants listed on the California Invasive Plant Council Invasive Plant Inventory, which can be accessed at: <http://www.cal-ipc.org/ip/inventory/weedlist.php>.
2. LADWP shall restore all areas of temporary impacts to aquatic resources and all upland areas of temporary disturbance which could result in a discharge to waters of the state as described in a restoration plan. The restoration plan shall be submitted for written concurrence by State Water Board staff within ninety days (90) of issuance of this Order. The restoration plan may be satisfied by the on-site Revegetation Plan (mitigation measure BIO-1 of FEIR/S for this Project), as long as the Revegetation Plan addresses on-site mitigation measures for permanent and temporary Project impacts to waters and riparian vegetation; plans for grading of disturbed areas to pre-project contours; planting palette with plant species native to the Project area; seed collection in the vicinity of and within 1,000 feet elevation band of construction area, performance standards; and, maintenance requirements (e.g. watering, weeding, and replanting).
3. The State Water Board may extend the monitoring period beyond requirements of the restoration plan upon a determination that the performance standards have not been met.

4. If restoration of aquatic resources is not completed within 180 days of the impacts, compensatory mitigation may be required to offset temporal loss of waters of the state.
5. Hydroseeding shall be performed with California native seed mix.
6. Vegetation management and replanting shall be conducted using a strategy that maximizes the functions of the vegetation to shade the active channel, stabilizes active channel banks, and provides instream habitat.

H. Mitigation Conditions

1. **Compensatory Mitigation Timing:** A copy of the fully executed agreement for the purchase of mitigation credits shall be provided to the State Water Board within 180 days of the date of this Order.
2. **Letter of Credit**
 - a. LADWP shall establish in favor of the State Water Board, an irrevocable letter of credit in an amount sufficient to pay for the cost of LADWP's required compensatory mitigation under this Order within 90 days of issuance of this Order. LADWP shall prepare a draft letter of credit and submit it to the State Water Board for written approval. The letter of credit shall allow the State Water Board to immediately draw on the letter of credit if the State Water Board determines, in its sole discretion, that LADWP has failed to meet its mitigation obligations.
 - b. LADWP shall finalize and execute the letter of credit within sixty (60) days after the State Water Board approves the draft letter of credit. LADWP shall have a letter of credit in place until LADWP has completed the required compensatory mitigation to the reasonable satisfaction of the State Water Board.
 - c. If LADWP has not completed the required compensatory mitigation within sixty (60) days prior to the letter of credit's expiration date, LADWP shall obtain an extension or a new letter of credit. The new letter of credit shall be subject to State Water Board approval following the same procedure described in the conditions above.
 - d. If LADWP is unable to establish a letter of credit, it shall arrange a different security instrument with the State Water Board prior to the letter of credit's expiration.
3. **Draft and Final Compensatory Mitigation Plan:** LADWP shall provide a preliminary compensatory mitigation plan for written approval by State Water Board staff within 90 days of issuance of this Order and a final compensatory mitigation plan for written approval by the State Water Board staff within 6 months of issuance of this Order. The final compensatory mitigation plan shall include at a minimum:
 - a. Mitigation bank or in-lieu fee program name and contact information.
 - b. Mitigation bank or in-lieu fee program location including: latitude/longitude, county, and nearest city.
 - c. Amount and type of aquatic resource credits proposed for compensation.

- d. Description of what the quantity of credits equals in acres and/or linear feet.
 - e. Rationale for the type of credit purchased (e.g., in-kind or out of kind),
 - f. Rationale for location of mitigation (e.g., inside or outside of watershed).
4. The State Water Board may extend the monitoring period beyond requirements of the compensatory mitigation plan upon a determination that the performance standards have not been met or are not on track to meet them.
5. **Completion of Mitigation Responsibility:** LADWP shall retain responsibility for providing the compensatory mitigation until the appropriate compensatory mitigation has been secured from a sponsor and the State Water Board has received documentation that confirms that the sponsor has accepted the responsibility for providing the required compensatory mitigation. This documentation may consist of a letter or form signed by the sponsor.
6. **Transfer of Mitigation Responsibility:** Any notification of transfer of responsibilities to satisfy the mitigation requirements set forth in this Order must include a signed statement from an authorized representative of the new party (transferee) demonstrating acceptance and understanding of the responsibility to comply with and fully satisfy the mitigation conditions and agreement that failure to comply with the mitigation conditions and associated requirements may subject the transferee to enforcement by the State Water Board under Water Code sections 13350 and 13385, subdivision (a). Notification of transfer of responsibilities meeting the above conditions must be provided to the State Water Board no less than thirty (30) days prior to the transfer of the mitigation responsibility.

I. Deviation Conditions

Minor modifications of Project locations or predicted impacts may be necessary as a result of unforeseen field conditions, necessary engineering re-design, construction concerns, or similar reasons. Some of these prospective Project modifications may have impacts on water resources. Some modifications of Project locations or predicted impacts may qualify as Deviations. For purposes of this Order, a "Deviation" is a Project locational or impact modification that does not require an immediate amendment of the Order, because the State Water Board has determined that any potential water resource impacts that may result from the change are sufficiently addressed by the Order conditions and the FEIR/S. Project modifications that warrant or necessitate changes to this Order that are not addressed by existing environmental documents will require an amendment to this Order and do not qualify for the Deviation procedures set forth in Attachment F of this Order. After the termination of construction, this Order will be amended to reflect all authorized Deviations and any resulting adjustments to the amount of water resource impacts and required compensatory mitigation amounts.

J. Water Quality Certification and Waste Discharge Requirements

This Order for the Barren Ridge Renewable Transmission Line Project shall apply as long as all of the conditions listed in this Order are met, any discharge from the referenced Project will comply with the applicable provisions of Clean Water Act sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and

Implementation Plans), 306 (National Standards of Performance), and 307 (Toxic and Pretreatment Effluent Standards). Except insofar as may be modified by any preceding conditions, all Order actions are contingent on (a) the discharge being limited and all proposed mitigation being completed in strict compliance with the conditions of this Order and the attachments to this Order, and (b) compliance with all applicable requirements of Statewide Water Quality Control Plans and Policies, the Regional Water Boards' Water Quality Control Plans and Policies, and the FEIR/S for the Project.

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on May 19, 2015.

AYE: Chair Felicia Marcus
Vice Chair Frances Spivy-Weber
Board Member Tam M. Doduc
Board Member Steven Moore
Board Member Dorene D'Adamo

NAY: None

ABSENT: None

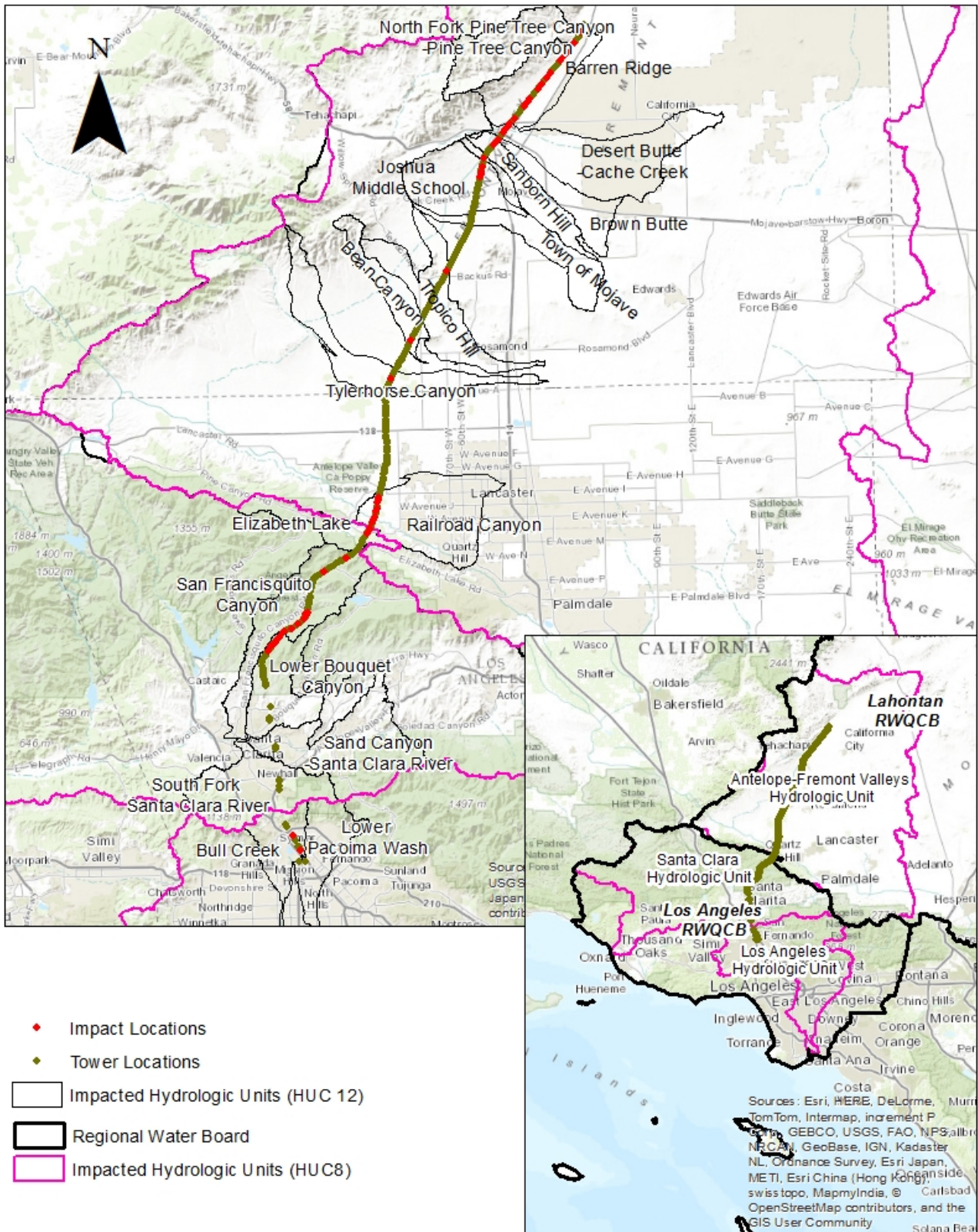
ABSTAIN: None

Jeanine Townsend
Clerk to the Board

Attachment A	Project Location
Attachment B	Signatory Requirements
Attachment C	Receiving Waters and Impact Information
Attachment D	CEQA Findings
Attachment E	Mitigation, Monitoring, and Reporting Plan
Attachment F	Deviation Procedures
Attachment G	Construction Notification and Reporting

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Attachment A: Project Location



Signatory Requirements

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SIGNATORY REQUIREMENTS

*All Documents Submitted In Compliance With This Order
Shall Meet The Following Signatory Requirements:*

1. All applications, reports, or information submitted to the State Water Resources Control Board (State Water Board) must be signed and certified as follows:
 - a) For a corporation, by a responsible corporate officer of at least the level of vice-president.
 - b) For a partnership or sole proprietorship, by a general partner or proprietor, respectively.
 - c) For a municipality, or a state, federal, or other public agency, by either a principal executive officer or ranking elected official.
2. A duly authorized representative of a person designated in items 1.a through 1.c above may sign documents if:
 - a) The authorization is made in writing by a person described in items 1.a through 1.c above.
 - b) The authorization specifies either an individual or position having responsibility for the overall operation of the regulated activity.
 - c) The written authorization is submitted to the State Water Board Executive Director.
3. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Receiving Waters, Impact, and Mitigation Information

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Table 1: Receiving Water(s) Information

Impact Description key:

RI-P: Road Improvement, permanent impacts
RI-T: Road Improvement, temporary impacts
PTS-T: Pulling, Tensioning, Stringing, temporary impacts

SR-P: Spur road, permanent impacts
SR-T: Spur road, temporary impacts
MR-T: Main road, temporary impacts
MR-P: Main road, permanent impacts

G-T: Guard structure, temporary impacts

Impact Site ID	Tower Location ID and Impact Description	Waterbody Name	Impacted Aquatic Resource Type	Basin Plan hydrologic unit	NHD Hydrologic Unit Code 12 & Name	Receiving Waters	Receiving Waters Beneficial Uses	303d Listing Pollutant
Los Angeles RWQCB								
1 – Bull Creek	249-2 (PTS) 109 (PTS)	Unnamed ephemeral drainages	Stream	180701050208 – Bull Creek	180701050208- Bull Creek	Los Angeles Reservoir, Bull Creek	<u>Existing BUs:</u> MUN, IND, PROC, WARM, WILD, RARE <u>Potential BUs:</u> GWR	N/A
2 - Lower Bouquet Canyon	55-4 (RI-P, RI-T) 56-4 (PTS-T) 57-2 (RI-P, RI-T) 57-3 (RI-P, RI-T) 57-4 RI-P, RI-T) 57-5 (RI-P, RI-T) 58-2/3-1 (RI-P, RI-T) 58-2/3-1 (RI-P, RI-T) 58-4 (RI-P, RI-T) AP57D-1 (RI-P, RI-T)	Unnamed ephemeral drainage, Drinkwater Flat, Dry Canyon	Stream	180701020201 - Lower Bouquet Canyon	180701020201 - Lower Bouquet Canyon	Dry Canyon Reservoir, Santa Clara River	<u>Existing BUs:</u> MUN, IND, PROC, AGR, WARM, WILD, REC2 <u>Potential BUs:</u> GWR, FRSH, POW, REC1	N/A
3 – San Francisquito Canyon	48-3 (RI-P, RI-T) 50-3_1 (RI-P, RI-T) 50-3_2 (RI-P, RI-T) 54-2 (RI-P, RI-T) 54-5 (RI-P, RI-T) 55-2 (RI-P, RI-T) 55-5 (RI-T) 56-3 (RI-P, RI-T) AP54A_1 (RI-T) AP54A_2 (RI-P, RI-T)	San Francisquito Creek, Unnamed ephemeral drainage	Stream	180701020402 - San Francisquito Canyon	180701020402 - San Francisquito Canyon	San Francisquito Creek, Santa Clara River	<u>Existing BUs:</u> WILD, RARE, WET <u>Intermittent BUs:</u> MUN, IND, PROC, AGR, GWR, FRSH, WARM, SPWN, REC1, REC2	N/A

Impact Site ID	Tower Location ID and Impact Description	Waterbody Name	Impacted Aquatic Resource Type	Basin Plan hydrologic unit	NHD Hydrologic Unit Code 12 & Name	Receiving Waters	Receiving Waters Beneficial Uses	303d Listing Pollutant
4 – Elizabeth Lake	45-3 (twr-P, twr-T) 45-4 (twr-P, twr-T) 45-6 (SR-P, SR-T)	Unnamed ephemeral drainages	Stream	180701020301 - Elizabeth Lake	180701020301 - Elizabeth Lake	Lake Elizabeth	Existing BUs: WARM, WILD, MIGR, REC1, REC2 Potential BUs: MUN, IND, PROC, AGR, GWR, FRSH	N/A
Lahontan RWQCB								
5 – Railroad Canyon	42-5 (twr-T) 43-1 (twr-T) 43-2 (SR-P, PTS-T) 43-4 (twr-P, twr-T,G) 43-5 (twr-T) 44-2 (PTS-T) 44-4 (twr-P, twr-T) 44-5 (twr-P, twr-T)	Unnamed ephemeral drainage	Stream	626.50 – Lancaster Hydrologic Area	180902061406 - Railroad Canyon (626.50)	Minor surface waters	MUN, AGR, GWR, NAV, REC1, REC2, WARM, WILD	N/A
6 – Tylerhouse Canyon	33-2 (SR-P, twr-T, G-T)				180902061802 – Tylerhorse Canyon			
7 – Bean Canyon	29-5 (twr-P, twr-T)	Unnamed ephemeral drainage	Stream	626.30 – Willow Springs Hydrologic Area	180902061703 – Bean Canyon	Minor surface waters	MUN, AGR, GWR, NAV, REC1, REC2, WARM, WILD	N/A
8 – Tropico Hill	23-4 (twr-P, twr-T, PTS-T)	Unnamed ephemeral drainage	Stream	626.20 – Gloster Hydrologic Area	180902061705 – Tropico Hill	Minor surface waters	MUN, AGR, GWR, NAV, REC1, REC2, WARM, WILD	N/A
9 – Town of Mojave	14-2 (twr-T)	Unnamed ephemeral drainage	Stream	626.10 – Chafee Hydrologic Area	180902062004 – Town of Mojave	Minor surface waters	MUN, AGR, GWR, NAV, REC1, REC2, WARM, WILD	N/A
10 – Joshua Middle School	14-5 (twr-P, twr-T) 15-2 (twr-P, twr-T) 15-3 (twr-T) 15-4 (twr-T)				180902062001 – Joshua Middle School			

Impact Site ID	Tower Location ID and Impact Description	Waterbody Name	Impacted Aquatic Resource Type	Basin Plan hydrologic unit	NHD Hydrologic Unit Code 12 & Name	Receiving Waters	Receiving Waters Beneficial Uses	303d Listing Pollutant
11 – Sanborn Hill	12-4 (twr-P, twr-T) 12-6 (twr-P, twr-T)	Unnamed ephemeral drainage, Cache Creek	Stream	625.40 – Koehn Hydrologic Area	180902062003 – Sanborn Hill	Minor surface waters	MUN, AGR, GWR, NAV, REC1, REC2, WARM, WILD	N/A
12 – Brown Butte	12-3 (twr-P, twr-T)				180902062005 – Brown Butte			
13 - Desert Butte-Cache Creek	10-4 (twr-P, twr-T) 11-1 (twr-P, twr-T) 11-2 (twr-T) 11-3 (twr-P, MR-P, twr-T, MR-T) 11-4 (twr-P, twr-T)				180902060401 – Desert Butte, Cache Creek			
14 – Barren Ridge	2-4 (twr-P, twr-T) 3-2 (twr-P, twr-T) 3-3 (twr-P, twr-T, PTS-T) 3-4 (twr-T) 4-1 (twr-P, twr-T) 4-3 (twr-P, twr-T, PTS-T) 5-4 (PTS-T) 6-2 (twr-P, twr-T) 6-5 (twr-P, twr-T) 7-2 (twr-T) 8-3 (SR-P) 8-4 (PTS-T) 8-5 (twr-P, twr-T) 9-1 (twr-T) 10-2 (PTS-T)				180902060502 – Barren Ridge			
15 - North Fork Pine Tree Canyon-Pine Tree Canyon	1-2 (twr-P, twr-T) 1-3 (twr-P, twr-T) 1-4 (twr-P, twr-T)				180902060501 – North Fork Pine Tree Canyon-Pine Tree Canyon			

Notes: 1. Aquatic Resource ID is generated by the State Water Board Staff and used for identification in the Receiving Waters and Project Impacts attachments of this Certification and Order.

Table 2: Individual Direct Impact Information

Direct Impact Site ID	Lat.	Long.	Indirect Impact Requiring Mitigation		Direct Impact Duration	Fill/Excavation		
			Yes	No		Acres	Cubic Yards	Linear Feet
1 – Bull Creek			<input type="checkbox"/>	<input type="checkbox"/>	Temp	0.103	0	200
					Perm	0	0	0
2 - Lower Bouquet Canyon			<input type="checkbox"/>	<input type="checkbox"/>	Temp	0.374	0	1275
					Perm	0.171	0	690
3 – San Francisquito Canyon			<input type="checkbox"/>	<input type="checkbox"/>	Temp	0.487	0	1,320
					Perm	0.145	0	565
4 – Elizabeth Lake			<input type="checkbox"/>	<input type="checkbox"/>	Temp	0.184	0	405
					Perm	0.163	18	715
5 – Railroad Canyon			<input type="checkbox"/>	<input type="checkbox"/>	Temp	1.702	0	1,534
					Perm	0.102	72	290
6 – Tylerhouse Canyon			<input type="checkbox"/>	<input type="checkbox"/>	Temp	0.311	0	290
					Perm	0.050	0	140
7 – Bean Canyon			<input type="checkbox"/>	<input type="checkbox"/>	Temp	0.075	0	205
					Perm	0.010	18	35
8 – Tropico Hill			<input type="checkbox"/>	<input type="checkbox"/>	Temp	0.112	0	374
					Perm	0.004	0	16
9 – Town of Mojave			<input type="checkbox"/>	<input type="checkbox"/>	Temp	0.177	0	175
					Perm	0	0	0
10 – Joshua Middle School			<input type="checkbox"/>	<input type="checkbox"/>	Temp	0.246	0	635
					Perm	0.023	6	95
12 – Sanborn Hill			<input type="checkbox"/>	<input type="checkbox"/>	Temp	0.861	0	483
					Perm	0.138	32	215
12 – Brown Butte			<input type="checkbox"/>	<input type="checkbox"/>	Temp	0.092	0	200
					Perm	0.035	13	120

Direct Impact Site ID	Lat.	Long.	Indirect Impact Requiring Mitigation		Direct Impact Duration	Fill/Excavation		
			Yes	No		Acres	Cubic Yards	Linear Feet
13 - Desert Butte-Cache Creek			<input type="checkbox"/>	<input type="checkbox"/>	Temp	1.406	0	1,125
					Perm	0.329	64	710
14 – Barren Ridge			<input type="checkbox"/>	<input type="checkbox"/>	Temp	3.186	0	3,055
					Perm	0.174	90	576
15 - North Fork Pine Tree Canyon-Pine Tree Canyon			<input type="checkbox"/>	<input type="checkbox"/>	Temp	1.699	0	600
					Perm	0.361	64	790

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A. Environmental Review

On September 12, 2012, LADWP, as lead agency, certified a Final Environmental Impact Report/Environmental Impact Statement (FEIR/S) (State Clearinghouse (SCH) No. 2008041038) Barren Ridge Renewable Transmission Line Project¹ (Project) and filed a Notice of Determination (NOD) at the SCH on September 26, 2012. The State Water Board is a responsible agency under CEQA (Pub. Resources Code, § 21069) and, in making its determinations and findings, must presume that LADWP's certified environmental document comports with the requirements of CEQA and is valid. (Pub. Resources Code, § 21167.3, subd. (b).) State Water Board staff has reviewed and considered the environmental document and finds that the environmental document prepared by LADWP is adequate. (Cal. Code Regs., tit. 14, § 15096, subd. (f).) The document includes the mitigation monitoring and reporting program (MMRP) developed by LADWP for all mitigation measures that have been adopted for the Project to reduce potential significant impacts. (Pub. Resources Code, § 21081.6, subd. (a)(1); Cal. Code Regs., tit. 14, § 15091, subd. (d).)

B. Incorporation by Reference

Pursuant to CEQA, these Findings of Facts (Findings) support the issuance of this Order based on the Project FEIR/S and the application for a water quality certification and waste discharge requirements (with attachments) (Application).

All CEQA project impacts, including those discussed in subsection C below, are analyzed in greater detail in the Project FEIR/S which is incorporated herein by reference. The Project FEIR/S is available from Los Angeles Department of Water and Power, 111 North Hope Street, Room 1044, Los Angeles, CA 90012, and at: www.ladwp.com/ladwp/faces/ladwp/aboutus/a-power.

Requirements under the purview of the State Water Board in the MMRP are additionally incorporated herein by reference and included in Attachment E of this Order.

Finally, LADWP's Application with all attachments is incorporated herein by reference, which includes detailed project maps, a detailed project description, copies of information provided to other resource agencies, and other supporting information.

¹ The Project as described in the FEIR/S includes three project elements that are not included in the Project authorized in this Order: the Haskell Canyon Switching Station construction, expansion of the Barren Ridge Switching Station, and installation of new circuits on existing transmission line between Haskell Canyon and Castaic Power station.

C. Findings

The FEIR/S describes the potential significant environmental effects to waters of the state. Having considered the whole of the record, State Water Board staff makes the following findings for Impacts 1 through 5:

1. Findings regarding impacts that will be mitigated to a less than significant level (Pub. Resources Code, § 21081, subd. (a)(1); Cal. Code Regs., tit. 14, § 15091, subd. (a)(1)).

Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the FEIR.

Note: Some impacts were not numbered in the original FEIR/S provided by LADWP. To help facilitate reference to impacts and associated mitigation measures, impact numbers provided in this analysis were assigned by State Water Board staff.

Impact 1: Impacts to Native Vegetation

Project activities may cause significant temporary and permanent impacts to native vegetation, including special status plant species and wetland and riparian species. Potential impacts may be caused by conversion of land to new uses such as roads and tower footings; excavation; road grading; trampling, crushing, mowing or cutting; inadvertent introduction or spread of invasive plants or noxious weeds; and use of herbicides. Impacts to native vegetation may also occur from increased erosion and sedimentation. These impacts would adversely affect the beneficial uses of fish migration (MIGR), municipal and domestic supply (MUN), preservation of rare and endangered species (RARE), water contact and water noncontact recreation (REC1 and REC2), warm and cold freshwater habitat (WARM, COLD), wetland habitat (WET), wildlife habitat (WILD), and spawning, reproduction, and/or early development (SPWN).

Facts Supporting the Finding (Rationale): Mitigation measures are proposed that are sufficient to reduce impacts to vegetation to a level that is less than significant. These measures include providing restoration/compensation for impacted sensitive vegetation communities (BIO-1 and BIO-4), preventing the spread of invasive weeds with a revegetation and weed control plan (BIO-2), avoiding riparian areas (BIO-3), implementing a worker training program on environmental measures (BIO-6) and confining work to marked or flagged work areas (BIO-13). Erosion control measures will also be implemented through the General Practices that will be integrated into the Project. These measures are consistent with widely accepted practices for mitigation of impacts to vegetation and have been demonstrated to be effective when properly implemented.

In addition, the United States Forest Service (USFS), the lead agency for the Project's analysis pursuant to the National Environmental Policy Act (NEPA), is requiring certain additional mitigation measures as detailed in their Special Use Authorization that would reduce impacts to native vegetation on National Forest lands. Such mitigation measures include helicopter construction for any towers which are more than 300 feet from an existing road and across slopes greater than approximately 25 percent; use of the "micropile" method of foundation construction to limit ground disturbance; construction of three-circuit towers within existing rights-of-way (ROW) where there are ROW expansion constraints and where LADWP has existing 230 kV transmission lines; specific requirements for access roads, including exclusion of NFS Road Drinkwater Canyon

5N27; specific requirements for construction area sites; and restrictions on use of herbicides.

Impact 2: Impacts to Special-Status Wildlife

The Project may impact special-status wildlife species including the arroyo chub, arroyo toad, California legless lizard, California red-legged frog, coast horned lizard, coastal rosy boa, two-striped garter snake, least Bell's vireo, western yellow-billed cuckoo, southwestern willow flycatcher, western spadefoot toad, southwestern pond turtle, and unarmored threespine stickleback, through crushing or disruption of life and habitat during construction, from vehicle and equipment run-off upstream, from soil erosion and sedimentation, and from other activities. These impacts would adversely affect the beneficial uses such as WILD, SPWN, and WARM.

Facts Supporting the Finding (Rationale): Mitigation measures are proposed that are sufficient to reduce impacts to special-status wildlife species to a level that is less than significant. These measures include general practices listed in Attachment E such as preparing a Hazardous Materials and Waste Management Plan and a Stormwater Pollution Prevention Plan; designing the Project to avoid riparian areas and water courses; installing drainage control features to minimize the amount of stormwater flow from areas of active construction; refueling and maintenance practices to avoid contamination of waters; erosion control measures for re-grading access roads; managing excavated soil to prevent run-off into waters; and avoiding use of heavy equipment in a flowing channel.

Other measures that reduce these impact so less than significant include utilizing existing stream crossings to the extent feasible and permanently closing new access roads after construction that aren't needed for ongoing maintenance (HYD-1), building roads at right angles to streams and washes and minimizing disturbance to vegetation, drainage channels, and intermittent or perennial stream banks (HYD-2), restoring and compensating for impacts to sensitive vegetation communities including a Habitat Restoration and Revegetation Plan (BIO-1), developing a weed control plan (BIO-2), avoiding riparian areas (BIO-3), restoring and compensating for riparian areas where avoidance is not feasible (BIO-4), covering steep-walled trenches or excavations to prevent entrapment of wildlife (BIO-5), conducting worker training in environmental measures (MM-BIO-6), avoidance and protection measures for least Bell's vireo, western yellow-billed cuckoo, southwestern willow flycatcher (BIO-14), monitoring for special-status herpetofauna (BIO-22), and avoidance measures for arroyo toad and California red-legged frog (BIO-24).

Impact 3: Soil Loss and Erosion

Ground-disturbing activities associated with the Project, such as excavation, grading, and trenching activities for access roads, tower sites, and pulling and tensioning sites could alter drainage patterns within work areas and result in soil erosion. Soil erosion can cause impacts to aquatic resources through increased turbidity and sedimentation. These impacts would adversely affect the beneficial uses WILD, SPWN, and WARM.

Facts Supporting the Finding (Rationale): Mitigation measures are proposed that are sufficient to reduce impacts from soil loss and erosion to a level that is less than significant. These measures include general practices listed in Appendix E such as preparing a Stormwater Pollution Prevention Plan; designing the Project to avoid riparian areas and water courses; installing drainage control features to minimize the amount of stormwater flow from areas of active construction; erosion control measures for re-

grading access roads; managing excavated soil to prevent run-off into waters; and avoiding use of heavy equipment in a flowing channel. Other mitigation measures include restoring new impervious areas associated with temporary construction to existing conditions (HYD-3), and designing stormwater drainage to minimize erosion and increase sediment control (HYD-4).

In addition, the USFS, the lead agency for the Project's analysis pursuant to NEPA for the Project, is requiring certain additional mitigation measures as detailed in their Special Use Authorization that would reduce impacts to native vegetation on National Forest lands. Such mitigation measures include helicopter construction for any towers which are more than 300 feet from an existing road and across slopes greater than approximately 25 percent; use of the "micropile" method of foundation construction to limit ground disturbance; construction of three-circuit towers within existing ROW where there are ROW expansion constraints and where LADWP has existing 230 kV transmission lines; specific requirements for access roads, including exclusion of NFS Road Drinkwater Canyon 5N27; and specific requirements for construction area sites.

Impact 4: Stormwater Runoff

The Project has the potential to create new sources of runoff through creation of new permanent access and spur roads or widening of existing roads; blading and other methods of vegetation removal for clearance of roads and construction areas would decrease the ability of the soil to absorb water and increase stormwater runoff from disturbed areas. These impacts would adversely affect the beneficial uses WILD, SPWN, and WARM, and could affect watershed functions leading to impacts to groundwater recharge, and flood peak attenuation.

Facts Supporting the Finding (Rationale): Mitigation measures are proposed that are sufficient to reduce impacts to stormwater runoff to a level that is less than significant. These measures include general practices such as preparing a Stormwater Pollution Prevention Plan; designing the Project to avoid riparian areas and water courses; installing drainage control features to minimize the amount of stormwater flow from areas of active construction; erosion control measures for re-grading access roads; managing excavated soil to prevent run-off into waters; and avoiding use of heavy equipment in a flowing channel. Other mitigation measures include restoring new impervious areas associated with temporary construction to existing conditions (HYD-3), and designing stormwater drainage to minimize erosion and increase sediment control (HYD-4).

In addition, the USFS, the lead agency for the Project's analysis pursuant to NEPA for the Project, is requiring certain additional mitigation measures as detailed in their Special Use Authorization that would reduce impacts to native vegetation on National Forest lands. Such mitigation measures include helicopter construction for any towers which are more than 300 feet from an existing road and across slopes greater than approximately 25 percent; use of the "micropile" method of foundation construction to limit ground disturbance; construction of three-circuit towers within existing ROW where there are ROW expansion constraints and where LADWP has existing 230 kV transmission lines; specific requirements for access roads, including exclusion of NFS Road Drinkwater Canyon 5N27; and specific requirements for construction area sites.

Impact 5: Floodplain Impacts

The Project will result in some tower structures within 100-year flood hazard area. This could impede flood flows or redirect flood flows to areas not currently within a flood hazard area by raising the base flood elevation level. These impacts could affect watershed functions leading to impacts to groundwater recharge and flood peak attenuation.

Facts Supporting the Finding (Rationale): Mitigation measures are proposed that are sufficient to reduce impacts to floodplains to a level that is less than significant. These measures include engineering structures and new access roads in 100-year floodplains to not impede or redirect flood flows or raise flood elevation (HYD-5), and designing structures within the 100-year floodplain of rivers and streams to minimize capture of flood debris and to prevent flow obstructions and scouring during flood flows (HYD-6).

2. Findings regarding infeasible mitigation measures or project alternatives due to specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers (Pub. Resources Code, § 21081, subd. (a)(3); Cal. Code Regs., tit. 14, §1 5091, subd. (a)(3)).

Specific economic, legal, social, technological, or other considerations make the mitigation measure(s) or Project alternative(s) infeasible.

Aquatic and biological resources may be affected by the Project and other reasonably foreseeable projects. Avoidance, minimization, and mitigation measures would minimize impacts to aquatic and biological resources. Nevertheless, cumulative impacts would likely have substantial intensity and be cumulatively considerable under CEQA (LADWP resolution 013-064, pages 61 and 62).

Facts in Support of Finding:

Various and numerous mitigation measures are proposed in the FEIR/S to mitigate Project impacts to aquatic resources, including wetlands. Mitigation measures incorporated into the Project requiring compensatory mitigation for special-status species and aquatic resources, when implemented along with the conditions of this Order, are adequate to minimize these cumulative impacts, but not to a level that is less than significant. No feasible mitigation measures are available to reduce this cumulative impact to a less-than-significant level. A statement of overriding considerations for this impact is presented in section D below.

D. Statement of Overriding Considerations

LADWP CEQA Findings of Fact concludes that implementing the Project will result in certain significant impacts to the environment that cannot be avoided or substantially lessened with the application of feasible mitigation measures or feasible alternatives. Because there are significant and unavoidable impacts the State Water Board provides this Statement of Overriding Considerations in compliance with CEQA (Pub. Resources Code, § 21081; Cal. Code Regs., tit. 14, §§ 15093).

The significant and unavoidable impacts and the benefits related to implementing the Project are disclosed in the LADWP's CEQA Findings of Fact. The unavoidable impacts to resources are discussed in subsection C above, and include impacts to native vegetation and special-status wildlife, soil loss and erosion, stormwater runoff, and floodplain impacts.

The State Water Board has considered the benefits of the Project against its unavoidable environmental risks and finds that the benefits of implementing the Project outweigh the significant and unavoidable environmental impacts. The impacts from the Project are significant, but are dispersed among small impact sites ranging in size from less than 0.003 acre to less than 1 acre and 25 linear feet to 500 linear feet along about 75 miles of land and through multiple watersheds. The State Water Board finds that the distribution of impacts across such a large area will diminish the cumulative impact to beneficial uses of waters of the state. In addition the State Water Board finds that the mitigation measures that LADWP will implement at each impact site will further diminish the impacts. These mitigation measures include, but are not limited to, restoration/compensation for impacted sensitive vegetation communities (BIO-1), creation of a soil management plan (General Practice 7), installation of drainage control features to minimize the amount of stormwater flow from areas of active construction (General Practice 12), and avoiding slopes or drainages outside of grading areas (General Practice 35).

Overall, the Project would reduce environmental impacts associated with greenhouse gas emissions, such as reduced air quality and climate change, because it would increase delivery of renewable energy to the City of Los Angeles. Renewable energy, such as wind and solar power, does not result in greenhouse gas emissions like burning of natural gas and coal does. In 2009, natural gas and coal made up about 70 percent of LADWP's resource mix. Renewable energy, such as wind, solar, hydroelectricity, and geothermal, made up 21 percent of LADWP's resource mix. By allowing LADWP to interconnect and expand to the Tehachapi Mountains and Mojave Desert areas, the Project would increase the percentage of renewable energy in its resource mix by about 15 percent (using 2009 figures). In addition the Project presents benefits for the residents of Los Angeles by allowing them access to continued energy. The Project would diversify LADWP's energy mix, thereby increasing reliability in the event that one energy source becomes unavailable.

These benefits are supported by substantial evidence in the record and are adequate to support a Finding of Overriding Considerations that offset the unavoidable adverse environmental effects.

E. Determination

The State Water Board will file a NOD with the SCH within five (5) working days from the issuance of this Order (Cal. Code Regs., tit. 14, §§ 15096, subd. (i), 15094, subd. (a)). The environmental document and other materials, which constitute the record, are located at 1001 I Street, Sacramento, CA 95814, and online at: http://www.swrcb.ca.gov/water_issues/programs/cwa401/#certifications (Pub. Resources Code, § 21081.6, subd. (a)(2)).

MITIGATION MONITORING AND REPORTING PROGRAM

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The following Mitigation Monitoring and Reporting Program has been developed by the Los Angeles Department of Water and Power (LADWP) per the requirements of the California Environmental Quality Act (CEQA). It is not considered binding on the U.S. Department of Agriculture, Forest Service (USFS) or the U.S. Department of the Interior, Bureau of Land Management (BLM). The federal lead agencies will independently select the mitigation measures to be included in the Record of Decision for each agency.

Number	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency*	Verification of Compliance		
				Initials	Date	Remarks
Air Quality and Climate Change						
AIR-2a	<p><i>Implement Construction Fugitive Dust Control Plan.</i></p> <p>The construction contractor shall develop a Fugitive Dust Emission Control Plan for construction work.</p> <p>Measures to be incorporated into the plan include, but are not limited to, the following where practical:</p> <ul style="list-style-type: none">Water the disturbed areas of the active construction sites in sufficient quantities to prevent the generation of visible dust plumes. Watering may not be required in wet weather. Soil binders may be used in lieu of watering where soil binders are appropriate and prevent the generation of visible dust plumes.Enclose, cover, or apply water a minimum of twice daily to exposed piles with a five percent or greater silt content.ARB-certified and agency-approved (on federal lands) non-toxic soil binders shall be applied per manufacturer recommendations to active unpaved roadways, unpaved staging areas, and unpaved parking area(s) throughout construction (as allowed by responsible agencies such as the USFS and BLM) to reduce fugitive dust emissions. Other watering products, selected from lists available from the Environmental Protection Agency’s (EPA’s) Environmental Technology Verification program or the SCAQMD, may be applied per manufacturer recommendations in place of the ARB-certified soil binders if such products can be reasonably demonstrated to be as effective as the ARB-certified non-toxic soil binders and be approved by the affected federal agency.Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8-hour work day]; OR Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour. Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface, to reduce fugitive dust emissions.All vehicle tires shall be inspected, are to be free of dirt, and washed as necessary before entering paved roadways. In lieu of washing vehicle tires, the construction contractor may sweep roads on a regular basis or employ similar methods to reduce dust track-out.Install wheel washers or wash the wheels of trucks and other heavy equipment where vehicles exit unpaved areas.Cover all trucks hauling soil and other loose material, or require at least two feet of freeboard.Establish a vegetative ground cover (in compliance with biological resources impact mitigation measures) as appropriate or otherwise create stabilized surfaces on all unpaved areas at each of the construction sites after active construction operations have ceased.Increase the frequency of watering unpaved surfaces under active construction to more than three times daily, or implement other additional fugitive dust mitigation measures, to all active disturbed fugitive dust emission sources as required by SCAQMD Rule 403 before wind events.)Travel routes to each construction site shall be developed to minimize unpaved road travel.Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate at active and inactive sites during workdays, weekends, holidays, and windy conditions.Install wind fencing and phase grading operations where appropriate, and operate water trucks for stabilization of surfaces under windy conditions.Prevent spillage when hauling loose material by limiting speeds to 15 miles per hour. Limit speed of earth-moving equipment to 10 miles per hour.	During Construction	LADWP USFS BLM			
AIR-2b	Properly Maintain Mechanical Equipment. The construction contractor shall ensure that all mechanical equipment associated with Project construction is properly tuned and maintained in accordance with the manufacturer’s specifications to the extent feasible, and is maintained to perform at CARB and/or EPA certification levels. The construction contractor shall prevent tampering with equipment. This measure will be verified by LADWP through unscheduled inspections.	During Construction	LADWP USFS BLM			
AIR-2c	Use Ultra Low-sulfur Diesel Fuel. ARB-certified ultra low-sulfur diesel (ULSD) fuel containing 15 ppm sulfur or less shall be used in all diesel-powered construction equipment to the extent feasible.	During Construction	LADWP USFS BLM			

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				Initials	Date	Remarks
AIR-2d	Restrict Diesel Engine Idling to Five Minutes. In accordance with LADWP’s Environmental Affairs Bulletin 2007-05 dated March 12, 2007, and in accordance with the requirements of the ARB’s idling regulations, vehicles with a gross vehicle weight rating (GVWR) of greater than 10,000 pounds “shall not idle the vehicle’s primary diesel engine for greater than five minutes at any location.” This measure will be verified by LADWP through unscheduled inspections. The five-minute idling limit does not apply for the period during which: <ul style="list-style-type: none">Idling must occur due to traffic conditions.Idling when the vehicle is queuing that at all times is more than 100 feet from any real property zoned for individual or multifamily housing units that has one or more such units on it.Idling when forced to remain motionless due to immediate adverse weather conditions.Idling to verify that the vehicle is in safe operating condition.Idling is required for mandatory resting, servicing, repairing, or diagnostic purposes.Idling when positioning or providing a power source for equipment or operations other than transporting passengers or propulsion.Idling while operating defrosters, heaters, air conditioners, or other equipment solely to prevent a safety or health emergency.	During Construction	LADWP USFS BLM			
AIR-2e	Schedule Deliveries Outside of Peak Traffic Hours. All material deliveries to the marshalling yards and from the marshalling yards to the construction sites shall be scheduled outside of peak traffic hours (6:00 to 9:30 a.m. and 3:30 to 6:30 p.m.) to the extent feasible, and other truck trips during peak traffic hours shall be minimized to the extent feasible. Construction scheduling will be planned to minimize vehicle trips.	During construction	LADWP			
AIR-2f	Off-road Diesel-fueled Equipment Standards. During project construction, all internal combustion engines/construction equipment operating on the project site shall meet EPA-Certified Tier 2 emissions standards, or higher according to the following: <ul style="list-style-type: none">January 1, 2012 to December 31, 2014: all offroad diesel-powered construction equipment greater than 50 hp shall meet Tier 3 offroad emissions standards. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.Post-January 1, 2015: All offroad diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.A copy of each unit’s certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided at the time of mobilization of each applicable unit of equipment.Encourage construction contractors to apply for AQMD “SOON” funds. Incentives will be provided for those construction contractors who apply for AQMD “SOON” funds. The “SOON” program provides funds to accelerate clean up of offroad diesel vehicles, such as heavy duty construction equipment.Alternative fuels such as natural gas and electricity shall be used where available and feasible. This measure will be implemented through development of administrative controls, including: <ul style="list-style-type: none">Prepare an inventory of all equipment prior to construction and identify the suitability of add-on emission controls for each piece of equipment before groundbreaking;Develop a construction traffic and parking management plan that maintains traffic flow and plan construction to minimize vehicle trips; andIdentify sensitive receptors in the project area, such as children, elderly, and infirmed, and specify the means by which the construction contractor will minimize impacts to these populations (e.g., locate construction equipment and staging zones away from sensitive receptors and building air intakes).Provide advanced notification to sensitive receptors of the potential effects of PM₁₀ and PM_{2.5}, as well as toxic air contaminants, prior to construction.	Prior to and during construction	LADWP USFS BLM			
AIR-2g	On-road Vehicles Standards. All on-road construction vehicles shall meet all applicable California on-road emission standards and shall be licensed in the State of California. This does not apply to construction worker personal vehicles.	During construction	LADWP			
AIR-2h	Off-road Gasoline-fueled Equipment Standards. All off-road stationary and portable gasoline powered equipment shall have EPA Phase 1/Phase 2 compliant engines, where the specific engine requirement shall be based on the new engine standard in effect two years before initiating Project construction.	Prior to construction	LADWP USFS BLM			

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AIR-4a	General Conformity Offset Mitigation. If the final emission estimate for the selected Project Alternative as provided in the Project's Conformity Analysis exceeds the NOx and/or VOC emission applicability thresholds, and assuming the SCAQMD does not provide confirmation that the Project's emissions are accounted for in the State Implementation Plan (SIP) emission estimates per 40 CFR 93.158(a)(1), then the Project will obtain emission reduction credits to fully offset the NOx and/or VOC emissions per 40 CFR 93.158(a)(2) for the years that the Project has been estimated to exceed the NOx and/or VOC emission applicability thresholds. Credits shall be submitted to the BLM and USFS for review and approval.	Prior to construction	LADWP USFS BLM			
Recreation						
R-1a	Coordinate construction schedule and maintenance activities with managing officer(s) for affected recreation areas. LADWP shall develop a Project construction schedule and coordinate construction with the authorized officer(s) or the agencies of recreational areas affected by construction and maintenance activities, including but not limited to the following: BLM, USFS (ANF); California Department of Fish and Game (CDFG); Pacific Crest Trail Association (PCTA); California State Park and Recreation Commission; California Department of Parks and Recreation; Kern County Department of Parks and Recreation; Castaic Lake Water Agency (CLWA); Mountains Recreation & Conservation Authority (MRCA); and Los Angeles County Department of Parks and Recreation. Through coordination efforts with the agencies listed above, as well as any additional agencies that manage recreational resources which would be affected, and at the discretion of the authorized officer(s) responsible for management of the affected resource(s), LADWP shall ensure the following occurs, to the extent practical, unless otherwise approved by the affected agencies: <ul style="list-style-type: none">Construction and maintenance activities are scheduled to avoid heavy recreational use periods (including major holidays);Staging areas for Project-related equipment, materials, and vehicles are in areas with the least possible effect on recreational activities and opportunities;Timetables for the required period of usage of each staging area are developed and adhered to in coordination with affected resource agencies.	Prior to and during construction	LADWP USFS BLM			
R-1b	Identify and provide noticing of alternative recreation areas. To the extent feasible, LADWP shall coordinate with the authorized recreation officer(s) or the agencies of all recreational areas affected by construction and maintenance activities, including but not limited to those listed under R-1a (Coordinate construction schedule and maintenance activities with managing officer[s] for affected recreation areas), the purpose of which is to accomplish the following: <ul style="list-style-type: none">Identify recreational areas (i.e., trails, parks, day-use areas) that would be closed during Project construction or maintenance activities;To the extent feasible, identify alternative recreational areas for each resource that would be made unavailable to the public due to construction or maintenance activities; andPost a public notice which identifies alternative recreational areas at USFS Ranger Stations within the ANF and at all recreational areas to be closed due to construction or maintenance activities.	Prior to and during construction	LADWP USFS			
R-1c	Notification of temporary closure of Off-Highway Vehicle routes. To the extent feasible, LADWP shall coordinate with the USFS (ANF) to identify OML 2 roads and other designated OHV routes which would be closed or otherwise made unavailable for use as a result of Project construction and maintenance activities. Included in this coordination effort, LADWP shall prepare a public notice which identifies all OML 2 roads and OHV routes to be closed as a result of construction and/or maintenance activities.	Prior to and during construction	LADWP USFS			
R-1d	Notification of temporary closure and reroute of the Pacific Crest National Trail and/or other trails. LADWP shall coordinate with the BLM, USFS, PCTA, and other agencies or organization(s) regarding temporary closure of trails that would occur during Project construction and maintenance activities. The following shall be included in this coordination effort to the extent feasible: <ul style="list-style-type: none">Identification of trail diversions to be applied at each point where trails would be temporarily closed to through-traffic as a result of construction and maintenance activities; andPosting of public notices of temporary closures/diversions at locations determined to be appropriate by the agency or organization during construction and maintenance activities.	Prior to and during construction	LADWP UFS BLM			

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R-1e	<p>Compensate ANF for reductions in Adventure Pass sales due to recreation area closures associated with the Project. Before Project construction in the ANF, LADWP shall coordinate with the USFS (ANF) to identify recreational resources on NFS lands in the ANF that would be temporarily closed as a direct result of Project construction. A resource is only considered to be closed directly as a result of Project construction if the resource is made entirely inaccessible to the public as a sole result of Project activities.</p> <p>LADWP shall coordinate with the USFS in reviewing financial records of the Adventure Pass program as well as recreational use data for the ANF. Upon completion of this review, LADWP and USFS shall come to agreement on recreation enhancement projects that will mitigate for the temporary loss of recreation facilities and reduction in revenue, comparable to the direct impacts of the Project. These projects shall be carried out by LADWP, according to plans and specifications of the USFS. Projects do not necessarily have to occur at sites directly impacted by the Project, but shall remain commensurate with the agreed-upon Project impacts.</p>	Prior to construction	LADWP USFS			
R-2	<p>Avoid permanent upgrades to National Forest System roads. LADWP shall avoid the permanent upgrade of NFS roads to the extent feasible as a result of Project construction or operation and maintenance activities unless otherwise approved by the USFS. Road upgrades that are required to accommodate construction of the Project shall be temporary in nature. Following construction of the Project, existing OML standards designated for temporarily improved roads shall be adhered to, thereby returning improved roads to existing maintenance practices, unless otherwise authorized by the USFS. As determined to be necessary through coordination between LADWP and the USFS and at the discretion of the USFS, LADWP shall develop a plan for returning improved NFS roads to existing conditions. LADWP shall implement the restrictions for road improvements and maintenance set forth in the Special Use or Road Use Authorization to be issued by the USFS for the Project.</p>	During construction and operation & maintenance	LADWP USFS			
R-3	<p>Installation of physical barriers. LADWP would install physical barriers to prevent illegal OHV use to the extent feasible. LADWP will place and maintain barriers, such as boulders or rail fencing, during restoration of temporary work sites. In addition, LADWP would place gates at permanent LADWP roads where public use is not allowed.</p>	During construction	LADWP USFS			
Public Services and Utilities Systems						
PSU-1	<p>Recycle Solid Construction Waste. LADWP contractors shall recycle a portion of the solid waste generated during Project construction activities to the extent feasible. The quantity of Project waste that is recycled shall aide local jurisdictions in meeting and/or exceeding Assembly Bill 939 standards.</p>	During construction	LADWP			
Hazardous Materials						
HAZ-1	<p>Environmental Monitoring Program.</p> <p>A construction monitoring plan shall be enforced by LADWP and its contractors to ensure that provisions outlined in Project-specific plans are correctly followed for the duration of the construction period. Site-specific plans would include, but are not limited to, the Emergency Response Plan; Hazardous Materials/Waste Management Plan; SWPPP; Soil Management Plan; and the SPCC.</p>	During construction	LADWP			
HAZ-2	<p>Document compliance with measures for encountering unknown contamination.</p> <p>If evidence of soil or groundwater contamination is detectable by visual and/or olfactory observation during Project construction, a report documenting the exact contamination location, laboratory test results, actions taken, and recommended mitigation (if applicable) shall be submitted to the USFS (if on USFS lands) or BLM (if on BLM lands) for each incident. This report shall be submitted within 30 days of LADWP's receipt of laboratory results.</p>	During construction	LADWP USFS BLM			
HAZ-4	<p>Herbicide Application Protocols.</p> <p>Protocol 1- Selection of Project Herbicides:</p> <ul style="list-style-type: none">Herbicides would be selected from an LADWP- and USFS-approved list, with mixture and dilution ratios that have been specified by the manufacturer. <p>Protocol 2- Contract Qualified Personnel for Herbicide Application:</p> <ul style="list-style-type: none">Individuals selected for herbicide application must possess all appropriate State and local herbicide applicator licenses, and documented training complying with applicable regulations and ordinances.Supervisory personnel must be familiar with the application areas and must be present to monitor herbicide application in these areas.Contractors applying herbicides must follow all applicable regulations regarding herbicide use. <p>Protocol 3a- Field Preparation Procedures:</p> <ul style="list-style-type: none">Contractors shall follow all specifications/recommendations provided by the manufacturer for mixing and application of herbicides. Only the minimum amount of chemicals required to adequately complete the job shall be mixed.	During construction	LADWP USFS BLM			

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	<ul style="list-style-type: none">Herbicide chemical mixing and vehicle loading must be conducted before entering the field, and all vehicles shall contain Hazardous Materials Spill Management Kits.Calibrate and inspect all spray equipment before entering the field to maintain adequate functionality.Distribute safety equipment, information, and emergency supplies to the application crew, including splash protection clothing and gear, chemical resistant gloves, chemical spill/splash wash supplies, and Materials Safety Data Sheets (MSDS), for all materials to be used on the job. <p>Protocol 3b- In-Field Preliminary Procedures:</p> <ul style="list-style-type: none">Before each herbicide application, the local weather conditions and the physical and climatic setting of the target area must be evaluated.Before herbicide application, mechanically remove appropriate vegetation at the target sites, as applicable. Minimize unnecessary environmental disturbance by preparing the work area at target sites. <p>Protocol 3c- Application Restrictions:</p> <ul style="list-style-type: none">Avoid contact with areas frequently occupied by humans and domestic animals and/or their food sources (i.e., yards, pens, food crops, drinking water, feed storage areas).Protect wildlife and valued vegetation from direct contact with herbicides. Only chemicals that are non-toxic to birds and small mammals shall be applied in areas where nests or dens are observed.Protect aquatic wildlife from chemical runoff. Avoid spraying within 50 feet of well heads. Avoid spraying near roadside drainage channels or within 50 feet of any surface water body when water present.Avoid application under the following conditions to avoid chemical drift and contamination outside the target sites: Under conditions of rain or when rain is imminent, during site irrigation, when the target site contains puddles, when the site has a slope that exceeds a 1:1 ratio.Avoid chemical drift outside of target sites by avoiding application during wind velocities in excess of 10 mph. If chemical drift is observed during application, discontinue spraying until conditions causing the drift stop. <p>Protocol 3d- In-Field Application Procedures:</p> <ul style="list-style-type: none">Complete preliminary site evaluation checks to record adverse conditions identified in the field. Avoid application in those areas.Do not dump excess pesticide onto soil or into drains. Do not dump or scatter vegetation waste into drainage canals or surface water bodies. Avoid fueling of maintenance vehicles/equipment within 100 feet of water bodies.Apply the minimum amount of chemicals necessary to complete the objective at the site. Minimize overlapping previously sprayed areas. <p>Protocol 4- Post-Application Protocols:</p> <ul style="list-style-type: none">Spray tanks shall be cleaned at the Project staging yards and shall be appropriately reused. Excess herbicide and containers shall be stored and disposed of according to the manufacturer's label by the construction contractor. After application, a record of herbicide application performed at each target site shall be provided by the contractor to LADWP, the USFS, and the BLM, as appropriate. <p>Protocol 5- Spill Clean-up Procedures:</p> <ul style="list-style-type: none">Immediately after a spill incident, absorbent material shall be applied. Affected media shall then be placed into a hazardous material storage container, and LADWP would be notified.If wildlife nests or dens are accidentally sprayed, personnel shall immediately notify their supervisor, who shall report the incident to LADWP within 24 hours.					
Visual Resources						
VIS-1	Crossing Linear Features - To reduce visual impacts at crossings of linear features identified as highly sensitive in the visual resources inventory, towers shall be placed at the maximum feasible distance from the crossing within limits of standard tower design. On ANF lands, to the extent practical, LADWP shall design and space all new transmission line structures at road crossings and trail crossings so that conductors are approximately mid-span at the road or trail. Structures should be set as far back from the crossing as possible. When feasible, crossings should be made at right angles and the site chosen for the crossing should be the one that will result in the least disturbance or alteration of the natural landscape.	Prior to construction	LADWP USFS			
VIS-2	Feathered Vegetation Clearing - Where vegetative clearing is necessary, to the greatest extent possible, clearing edges shall be tapered and feathered to reduce the visual impact.	During construction	LADWP USFS BLM			

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VIS-3	Existing Access Road Widening or Upgrades - To the greatest extent possible, LADWP shall use existing and already maintained access roads and spur roads to perform project construction. Where erosion potential has been identified as severe or very severe in the visual contrast analysis, no widening or upgrading of existing access roads shall be undertaken in the area of construction and operation, except for repairs necessary to make roads passable and where the USFS has approved plans submitted by LADWP before construction.	Prior to and during construction	LADWP USFS BLM			
VIS-4	Pacific Crest National Scenic Trail - Where the proposed transmission line route crosses the Pacific Crest National Scenic Trail, the transmission towers shall be engineered to be placed as far away from the Foreground viewshed (0.5 mile) of the Trail as feasibly possible within engineering constraints, and a minimum of 300 feet from the PCT if possible.	During construction	LADWP USFS			
VIS-5	Clean Up Construction Related Areas - LADWP shall keep construction-related operations areas clean and tidy by storing building materials and equipment within the proposed construction staging areas and/or generally away from public view when feasible. LADWP shall remove construction debris, including temporary fencing when no longer needed, promptly and at regular intervals. For ANF lands, in areas where cleared vegetation would be visible from sensitive viewing locations, LADWP shall dispose of cleared vegetation and woody material off-site (not necessarily off-ANF land), or chip and store for restoration work, as approved by the USFS, in a manner that is not visually evident and does not create visual contrasts.	During construction	LADWP USFS BLM			
VIS-6	Construction Site Clean Up and Restoration - When the construction period is over, construction sites shall be cleaned up and their surfaces shall be restored as closely as possible to pre-construction conditions.	Post construction	LADWP USFS BLM			
VIS-7	Fence Screening - All temporary chain-link fencing installed during the construction process shall be covered with screening fabric or slats and shall be maintained in good working condition until the fence is removed. This process will help provide screening from construction activities, equipment and materials. The fabric/slat colors shall be selected based on what best blends in to the immediate surroundings of where they are being used.	During construction	LADWP USFS BLM			
VIS-8	Reduce Glare and Light Spill - Where applicable, the lighting specified during the implementation of this Project shall be the minimum required to meet safety and security standards. All light fixtures shall be hooded to eliminate any potential for glare effects and to prevent light from spilling off the site or up into the sky. In addition, the fixtures shall have sensors or switches to permit the lighting to be turned off at times when not required.	During construction	LADWP USFS BLM			
VIS-9	Darkened Structure Treatment – LADWP shall implement darkened steel lattice structure treatment for selected locations within the ANF for the new 230kV transmission line. For each Alternative, treatment options and selected locations for the new 230 kV transmission line are as follows: <ul style="list-style-type: none">Alternative 1: dark grey, mileposts 58.2 – 73.8Alternative 2: dark grey, mileposts 51.7 - 52.6, 54.9 – 58.5Alternative 2a: in addition all the Alternative 2 treatment options and locations: medium grey, mileposts 0.0 - 6.6Alternative 3: none	During construction	LADWP USFS			
VIS-10	Landscape Screening - To the extent practical, LADWP shall locate new transmission line structures in areas where they are screened by natural landscape features (e.g., behind a hill) so that they are seldom seen by ANF visitors or the general public. Natural topography lines should be followed to soften the visual impact of structures and of disturbances of soils and vegetation. Avoid placing lines in the center of valleys or draws where they would be even more prominent. To the extent feasible, the final locations of transmission structures shall be adjusted to avoid locations that place the structures in the middle of the line of sight from roads, trails and other important views. New routes should follow vegetative edges whenever possible for added screening and to soften the visual impact of the transmission line.	Prior to construction	LADWP USFS			
VIS-11	Avoid Skylining of Towers - To the extent practical, LADWP shall design and locate new transmission lines so that they do not break the skyline or are directly on the skyline when viewed from sensitive viewpoints. LADWP shall consult with the USFS to ensure that the objectives of this measure are achieved.	Prior to construction	LADWP USFS			
VIS-12	Minimize Vegetation Clearing - To the extent practical, LADWP shall keep modifications of the natural settings to what is minimally required for safe, efficient construction, operation, and maintenance of the Project. Areas that are cleared/opened solely for safe access during the construction stage and that exceed the need for permanent future access into the site shall be restored to the greatest extent possible.	During construction	LADWP USFS BLM			
VIS-13	Avoid Locating New Roads in Bedrock - Where feasible, re-opened and/or new access road and spur road locations on ANF land shall be designed to avoid bedrock cuts, and all road cuts shall be in soil material to protect landscape character, ensure revegetation opportunities, and promote visual quality.	During construction	LADWP USFS			
VIS-14	Excavated Materials Disposal - For ANF lands, LADWP shall dispose of excavated materials (excess soil and rocks, etc.) in disposal areas (either on ANF lands or off ANF lands) as designated by the USFS. Where applicable, any tower footings designated for removal (concrete, reinforcing steel, angle steel, anchor bolts, etc.) shall be disposed off ANF lands.	During construction	LADWP USFS			
VIS-15	Construction Area Site Selection - To the extent feasible, the sites selected for use as construction yards, pull sites, helicopter landing zones, laydown areas, etc., shall be areas that are already flat, disturbed, and/or clear of vegetation, which would require the least amount of modification, clearing, and soil disturbance. To the extent feasible, these construction features shall be in areas of low visual sensitivity.	During construction	LADWP USFS BLM			

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VIS-16	Compensation for Impacts to Landscape Character and Visual Quality – All reasonable efforts shall be made to meet the Scenic Integrity Objectives (SIOs) shown on the SIO Map in the ANF Land Management Plan. Minor adjustments that exceed a drop of more than one SIO level are allowable, with the Forest Supervisor’s approval, for necessary projects that meet a greater public need and cannot be reasonably accommodated on non-NFS land. In areas where the SIOs cannot be met, LADWP and the Forest Supervisor shall reach a consensus on what is a commensurate amount of Visual/Scenery Management related restoration or compensation to the ANF to make up for the Project’s long-term visual impacts to the landscape character and visual quality, including but not limited to impacts to landscape character and visual quality of scenic highway and scenic trail viewsheds.	During construction	LADWP USFS			
VIS-17	Span Matching of Existing Structures – To the extent practicable and within the limits of standard structure design, LADWP shall match existing structure spacing, spans and heights as closely as possible to reduce visual complexity as seen from high concern viewpoints.	Prior to construction	LADWP USFS BLM			
VIS-18	Treat New Concrete Footings and any other permanent Project-related structures with Visually Appropriate Color or Construction Materials in Selected Areas – Within the limits of normal construction practice and in areas on the ANF identified during final design by the ANF landscape architect and approved by the Authorized Officer, LADWP shall apply a one-time treatment or application on the exposed surfaces of all new footings and concrete structures using the vendor’s standard method (a concrete additive or stain, to be determined during final design). Up to three colors may be chosen by the ANF landscape architect; however, consideration would be given to apply the colors in a reasonable approach to limit the non-contiguous use of each color. Other constructed permanent (3 years or more) features/structures including, but not limited to, retaining walls, fences, gates, drains, culverts, bridges, low water crossings, etc., on the ANF must meet the guidelines in the Built Environment Image Guide and the SMS to the extent feasible and be approved by the ANF landscape architect and the authorized officer.	During construction	LADWP USFS			
Cultural Resources						
CUL-1	To avoid or reduce impacts to cultural resources on federal, State, city and private land, the ANF, BLM, California SHPO, and LADWP will develop and implement a Programmatic Agreement (PA) to comply with Section 106 of the NHPA, in accordance with the implementing regulations at 36 CFR 800.14(b). As stipulated in 36 CFR 800.14(b), the PA will document the alternate procedures and guidelines to resolve potential adverse effects or impacts that may result from the construction, operation, and maintenance of the BRRTP. The development of the PA will involve the appropriate government-to-government consultations pursuant to 36 CFR 800.16(f)(1) and invite participation by interested groups, organizations, and individuals, per 36 CFR 800.16(e)(2). The PA will require a Construction Phase Management Plan (CPMP) and a Historic Properties/Historical Resources Management Plan (HP/HRMP). Provisions of the CPMP will be implemented before and during construction; provisions of the HP/HRMP will be implemented following construction during operation and maintenance of the BRRTP. The PA will be signed by the signatories and invited signatories before issuance of the Record of Decision (ROD) by the ANF and BLM.	Prior to and during construction, and operation and maintenance.	LADWP USFS BLM			
Wildfire and Fuels						
F-1a	Eliminate Transmission Line Bounded Islands. LADWP shall eliminate the transmission line bounded islands, as feasible within the limits of standard transmission line design, that would be created by the proposed transmission line along Alternative 1, Alternative 2, and Alternative 2a where the new line departs and remerges with the existing transmission line corridors. Specifically, this would apply to Alternative 1 between mile markers 52.2 and 52.7 and 55.2 and 55.7; Alternative 2 between mile markers 55.0 and 55.7; and Alternative 2a between mile markers 55.0 and 55.6.	Prior to construction	LADWP USFS BLM			
F-1b	Remove the Potential for Wooden Pole Contact. Within the limits of standard transmission line design, the Project should be constructed to avoid potential conflict of existing wooden poles from either conductor contact or from the placement of the new transmission structures. If avoidance of the wooden poles is not possible through design of the Project, then LADWP would coordinate with the responsible utility to rebuild as steel poles or relocate the wooden poles to meet standard avoidance practice. Potential wooden pole contact exists along Alternative 1 between mile markers 52.2 and 53.4, Alternative 2 between mile markers 52.7 and 54.7, Alternative 2a between mile markers 52.7 and 54.7, Alternative 3 between mile markers 41.0 and 53.9, and along the reconductoring of the existing BR-RIN 230 kV transmission line in the same mile marker locations of the new line listed above under Alternative 2.	During construction	LADWP USFS BLM			
F-1c	Share Costs for ANF Fuel Break Maintenance Programs. LADWP shall enter into a cost-sharing agreement with the USFS for maintenance of existing backbone fuelbreaks within the ANF that are close (within 0.25 mile of the proposed centerline) to the Project or that transect one of the Alternatives. A backbone fuelbreak is an identified key ridge or other linear geographical feature that has a high level of effectiveness in slowing or containing a wildfire. LADWP’s responsibility under the cost-sharing agreement would be established through coordination between LADWP and USFS. Responsibility would be proportional to the Project’s potential impacts on wildfire prevention and suppression. The fuelbreaks program between USFS and LADWP shall be finalized before transmission line energization.	Prior to and during construction	LADWP USFS			

Number	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency*	Verification of Compliance		
				Initials	Date	Remarks
F-1d	Provide Transmission Line Safety Training to Regional Fire Prevention Agency Staff. LADWP and fire prevention agencies shall coordinate to provide transmission line bi-lateral/cooperative fire safety training to regional fire prevention agency staff before the start of the official fire season following construction of the Project. LADWP and the agencies will coordinate and mutually decide if additional training is needed in subsequent years, and on the duration, content and most productive methods to conduct the bi-lateral training. A key element of this bi-lateral/cooperative training mitigation is to allow for the exchange of BRRTP-specific construction, maintenance and operation activities planned for the coming year, as well as to update both Utility and Fire Agency emergency fire reporting and fire suppression coordination procedures.	Operation and maintenance	LADWP USFS			
F-1e	Coordinate During Emergency Fire Suppression Activities. In the event of a fire within the Project area, LADWP would coordinate construction activities with fire agencies to avoid obstructions to firefighting activities. The following provisions shall be defined based on consultation with fire agencies. Onsite LADWP and contracted personnel shall coordinate fire suppression activities through the active Fire Incident Commander, and emergency ingress and egress to construction-related access roads shall remain unobstructed at all times during active firefighting activities. Construction in the work area shall cease in the event of a fire within 1,000 feet of the work area or a distance deemed to be unsafe for construction crews. The work area includes the transmission ROW, construction laydown areas, pull sites, access roads, parking pads, and any other sites adjacent to the ROW where personnel are active or where equipment is in use or stored. LADWP shall contact cooperating fire agency dispatches seven days before helicopter use and shall provide dispatch centers with radio frequencies being used by the aircraft, aircraft identifiers, the number of helicopters that would be used while working on or near CAL FIRE Contract County and ANF lands at any given time, and the flight pattern of helicopters to be used. Should a wildfire occur within five (5) miles of the work area, if instructed by the Incident Commander and/or Forest Aviation Officer, construction-related helicopters in use by LADWP shall immediately cease construction activities and not restart aerial operations until authorized by the appropriate fire agency.	During construction	LADWP USFS BLM			
F-1f	Implement FAA/USFS Review for the Appropriate Installation of Aerial Warning Signage and/or Lighting per FAA “Advisory AC70-7460 – Obstruction Marking and Lighting.” Before approval of final Project design, LADWP shall consult with the FAA in regards to Aerial Warning Signage and/or lighting per FAA “Advisory AC70-7460 – Obstructions Marking and Lighting” dated Feb. 1, 2007. Following FAA coordination, LADWP would contact Aerial Fire Suppression agencies for updates related to the location and final design of the transmission line, including tower heights and any warning signage and/or lighting required by the FAA.	Prior to construction	LADWP USFS			
F-2a	Develop and Implement a Construction and Maintenance Fire Prevention Plan. LADWP shall coordinate, develop and implement a Fire Prevention and Vegetation Management Plan, which may be incorporated into the overall COM Plan, to cover construction and maintenance activities associated with the Project. The Plan would include monitoring activities during construction to ensure implementation and effectiveness of the Plan. The Plan would be applicable to the entirety of the Proposed Action or Alternative during all construction and maintenance activities. The Plan will be developed in coordination with USFS and BLM, with input from the CAL FIRE Contract County. The plan will be approved by the Forest Service and BLM prior the start of any construction activities. At a minimum, Plan contents shall include the requirements of ANF Fire Management Plan and Title 14 of the California Code of Regulations, Article 8 #918 “Fire Protection.” Based on these requirements, the plan will include procedures for reporting fires, minimum fire suppression equipment requirements, communication, construction restrictions based on fire conditions, fire patrols, and fire suppression water supplies.	Prior to construction	LADWP USFS BLM			
F-2b	Cease Work During Red Flag Conditions. During Red Flag Warning events, as issued daily by the National Weather Service and the Los Angeles County Fire Department in Federal Responsibility Areas (FRAs) and Local Responsibility Areas (LRAs), all non-emergency construction and maintenance activities shall cease in affected areas. An exception shall be made for transmission line testing where a transmission line may be tested if the loss of another transmission facility could lead to system instability or cascading outages.	During construction and operation & maintenance	LADWP USFS BLM			
F-2c	Remove Hazards from the Work Areas. Before starting construction and/or maintenance work on the Project, LADWP shall clear or remove brush and dead and decaying vegetation that would pose a fire hazard from the work area. The work area includes the transmission ROW, construction laydown areas, pull sites, access roads, parking pads, remote helicopter construction sites, helicopter fueling/maintenance sites and any other sites adjacent to the ROW where personnel are active or where equipment is in use or stored. For ground-based construction, cleared vegetation may either be removed or chipped and spread onsite in piles no higher than six (6) inches.	Prior to construction	LADWP USFS BLM			

Number	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency*	Verification of Compliance		
				Initials	Date	Remarks
F-3a	Fire Prevention On Private Property. The BRRTP firehshed assessment area comprises 55% non-federal ownership that includes many homes, businesses, and other structures associated with these communities. Active fire prevention practices by home- and land-owners would mitigate and decrease the potential for loss of private property, including homes, in the event of a wildfire. Fire prevention practices primarily include creation of defensible space around structures (compliance with Public Resources Code 4291) but can also include retrofitting rooftops with fire-proof materials, fire shutters, double pan windows, eave boxing, removal of attic vents, automatic or remotely operated water sprinklers and automatic or remotely operated, generator-supported water systems, and removal or replacement of wood fencing and decks with fire-resistant materials. There are various existing programs at the federal, state, and local level that are available to individual land owners and communities for education and funding for specific wildfire prevention measures. These programs and grants are available through the National Fire Protection Association's (NFPA) Firewise Communities, the National Fire Plan, FEMA Region IX, the California Fire Safe Council, and locally with the Angeles Forest Valleys and Lakes Fire Safe Council, as well as numerous private foundations. The responsibility to implement and maintain these fire prevention measures as part of this mitigation measure on private property lies with the individual land/home owner. State and Local fire agencies have enforcement authority for state and local code requirements.	Prior to and during construction, and operation & maintenance	None (individual land/home owner)			
Biological Resources						
BIO-1	<p><i>Provide restoration/compensation for impacted sensitive vegetation communities.</i></p> <p>1a The intent of this mitigation measure is to require LADWP to restore disturbed sites to pre-construction conditions or the desired future conditions per the Angeles National Forest (ANF) Land Management Plan (LMP). Before construction LADWP shall have a qualified biologist, where concurrence on the biologist has been provided by the USFS and approval on the biologist has been provided by the BLM, document the community type and acreage of vegetation that would be subject to Project disturbance. Impacts to all oaks and native trees will be documented by identifying the species, number, location, and diameter at breast height (DBH). On non-federal lands, all protection and replacement measures shall be consistent with applicable local jurisdiction requirements, such as the Los Angeles County Oak Tree Ordinance.</p> <p>1) For NFS and BLM lands, the USFS and BLM shall review and approve a Habitat Restoration and Revegetation Plan, prepared by LADWP in coordination with the federal agencies, for the Project, which shall include plans for restoration, enhancement/re-vegetation and/or mitigation banking. For non-federal lands, LADWP shall prepare the Habitat Restoration and Revegetation Plan. Both plans shall include at minimum: (a) the location of the mitigation site (off-site mitigation may be required); (b) locations and details for topsoil storage; (c) the plant species to be used; (d) seed and cutting collecting guidelines; (d) a schematic depicting the mitigation area; (e) time of year that the planting will occur and the methodology of the planting; (f) a description of the irrigation methodology for container, bare-root or other planting needing irrigation; (g) measures to control exotic vegetation on site; (h) success criteria; (i) a detailed monitoring program;(j) locations and impacts to all oaks and native trees (over 3 inches DBH); (k) locations of temporary or permanent gates, barricades, law enforcement patrolling, or other means to control unauthorized vehicle access on access and spur roads as deemed necessary by the USFS and BLM (NFS and BLM lands only). Restoration efforts will not adversely affect listed species or critical habitat and measures will be implemented to protect these species during restoration.</p> <p>2) LADWP shall utilize a USFS/BLM approved locally collected seed mix, locally collected cuttings, bare-root stock, etc. to revegetate areas disturbed by construction activities. All areas dominated by non-native species before Project disturbance shall be revegetated using appropriate native species. The seed mix shall consist of native, locally occurring species collected from local seed sources. Cuttings and bare-root stock shall be of local origin. Restoration shall include the revegetation of stripped or exposed work sites and/or areas to be mitigated with vegetation native to the area. No commercially purchased seeds, stock, etc. will be accepted without the approval of the USFS and BLM on NFS/BLM lands, and seeds must be certified to be free of noxious weeds. Revegetation shall include ground cover, grass, shrub, and tree species to match disturbed areas to surrounding conditions and to restore or improve wildlife habitat quality to pre-Project or higher levels. The Habitat Restoration and Revegetation Plan shall also include a monitoring element. Post seeding and planting monitoring reporting will be yearly from years one to five and every other year from years six to ten or until the success criteria are met. LADWP shall restore temporarily disturbed areas, including existing tower locations that are to be removed by the Project, to pre-construction conditions or the desired future conditions per the ANF LMP. If the survival and cover requirements have not been met, LADWP is responsible for replacement planting to achieve these requirements. Replacement plants shall be monitored with the same survival and growth requirements as previously mentioned.</p> <p>3) On NFS land, the USFS/LADWP will conduct a preconstruction evaluation of the probable impacts to all oaks and native trees (over 3 inches DBH) in all construction-related disturbance areas. This evaluation shall be incorporated into the Habitat Restoration Plan and shall include the species and number of individuals, their DBH, location, and potential impact type. Construction within the driplines of all native trees and oak trees/shrubs, and incidental trimming or damage to trees along the proposed access/spur routes, shall not occur until the trees are evaluated by a USFS botanist or authorized arborist. This person shall identify appropriate measures to minimize tree loss, such as the placement of fence around the dripline, padding vehicles, minimizing soil removal or adding spoil</p>	Prior to and during construction, post construction	LADWP USFS BLM			

Number	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency*	Verification of Compliance		
				Initials	Date	Remarks
	<p>around driplines, and the placement of matting under the existing dripline during construction activities. On the ANF, if a tree must have any construction-related activities such as equipment or soil staging within the drip zone, root pruning, or excessive branch pruning (greater than 25% in one year), then the tree must be monitored for five years for tree mortality. If any of these identified trees dies during the monitoring period, then the tree must be replaced at the rate appropriate to the DBH.</p> <p>4) The replacement ratios (using rooted plants in liners or direct planting of acorns [for oaks]) for native trees or any oaks that are to be removed on the ANF shall be as follows: trees from 3 to 5 inches DBH shall be replaced at 3:1; trees from 5 to 12 inches shall be replaced at 5:1; trees from 12 to 24 inches shall be replaced at 10:1; trees from 24 to 36 inches shall be replaced at 15:1; and all oaks greater than 36 inches shall be replanted at a ratio of 20:1. The replacement ratio for damaged trees shall be 2:1 for trees with DBH less than 12 inches and a 5:1 ratio for trees with DBH greater than 12 inches. The DBHs for scrub oaks will be measured following California Department of Fish and Game (CDFG) guidelines. On the ANF, any oak or native tree that must be removed or killed as a result of construction or other Project-related activities shall be replaced in kind or mitigated (off-site) at a comparable value. Compliance shall be evaluated annually for years one to five and bi-annually for years six to ten (years after tree planting). Trees shall be planted at locations acceptable to the landowner or managing agency. All planting locations, procedures, and results shall be evaluated by an authorized arborist and USFS botanist. On non-federal lands, all protection and replacement measures shall be consistent with applicable local jurisdiction requirements, such as the Los Angeles County Oak Tree Ordinance.</p> <p>5) Permanent impacts on federal lands shall be determined by the appropriate federal manager (USFS and BLM) at the ratios stated below (Table BIO-MM-1) or at a comparable value. On NFS and BLM lands, impacts will be considered permanent if the trees are not likely to recover by ten years post-disturbance. Where on-site restoration is planned for mitigation of temporary impacts to vegetation communities, LADWP shall identify a Habitat Restoration Specialist, where concurrence has been provided by the USFS, to implement the method of restoration outlined by the USFS/BLM in the Habitat Restoration Plan.</p> <p>6) On USFS/BLM lands, the creation or restoration of habitat shall be monitored after mitigation site construction to assess progress and identify potential problems with the restoration site. This will be monitored on USFS/BLM lands until the success criteria outlined in the restoration plan are met annually for years one to five, and bi-annually for years six to ten. Remediation activities (e.g., additional planting, removal of non-native invasive species, or erosion control) shall be taken until the success criteria are met as specified above, to ensure the success of the restoration effort. If the mitigation fails to meet the established success criteria after the ten-year maintenance and monitoring period, monitoring and remedial activities shall extend beyond the ten-year period until the criteria are met or unless otherwise specified by the USFS/BLM (as appropriate). If a fire occurs in a revegetation area before the success criteria are met, LADWP shall be responsible for a one-time replacement of vegetation. If a second fire occurs, no replanting is required, unless the fire is caused by LADWP activity. Off-site mitigation for NFS/BLM and non-NFS/BLM lands may be required if mitigation rates exceed what can be achieved on NFS/BLM land. This may be in the form of funding for land acquisition for inclusion into the Angeles National Forest or BLM lands affected by the Project, mitigation banking, removing existing structures, or comparable restoration efforts.</p> <p>1b During and after construction, USFS/BLM-identified potential or existing entrances to Project-related disturbed areas such as access/spur roads, pull sites, staging areas, fly yards, landing zones, etc. on NFS/BLM lands shall be gated, blockaded and/or concealed in some manner and maintained to prevent the unauthorized use by the general public. Signs prohibiting unauthorized use of these disturbance areas shall be posted on these barricades if deemed necessary by the USFS/BLM. If barricades are being compromised, law enforcement patrolling may also be implemented to control unauthorized access onto Project disturbance areas.</p> <p>1c Treat cut tree stumps with Sporax. All stumps of trees (conifers and hardwoods) resulting from activities associated with construction of the Project shall be treated with Sporax according to product directions to prevent the spread of annosus root disease. Only licensed applicators shall apply Sporax. Sporax shall not be used during rain events unless otherwise approved by the USFS.</p>					

TABLE BIO-MM-1. SUMMARY OF ESTIMATED IMPACTS TO VEGETATION COMMUNITIES ON FEDERAL LANDS

Vegetation Communities	Jurisdiction	Permanent Impacts (acres)			Temporary Impact (acres)			Total Estimated Mitigation (acres)
		Estimated Impact	Ratio	Estimated Off-site Mitigation	Estimated Impact	Ratio	Estimated On-site Restoration	
Alternative 1								
Chamise Chaparral	USFS	16.73	3:1	50.19	56.06	1:1	56.06	106.25
Mojave Creosote Bush Scrub	BLM	2.68	1:1	2.68	21.81	1:1	21.81	24.49
Mojave Wash Scrub	BLM	0.25	1:1	0.25	2.05	1:1	2.05	2.30
Riversidian Sage Scrub	USFS	3.06	5:1	15.3	10.48	2:1	20.96	36.26
Southern Coast Live Oak Riparian	USFS	0.05	5:1	0.25	0.38	2:1	0.76	1.01

Vegetation Communities	Jurisdiction	Permanent Impacts (acres)			Temporary Impact (acres)			Total Estimated Mitigation (acres)
		Estimated Impact	Ratio	Estimated Off-site Mitigation	Estimated Impact	Ratio	Estimated On-site Restoration	
Forest								
Southern Cottonwood Willow Riparian Forest	USFS	0.42	5:1	2.1	0.86	2:1	1.72	3.82
Southern Mixed Chaparral	USFS	14.13	3:1	42.39	45.81	1:1	45.81	88.20
Southern Sycamore Alder Riparian Woodland	USFS	0.13	5:1	0.65	0.25	2:1	0.5	1.15
Southern Willow Scrub	USFS	0.32	3:1	0.96	1.30	2:1	2.6	3.56
Alternative 2								
Chamise Chaparral	USFS	10.11	3:1	30.33	39.38	1:1	39.38	69.71
Barren/developed	USFS	7.8	1:1	7.8	24.8	1:1	24.8	32.6
Mojave Creosote Bush Scrub	BLM	2.69	1:1	2.69	21.82	1:1	21.82	24.51
Mojave Wash Scrub	BLM	0.25	1:1	0.25	2.06	1:1	2.06	2.31
Riversidian Sage Scrub	USFS	1.84	5:1	9.2	8.85	2:1	17.7	26.9
Southern Coast Live Oak Riparian Forest	USFS	0.69	5:1	3.45	3.39	2:1	6.78	10.23
Southern Mixed Chaparral	USFS	3.24	3:1	9.72	8.77	1:1	8.77	18.49
Southern Riparian Scrub	USFS	0.33	3:1	0.99	0.66	1:1	0.66	1.65
Southern Sycamore Alder Riparian Woodland	USFS	0.87	5:1	4.35	2.2	2:1	4.4	8.75
Alternative 2a								
Chamise Chaparral	USFS	10.11	3:1	30.33	39.38	1:1	39.38	69.71
Barren/developed	USFS	3.24	1:1	3.24	12.72	1:1	12.72	15.96
Interior Live Oak Chaparral	USFS	2.06	5:1	10.3	5.60	2:1	11.2	21.5
Mojave Creosote Bush Scrub	BLM	2.68	1:1	2.68	21.81	1:1	21.81	24.49
Mojave Wash Scrub	BLM	0.25	1:1	0.25	2.05	1:1	2.05	2.3
Riversidian Sage Scrub	USFS	1.84	5:1	9.2	8.85	2:1	17.7	26.9
Scrub Oak Chaparral	USFS	1.46	5:1	7.3	3.19	2:1	6.38	13.68
Southern Coast Live Oak Riparian Forest	USFS	0.69	5:1	3.45	3.40	2:1	6.8	10.25
Southern Mixed Chaparral	USFS	9.03	3:1	27.09	27.88	1:1	27.88	54.97
Southern Riparian Scrub	USFS	0.33	5:1	1.65	0.66	2:1	1.32	2.97
Southern Sycamore Alder Riparian Woodland	USFS	0.81	5:1	4.05	1.64	2:1	3.28	7.33
Alternative 3								
Chamise Chaparral	BLM	0.00	1:1	0.0	0.02	1:1	0.02	0.02
Barren/developed	USFS	1.04	1:1	1.04	2.13	1:1	2.13	3.17
Mojave Creosote Bush Scrub	BLM	2.68	1:1	2.68	21.81	1:1	21.81	24.49
Mojave Wash Scrub	BLM	0.25	1:1	0.25	2.05	1:1	2.05	2.3
Riversidian Sage Scrub	USFS	9.57	5:1	47.85	28.19	2:1	56.38	104.23
Scrub Oak Chaparral	USFS	2.87	5:1	14.35	5.83	2:1	11.66	26.01
Southern Riparian Scrub	USFS	0.34	5:1	1.7	0.69	2:1	1.38	3.08
New Circuit								
Chamise Chaparral	USFS	8.03	3:1	24.09	23.05	1:1	23.05	47.14
Riversidian Sage Scrub	BLM	0.04	1:1	0.04	0.34	1:1	0.34	0.38
Riversidian Sage Scrub	USFS	1.98	5:1	9.9	5.96	2:1	11.92	21.82
Southern Coast Live Oak Riparian Forest	USFS	0.08	5:1	0.4	0.66	2:1	1.32	1.72
Southern Cottonwood Willow Riparian Forest	USFS	0.40	5:1	2.0	0.80	2:1	1.6	3.6
Southern Sycamore Alder Riparian Woodland	USFS	0.09	5:1	0.45	0.19	2:1	0.38	0.83
Reconductoring								
Chamise Chaparral (Segment ABG)	USFS	16.07	3:1	48.21	32.65	1:1	32.65	80.86
Barren/developed (Segment ABG)	USFS	7.77	1:1	7.77	25.28	1:1	25.28	33.05
Mojave Creosote Bush Scrub	BLM	2.85	1:1	2.85	23.16	1:1	23.16	26.01

Vegetation Communities	Jurisdiction	Permanent Impacts (acres)			Temporary Impact (acres)			Total Estimated Mitigation (acres)
		Estimated Impact	Ratio	Estimated Off-site Mitigation	Estimated Impact	Ratio	Estimated On-site Restoration	
(Segment ABG)								
Mojave Wash Scrub (Segment ABG)	BLM	0.23	1:1	0.23	1.86	1:1	1.86	2.09
Riversidian Sage Scrub (Segment ABG)	USFS	5.07	5:1	25.35	10.30	2:1	20.6	45.95
Southern Coast Live Oak Riparian Forest (Segment ABG)	USFS	3.25	5:1	16.25	6.60	2:1	13.2	29.45
Southern Mixed Chaparral (Segment ABG)	USFS	2.86	3:1	8.58	8.01	1:1	8.01	16.59
Southern Riparian Scrub (Segment ABG)	USFS	0.33	5:1	1.65	0.66	2:1	1.32	2.97
Southern Sycamore Alder Riparian Woodland (Segment ABG)	USFS	0.95	5:1	4.75	2.34	2:1	4.68	9.43
Southern Coast Live Oak Riparian Forest (Segment K)	BLM	0.02	1:1	0.02	0.04	1:1	0.04	0.06
Southern Mixed Chaparral (Segment K)	BLM	0.00	1:1	0.0	0.01	1:1	0.01	0.01

Note: The permanent and temporary impact calculations provided above are estimates based on the impact model described in Appendix C of the Biological Resources Technical Report. Therefore, acreage numbers for the habitat types listed above may be smaller than those listed in the table. Preconstruction surveys will be conducted to estimate the acreage impacts and will be based on the final design not the impact model.

Number	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
BIO-2	<p><i>The following prescriptions would prevent the spread of invasive weeds into previously uninfested areas in the designated construction right-of-way.</i></p> <p>2a Prepare and implement a Weed Control Plan. LADWP/ANF/BLM shall prepare and implement a comprehensive, adaptive Weed Control Plan on NFS/BLM lands for pre-construction and construction invasive weed abatement. The Weed Control Plan, including monitoring and eradication, will be part of the 50 year Operations and Maintenance Permit. On ROW easement lands administered by the USFS/BLM, the Weed Control Plan shall incorporate all appropriate and legal agency-stipulated regulations including consulting with CDFG on CESA species. The Weed Control Plan shall be submitted to the USFS/BLM for final authorization of weed control methods, practices, and timing before implementation of the Weed Control Plan on public lands. Weed control on BLM lands using pesticides would require site-specific NEPA analysis and an approved BLM Pesticide Use Permit. Pesticide Use Permits are issued for a maximum of three years. ROW easements on private lands shall include provisions such as wheel and equipment washing as part of implementation of the Weed Control Plan. The Weed Control Plan shall include the following stipulations:</p> <p>1) A pre-construction weed inventory shall be conducted on NFS and BLM lands by surveying all areas subject to ground-disturbing activity, including, but not limited to, tower pad preparation and construction areas, tower removal sites, pulling and tensioning sites, assembly yards, and areas subject to grading for new or improved access and spur roads. Weed populations that: (1) are rated High or Moderate for negative ecological impact in the California Invasive Plant Inventory Database (Cal-IPC 2006); (2) aid and promote the spread of wildfires (such as cheatgrass, Saharan mustard, and medusa head); and (3) are considered by the USFS and/or BLM as species of priority (for NFS/BLM lands only) shall be mapped and described according to density and area covered. In areas subject to ground disturbance, weed infestations shall be treated before construction according to control methods and practices for invasive weed populations designed in consultation with the USFS/BLM. The Weed Control Plan shall be updated and guide post-construction eradication and monitoring efforts.</p> <p>2) Weed control treatments shall include all legally permitted herbicide application, manual, and mechanical methods applied with the authorization of the USFS/BLM. The application of herbicides shall be in compliance with all State and federal laws and regulations under the prescription of a Pest Control Advisor (PCA), where concurrence has been provided by the USFS/BLM, and implemented by a Licensed Qualified Applicator. The most effective herbicides with the least toxic surfactant available shall be used. Herbicides shall not be applied during or within 24 hours of a 70% chance of occurring rain event. Herbicides shall not be used within Riparian Conservation Areas (RCAs) on the ANF without approval of the USFS. In riparian areas, only water-safe herbicides, surfactants and adjuvants shall be used. Herbicides shall not be applied by spray equipment when wind velocities exceed 6 mph. Herbicides applied by sponge or paintbrush to cut stumps shall not be applied at wind speeds over 15 mph. In</p>	Prior to and during construction	LADWP USFS BLM			

Number	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
	<p>areas containing special-status plants or animals, there will be a 5- to 70-foot buffer where herbicides are not used. The size of the buffer will be determined and flagged for avoidance by an approved botanist/biologist, based on phenology or life cycle at time of treatment, rareness and imperilment of adjacent native species, herbicide being used, method of herbicide application, concentration of herbicide being used based on no observed effect to non-target species, and/or environmental conditions and terrain. Where manual and/or mechanical methods are used, disposal of the plant debris will follow the regulations set by the USFS/BLM. The timing of the weed control treatment shall be determined for each plant species in consultation with the USFS/BLM (on NFS/BLM lands) with the goal of controlling populations before they start producing seeds. Pre-emergent herbicides will only be used in areas that have a very low potential for supporting native plant species after disturbance, as determined by an authorized botanist.</p> <p>For the preconstruction and construction of the Project, measures to control the introduction and spread of noxious weeds in the Project work area shall be taken as follows.</p> <p>3) On the ANF and BLM lands, surveying for new invasive weed populations and the monitoring of identified and treated populations shall be required at all sites impacted by construction (tower pads, staging areas, landing zones, etc.), including access/spur roads disturbed during the Project. Surveying and monitoring for weed infestations shall occur annually for years one to five and bi-annually for years six to ten, or until success criteria as outlined in the Weed Control Plan are met. Treatment of all identified weed populations shall occur at an appropriate interval so as to meet the success criteria. When no new seedlings or resprouts are observed at treated sites for three consecutive, normal rainfall years, the weed population can be considered eradicated and weed control efforts may cease for that site.</p> <p>4) During Project preconstruction and construction, all seeds and straw materials shall be weed-free when available, and all gravel and fill material shall be certified weed-free by the county Agriculture Commissioners' Offices. Any deviation from this must be approved by a USFS/BLM botanist. All plant materials used during restoration shall be native, certified weed-free, and approved by the USFS/BLM.</p> <p>5) Before beginning preconstruction activities, the USFS and the BLM, in coordination with LADWP, will determine suitable locations to install field washing stations as part of the Weed Control Plan. Before commencing construction activities, LADWP shall document that all vehicles, equipment, and tools used on the Project have been cleaned at existing construction yard wash facilities or legally operating car washes. This is a one-time requirement designed to address the potential of new species of weeds being transported from outside the area. If, however, vehicles, equipment, or tools are used or driven off paved roads on non-NFS/BLM lands, washing must occur before entering USFS/BLM lands.</p> <p>During Project preconstruction and construction, all vehicles, equipment, or tools which will be used outside of permitted Project roadways shall be washed at the nearest wash station before operating off-road. In other areas also designated by the USFS/BLM, vehicles, equipment, and tools will be washed at the nearest wash station after exiting those areas. Vehicles that do not leave permitted Project roadways are not required to be washed after the initial washing described above. All washing shall take place where rinse water is collected and disposed of in either a sanitary sewer or landfill, unless otherwise approved by the USFS/BLM. For NFS lands, plant material may also be removed by air compressors at USFS botanist/LADWP-approved locations.</p> <p>Written daily logs shall be kept for all vehicle/equipment/tool washing that records the date, time, location, type of equipment washed, methods used, and staff present. The log shall include the signature of a responsible staff member. Logs shall be available to the USFS and BLM for inspection at any time and shall be submitted to the USFS and BLM permit administrators on a monthly basis.</p> <p>6) During Project operation and maintenance activities, weeds shall be removed in assembly yards, helicopter landing areas, tower pads, spur roads, staging areas, and any other disturbance areas in a USFS/BLM-approved method.</p> <p>2b Remove weed seed sources from construction access routes. Before construction, LADWP shall initiate invasive species eradication along construction access routes to minimize the potential of weeds spreading aggressively during construction. Post-construction, these treatment areas will be included and treated according to the restoration plan. Per the Forest Service Manual (FSM) 2080 Best Management Practice (BMP) guideline, LADWP shall also remove or reduce sources of weed seed along the travel routes associated with Project construction. Weed species identified along the Alternatives and associated access roads include tocalote, artichoke thistle, tree tobacco, saltcedar, slender wild oat/wild oat, rigput brome, soft chess brome, red brome, cheatgrass, blessed thistle, filaree, shortpod mustard, prickly lettuce, common horehound, yellow sweetclover, rabbit foot grass, Mediterranean grass, sowthistle, rat-tail fescue, tree-of-heaven, giant reed grass, yellow starthistle, bull thistle, fennel, perennial pepperweed, and black locust. To prevent the introduction or control the spread of invasive weeds, herbicide, hand removal or other control methods will be implemented to reduce seed production during Project construction. Following Project approval and during the time of year when weed species can be observed and identified, LADWP shall identify, using an authorized plant ecologist, any other weed seed sources that could contribute</p>					

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	<p>to Project-related weed spread on the ANF and BLM lands. Target infestations identified by Project surveys should be controlled before construction. LADWP shall initiate eradication of the target infestations discovered during pre-construction surveys along construction routes.</p> <p>2c Remove weed seed sources from assembly yards, staging areas, tower pads, pull sites, landing zones, and spur roads. Before construction and during each year of construction at all assembly yards, staging areas, tower pads, pull sites, landing zones, and spur roads within the ANF and BLM lands, weed-infested areas shall be hand-weeded and/or treated as appropriate for the individual weed species under the guidance of an authorized plant ecologist or restoration ecologist, where concurrence on the ecologist has been provided by the USFS/BLM. Unless otherwise authorized by the USFS/BLM, weed control efforts in these areas shall be timed annually to reduce shortpod mustard, tocalote, bromes and other invasive weed seed production, by herbicide application or other control techniques prior to flowering. All plant debris shall be disposed of at a USFS/BLM approved location. Weed control efforts shall commence in early spring (February – March), as indicated annually by an authorized plant ecologist or restoration ecologist in coordination with LADWP and USFS/BLM botanist or weed specialist.</p> <p>2d Use of Herbicides to Control Exotic Weeds. LADWP may use herbicides where deemed necessary for the control of invasive weeds within the Project area. Weed control shall be species-specific, and herbicides shall be applied only if necessary after considering alternate methods or as part of a proven eradication strategy for the particular weed species. To minimize potential impacts, weed control treatments shall include all legally permitted herbicide, manual, and mechanical methods applied with the authorization of the USFS/BLM. Due to typically large seed banks and the ability of some weed species to vigorously resprout following removal methods, most species require more than one round of treatment, or require a different follow-up treatment method after the initial removal occurs. Any herbicide use on NFS lands would be subject to the review and approval of the appropriate USFS personnel and in coordination with LADWP. On BLM lands, herbicide use will be guided by an approved, site-specific Pesticide Use Proposal.</p>					
BIO-3	<p><i>Incorporate riparian area avoidance and permit measures.</i></p> <p>The following actions and all permit conditions detailed within the U.S. Army Corps of Engineers individual or Nationwide 12 permit, CDFG 1602 Streambed Alteration Agreement, and RWQCB 401 water quality certification (subject to separate approval) would be implemented by the construction manager and environmental compliance monitor(s).</p> <p>3a LADWP shall not construct or modify any structure, culvert, or bridge or modify any habitat on NFS lands in RCAs without the authorization of the USFS. Vegetation removal or road construction shall not occur in RCAs during the breeding season for nesting birds (February 1 to August 15) unless otherwise approved by the USFS. LADWP shall prepare and implement a USFS RCA Treatment Plan for the Project. This Plan shall include the specific activities that will occur at each of the RCA points crossed by the Project, including the amount and type of vegetation to be cleared, the type of road crossing or improvement allowed for wet and dry crossings, and the methods that would be employed to reduce the effects of the Project on water quality. The Plan shall include seasonal restrictions for vehicle or equipment passage, restrictions on what activities may occur (such as grading, vegetation removal or tree trimming), monitoring requirements, and restoration requirements. This Plan shall be submitted to the USFS for approval before construction or the grading of any access road.</p> <p>3b Before construction, an authorized biologist shall stake and flag or fence exclusion zones around all identified riparian areas. Such exclusion zones will include an appropriate buffer to preclude sediment intrusion into the riparian areas. Earth-moving activities shall be restricted from these zones, although essential vehicle operation and foot travel will be permitted on existing roads, bridges, and crossings. All other construction activities, vehicle operation, material and equipment storage, and other surface-disturbing activities will be prohibited within the exclusion zone.</p> <p>3c In areas where riparian habitats are unavoidable, the construction manager, in consultation with the lead environmental compliance inspector and USFS, shall narrow the width of the road through the area to the minimum extent required for safe travel. New spur roads and existing access road improvements shall be constructed and implemented using methodology that preserves existing hydrology.</p> <p>3d Towers shall not be constructed in riparian areas.</p> <p>3e All temporarily disturbed riparian areas that would not be utilized for future routine operation and maintenance activities shall be restored according to the guidelines of the Habitat Restoration Plan to the extent required to ensure no net loss of habitat functions and values. Following construction activities, the areas will be restored as soon as practicable.</p> <p>3f Permanent, unavoidable losses of riparian areas will be mitigated by restoration and/or preservation of off-site habitats, as outlined in the Habitat Restoration Plan. The final mitigation and off-site restoration locations will be determined in consultation with LADWP and the relevant permitting agency(s). Mitigation acreage ratios will be consistent with those listed in Table BIO-MM-1.</p>	Prior to and during construction	LADWP USFS BLM			

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BIO-4	<p><i>Provide restoration/compensation for affected jurisdictional areas.</i></p> <p>4a Impacts to areas under jurisdiction of the USACE, RWQCB, USFS and CDFG shall be avoided to the extent feasible. Where avoidance of jurisdictional areas is not feasible, including emergency repairs, and access/spur roads within RCAs, the applicant shall provide the necessary mitigation required as part of wetland permitting. This will include creation, restoration, and/or preservation of suitable jurisdictional habitat along with adequate buffers to protect the function and values of jurisdictional area mitigation. The location(s) of the mitigation will be determined in consultation with LADWP and the responsible agency(s) as part of the wetland permitting process.</p> <p>4b Measures 3a, b, c, and d will also be incorporated to avoid and protect jurisdictional areas.</p>	During construction	LADWP USFS BLM			
BIO-5	<p><i>Construction activities and vehicle operation would be conducted to minimize potential disturbance to wildlife.</i></p> <p>5a. Conduct preconstruction surveys in locations where potential habitat exists for special-status species to avoid impacts during construction. If wildlife sign or habitat is detected during the surveys, construction activities will be monitored by authorized biologists, or exclusion fencing will be placed around work areas. If federally listed species are found within the area of potential effect, the authorized biologist shall notify the construction manager and the USFWS. The construction manager, in consultation with the USFWS and the authorized biologist, will have the authority to halt all activities until appropriate avoidance measures have been completed. If non-federal special-status species are found within the area of potential effect, the USFS, BLM, and CDFG will be notified and, in consultation with these agencies, agreed-upon appropriate actions to address impacts to the species will be implemented. This only applies to species that are not listed under the California Endangered Species Act (CESA) unless authorized by an Incidental Take Permit (ITP) or not fully protected under Fish and Game Code or Title 14, California Code of Regulations (CCR).</p> <p>5b. Cover all steep-walled trenches or excavations used during construction to prevent entrapment of wildlife (e.g., reptiles and small mammals). If the trenches or excavations cannot be covered, escape ramps shall be placed into the trench or excavated area, or exclusion fencing (i.e., silt fencing) shall be installed around the trench or excavation to prevent entrapment of wildlife. Open trenches, or other excavations that could entrap wildlife, shall be inspected by the authorized biologists a minimum of three times per day and immediately before backfilling. All excavated areas shall be covered if left overnight. Furthermore, employees and contractors shall look under vehicles and equipment for the presence of wildlife before moving the vehicle or equipment. If wildlife is observed, no vehicles or equipment would be moved until the animal has left voluntarily or is moved out of harm's way by an authorized biologist. Should a dead or injured special-status species be found in a trench or excavation or anywhere in the construction zone or along an access road, the authorized biologist shall contact BLM and/or USFS (for activities on land managed by the agencies) and the Wildlife Agencies within 48 hours of the finding. The authorized biologist shall record the species found, the location of the finding, and the cause of death (if known), and shall submit a photograph and any other pertinent information; this information shall be submitted to the appropriate wildlife agency.</p>	Prior to and during construction	LADWP USFS BLM			
BIO-6	<p><i>Implement a Worker Environmental Awareness Program.</i></p> <p>An authorized biologist(s) shall conduct a detailed biological Worker Environmental Awareness Program (WEAP) for all Project personnel before any construction or activities within the Project footprint. The WEAP shall include discussions of Project permits and brief summaries of their conditions; discussions of agency involvement, their applicable sensitivity measures, and relevant environmental protection legislation (e.g., the Endangered Species Act, the Migratory Bird Treaty Act); descriptions of special-status species and other sensitive resources that could exist in the Project area, along with their locations, legal status and protections; and a review of all measures to be implemented for avoidance of these sensitive resources. The final list of wildlife species to be included in the WEAP may be reduced at the discretion of the biologist with concurrence from applicable agencies.</p> <p>6a. Training materials and briefings shall also include the consequences of non-compliance with these acts; identification and values of plant and wildlife species and significant natural plant community habitats; fire protection measures; sensitivities of working on NFS and BLM lands and identification of USFS and BLM sensitive species; hazardous substance spill prevention and containment measures; a contact person in the event of the discovery of dead or injured wildlife; and review of mitigation requirements. Discussion of GPs and BMPs shall include topics such as appropriate work limits, avoiding the spread of non-native plant species, fire safety, wildlife avoidance, trash and debris collection, spill prevention and containment protocol, and appropriate protocol for passage and/or construction near riparian zones. Sightings of sensitive wildlife species or harmful encounters with any wildlife species shall be reported to the authorized biologist immediately for evaluation and, as necessary, reporting to agencies.</p> <p>6b. Training materials and a course outline shall be provided to the USFS/BLM for review and approval at least 30 days before the start of construction. Maps showing the location of special-status wildlife, fish, or populations of rare plants, exclusion areas, or other construction limitations (e.g., limited operating periods) will be provided to the environmental monitors and construction crews before ground disturbance.</p> <p>6c. The training shall be conducted for all crew members present for the start of construction. If new crew members are brought to the</p>	Prior to and during construction	LADWP USFS BLM			

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	Project after this time, they shall take part in the WEAP before beginning construction work; if the authorized biologist is not available at this time, new crew members shall be given a summary handout of the WEAP until the full WEAP can be administered by the authorized biologist, to be conducted no more than one workweek following the crew members' assignment to the Project. All crew members who have completed the WEAP shall submit their names to a list to be updated continuously and furnished to agencies upon request. No construction worker may work in the field for more than five days without participating in the WEAP.					
BIO-7	<p><i>Impacts to Raptors.</i></p> <p>7a. If Project construction activities cannot occur completely outside the bird breeding season, then pre-construction surveys for active nests shall be conducted by a qualified biologist within 1,200 feet of the construction zone no more than seven days before the initiation of construction that would occur between February 1 and August 15. The required survey dates may be modified based on local conditions (e.g., high altitude locations) with the approval of the CDFG, BLM, and/or USFS. LADWP shall be responsible for designating qualified biologists who can conduct pre-construction surveys and monitoring for breeding birds. The résumé of the proposed biologists will be provided to the BLM and USFS for concurrence before ground disturbance. If breeding birds with active nests are found, a biological monitor shall establish a species-specific buffer around the nest for ground-based construction activities and a one-mile buffer for helicopter use if helicopters are flying below 300 feet, and no activities will be allowed within the buffer(s) until the young have fledged from the nest or the nest fails. If nesting bald or golden eagles are identified, a 660-foot no activity buffer will be implemented. The buffer (660-foot eagle and one-mile helicopter) may be adjusted to reflect existing conditions, including ambient noise, topography, and disturbance, with the approval of the U.S. Fish and Wildlife Service (USFWS), CDFG, BLM or USFS, as appropriate (USFS 2005). On NFS lands, the USFS shall apply the USFS Land Management Plan Standard S18 (Part 3 of the Land Management Plan), which states, "Protect known active and inactive raptor nest areas. Extent of protection will be based on proposed management activities, human activities existing at the onset of nesting initiation, species, topography, vegetative cover, and other factors. When appropriate, a no-disturbance buffer around active nest sites will be required from nest-site selection to fledging." If for any reason a bird nest must be removed during the nesting season, LADWP shall provide written documentation providing concurrence from the USFWS and CDFG authorizing the nest relocation. On NFS lands, this will include coordination and written approval from the USFS. On BLM lands, this will include coordination and written approval by the BLM. LADWP shall provide a written report documenting the relocation efforts. The report shall include what actions were taken to avoid moving the nest, the location of the nest, what species is being relocated, the number and condition of the eggs taken from the nest, the location of where the eggs are incubated, the survival rate, the location of the nests where the chicks are relocated, and whether the birds were accepted by the adopted parent.</p> <p>7b. Before construction, LADWP shall identify all existing raptor nests that would be affected by Project construction. LADWP shall coordinate with the USFWS, CDFG, USFS and BLM for the proposed removal of nests that may present safety issues associated with the construction activities. All nest removals shall occur after the nest is demonstrated to be inactive by a qualified biologist and have been shown to not result in take as defined by the Migratory Bird Treaty Act (MBTA).</p>	Prior to construction	LADWP USFS BLM			
BIO-8	<p><i>Avoid nesting season and limit disturbance of nesting birds.</i></p> <p>LADWP shall conduct pre-construction surveys for nesting birds if construction and removal activities are scheduled to occur during the breeding season. Surveys shall be conducted in areas within 500 feet of tower sites, laydown/staging areas, substation sites, access/spur road locations, or any other area subject to ground disturbance. Surveys for birds shall be conducted for all areas from February 1 to August 15. The required survey dates may be modified based on local conditions (e.g., high altitude locations) with the approval of the CDFG and/or USFS. LADWP shall be responsible for designating qualified biologists who can conduct pre-construction surveys and monitoring for breeding birds. The résumé of the proposed biologists will be provided to the USFS for concurrence before ground disturbance.</p> <p>If breeding birds with active nests are found, a biological monitor shall establish a 300-foot buffer around the nest for ground-based construction activities and a one-mile buffer for helicopter use if helicopters are flying below 300 feet, and no activities will be allowed within the buffer(s) until the young have fledged from the nest or the nest fails. If nesting bald or golden eagles are identified, a 660-foot no activity buffer will be implemented. The 300-foot (or 660-foot eagle and one-mile helicopter) buffer may be adjusted to reflect existing conditions, including ambient noise, topography, and disturbance with the approval of the USFWS, CDFG, or USFS, as appropriate and in coordination with LADWP. On NFS lands, the USFS shall have the authority to define/redefine such buffers. The biological monitors shall conduct regular monitoring of the nest to determine success/failure and to ensure that Project activities are not conducted within the buffer(s) until the nesting cycle is complete or the nest fails.</p> <p>The biological monitors shall be responsible for documenting the results of the surveys and the ongoing monitoring and will provide a copy of the monitoring reports for impact areas to the respective agencies (e.g., on NFS lands documentation will be provided to the Forest</p>	Prior to and during construction	LADWP USFS BLM			

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	Biologist). If for any reason a bird nest must be removed during the nesting season, LADWP shall provide written documentation providing concurrence from the USFWS and CDFG authorizing the nest relocation. On NFS lands, this will include coordination and written approval from the USFS. LADWP shall provide a written report documenting the relocation efforts. The report shall include what actions were taken to avoid moving the nest, the location of the nest, what species is being relocated, the number and condition of the eggs taken from the nest, the location of where the eggs are incubated, the survival rate, the location of the nests where the chicks are relocated, and whether the birds were accepted by the adopted parent.					
BIO-11	<p><i>Reduce avian electrocutions/collisions on transmission lines.</i></p> <p>Raptor safety protection will be required on tower/conductor (lines) in appropriate locations. The Project would have minimum clearance between phase conductors or between phase conductors and grounded hardware, as recommended by the Avian Power Line Interactive Committee (APLIC 2006), that are sufficient to protect even the largest birds, such as California condor, and therefore would present little to no risk of bird electrocution.</p> <p>New Project structures shall be designed to implement collision-reducing techniques as described in the latest version of the APLIC guidelines. Devices such as swan wrapping or other similar functioning devices may be required if areas are identified as being a hazard to birds. In addition, per General Practice (GP) 8, an Avian Protection Plan will be developed for this Project that will include avian collision protocols.</p>	Prior to construction	LADWP USFS BLM			
BIO-13	<p><i>Protect special-status plant species and their habitat.</i></p> <p>13a. Conduct preconstruction surveys for State and federal Threatened, Endangered, Proposed, Petitioned, Candidate, USFS Sensitive, USFS Watch, BLM Sensitive, and California Native Plant Society (CNPS) listed plants and avoid any occurrences of these plants. LADWP shall conduct pre-construction surveys for State and federally listed Threatened and Endangered, Proposed, Petitioned, and Candidate plants in a 250-foot radius around all areas subject to ground-disturbing activity, including, but not limited to, tower pad preparation and construction areas, tower removal sites, pulling and tensioning sites, assembly yards, and areas subject to grading for new access roads. The surveys shall be conducted during the appropriate blooming period(s) by an authorized plant ecologist/biologist according to protocols established by the USFWS, CDFG, USFS, BLM, and CNPS. The résumé of the proposed biologists will be provided to the USFS and BLM for concurrence before ground disturbance. The completion of these surveys shall be coordinated with the federal land manager. All listed plant species found shall be marked and avoided. If a federally listed plant species cannot be avoided on private land, consultation with USFWS will occur.</p> <p>13b. Before site grading, any populations of listed plant species identified during the surveys shall be protected by a buffer zone. The buffer zone shall be established around these areas and shall be of sufficient size to eliminate potential disturbance to the plants from human activity and any other potential sources of disturbance, including human trampling, erosion, and dust. The size of the buffer will depend upon the proposed use of the immediately adjacent lands, and include consideration of the plant's ecological requirements (e.g., sunlight, moisture, shade tolerance, edaphic physical and chemical characteristics) that are identified by a qualified plant ecologist and/or Forest botanist. At minimum, the buffer shrub species shall be equal to twice the drip line (i.e., two times the distance from the trunk to the canopy edge) to protect and preserve the root systems of the plant. The buffer for herbaceous species shall be, at minimum, 50 feet from the perimeter of the population or the individual. A smaller buffer may be established, provided there are adequate measures in place to avoid the take of the species, with the approval of the USFWS, CDFG, USFS, and BLM and in coordination with LADWP. If impacts to listed plants are determined to be unavoidable, the USFWS shall be consulted for authorization, through the context of a Biological Opinion. Additional mitigation measures to protect or restore listed plant species or their habitat may be required by the USFWS before impacts are authorized, whichever is appropriate.</p> <p>13c. Impacts to non-listed plant species (i.e., USFS Sensitive, CNPS List 1,2 and 4 species) shall first be avoided where feasible, and, where not feasible, impacts shall be compensated through reseedling (with locally collected seed stock), or other USFS or BLM approved methods. For USFS lands, if the ANF determines Project activities will result in the loss of a significant portion of the known individuals of USFS Sensitive plant species, and reseedling/transplanting are not feasible options, LADWP shall preserve existing off-site occupied habitat that is not already part of the public lands in perpetuity at a 2:1 mitigation ratio (habitat preserved: habitat impacted).This ratio will apply only to specific acreage inhabited by special-status plant species that are removed during construction, and will supersede ratios listed in Table BIO-MM-1 regardless of habitat type. The determination of a significant rare plant population loss will be decided by the ANF botanist on a species and location basis, after available literature, research, and overall species distribution are reviewed. If avoidance, reseedling/transplanting, and, preservation of off-site habitat occupied by the impacted species are not found to be possible, the ANF will consider off-site restoration of degraded ANF lands and/or preservation of non-public lands with suitable habitat for the impacted species. The preserved habitat shall be of superior or similar habitat quality to the impacted areas in terms of soil features, extent of disturbance, habitat structure, and dominant species composition, as</p>	Prior to and during construction	LADWP USFS BLM			

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	determined by a qualified plant ecologist. 13d. All special-status plant species impacted by Project activities shall be documented in an annual report and submitted to the federal land manager (USFS and BLM) until the success criteria outlined in the Habitat Restoration Plan are met. Where reseeding has occurred, LADWP shall track the success of the plants during the course of the annual restoration monitoring. This information shall be submitted as part of the annual report to the federal land manager (USFS and BLM).					
BIO-14	<i>Protect western yellow-billed cuckoo, southwestern willow flycatcher, least Bell's vireo, and their habitat.</i> 14a All Project activities taking place within suitable habitat for the western yellow-billed cuckoo, southwestern willow flycatcher, and least Bell's vireo shall be conducted from November through early March, which is a period outside their breeding seasons (Sedgwick 2000, Sogge 2000, Brown 1993, Kus 2002, Hughes 1999). If these activities cannot be avoided during the breeding season, the following measures shall apply: 14b If construction activities must occur during the breeding season in areas that have the potential to support listed riparian species, an authorized ornithologist shall conduct protocol surveys of the Project and adjacent areas within 500 feet to determine if this species is present within the area and to determine breeding status. USFWS protocol surveys will be conducted for southwestern willow flycatcher, least Bell's vireo, and western yellow-billed cuckoo (if no protocols exist, the appropriate land management agency will establish the protocols to be used). In known occupied habitat for listed riparian birds, LADWP shall only conduct focused surveys of the Project and adjacent areas within 500 feet. The surveys shall be of adequate duration to verify potential nest sites if work is scheduled to occur during the breeding season. If breeding is confirmed, the USFWS-recommended buffers will be applied and no activities will occur within that buffer. 14c Protocol or focused surveys, as appropriate, should be conducted within one year of start of construction. However, on NFS lands, annual surveys in suitable habitat may be required during construction. These surveys may be modified through the coordination with the USFWS, CDFG, USFS, LADWP and the BLM based on the condition of habitat, the observation of the species, or avoidance of riparian areas during the breeding season. 14d If a territory or nest is confirmed, the USFWS and CDFG shall be notified immediately. On NFS or BLM lands, these agencies would be notified immediately. In coordination with the USFWS, CDFG and the appropriate land management agency, a 300-foot disturbance-free buffer shall be established and demarcated by fencing or flagging. This buffer may be adjusted, provided noise levels do not exceed 60 dB(A) hourly Leq at the edge of the nest site as determined by an authorized biologist in coordination with a qualified acoustician. If the noise meets or exceeds the 60 dB(A) Leq threshold, or if the authorized biologist determines that the construction activities are disturbing nesting activities, the authorized biologist shall notify the construction manager, and the construction manager, in consultation with the biologist and USFS, has the authority to halt the construction and shall devise methods to reduce the noise and/or disturbance in the vicinity. This may include methods such as, but not limited to, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nest site and the construction activities, and working in other areas until the young have fledged. If noise levels still exceed 60 dB(A) Leq hourly at the edge of nesting territories and/or a no-construction buffer cannot be maintained, construction shall be deferred in that area until the nestlings have fledged. All active nests shall be monitored on a weekly basis until the nestlings fledge. No construction or vehicle traffic shall occur within this buffer during the breeding season for these species. 14e The nest must be monitored by an authorized biologist during the construction activities. If the monitor determines that Project activities are disturbing or disrupting nesting activities, the monitor shall notify the construction manager, and the construction manager, in consultation with the biological monitor, has the authority to implement measures to reduce the noise and/or disturbance in the vicinity. 14f Because these species are State-listed as endangered by CESA, LADWP would apply for an ITP if take of any of these species is anticipated during Project construction.	Prior to and during construction	LADWP USFS BLM			
BIO-15	<i>Protect coastal California gnatcatcher and its habitat.</i> 15a. All Project activities taking place within suitable habitat for the coastal California gnatcatcher shall be conducted from September through February, which is a period outside their breeding season. If these activities cannot be avoided during the breeding season, the following measures shall apply: 15b. LADWP shall conduct protocol surveys for coastal California gnatcatchers in areas supporting coastal sage scrub habitat that may be affected by the Project. In known occupied habitat for the California gnatcatcher, LADWP shall only conduct focused surveys for coastal California gnatcatchers. Survey areas shall include a 500-foot buffer around Project disturbance areas. 15c. If a territory or nest is confirmed, the USFWS shall be notified immediately; on NFS or BLM lands, these agencies would also be notified immediately. In coordination with the USFWS and the appropriate land management agency, a 300-foot disturbance-free buffer shall be established and demarcated by fencing or flagging. This buffer may be adjusted, provided noise levels do not exceed	Prior to and during construction	LADWP USFS BLM			

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	<p>60 dB(A)hourly Leq at the edge of the nest site as determined by an authorized qualified biologist in coordination with a qualified acoustician. If the noise meets or exceeds the 60 dB(A) Leq threshold, or if the authorized biologist determines that the construction activities are disturbing nesting activities, the authorized biologist shall notify the construction manager, and the construction manager, in consultation with the authorized biologist, has the authority to halt the construction and shall devise methods to reduce the noise and/or disturbance in the vicinity. This may include methods such as, but not limited to, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nest site and the construction activities, and working in other areas until the young have fledged. If noise levels still exceed 60 dB(A) Leq hourly at the edge of nesting territories and/or a no-construction buffer cannot be maintained, construction shall be deferred in that area until the nestlings have fledged. All active nests shall be monitored on a weekly basis until the nestlings fledge. No Project activities may occur in these areas unless otherwise authorized by USFWS. LADWP shall obtain incidental take authorization from the USFWS before further activities.</p> <p>15d. Protocol or focused surveys, as appropriate, shall be conducted, at a minimum, within one year of start of construction. These surveys may be modified through the coordination with the USFS, BLM, and CDFG based on the condition of habitat, the observation of the species, or avoidance of nesting areas during the breeding season.</p> <p>15e. Construction activities in occupied gnatcatcher habitat will be monitored by a fulltime authorized biologist. The monitoring shall be of a sufficient intensity to ensure that the biologist could detect the presence of a bird in the construction area. Ata minimum, one full-time monitor shall be present for every two miles of active construction within occupied habitat. The monitors shall notify the construction manager, and the construction manager. in consultation with the biologist, will have the authority to halt all activities until appropriate corrective measures have been completed.</p>					
BIO-16	<p><i>Protect burrowing owl.</i></p> <p>The following measures are proposed to minimize the potential for take of burrowing owl nests during construction associated with the proposed Project.</p> <p>16a Preconstruction surveys will be conducted throughout the Project site and laydown areas for burrowing owls, possible burrows, and sign of owls (e.g., pellets, feathers, white wash).</p> <p>16b Occupied burrows will not be disturbed during the breeding season (February 1 through August 31) unless an approved biologist verifies, through non-invasive methods, that both 1) the birds have not begun egg-laying and incubation, and 2) that juveniles from the occupied burrow are foraging independently and are capable of independent survival.</p> <p>16c Occupied burrows will be protected with a 600-foot buffer, if possible.</p> <p>16d When the destruction of an occupied burrow is unavoidable, the owl(s) will be passively relocated in accordance with the CDFG memo dated October 17, 1995. Relocation efforts will occur at least one week before ground disturbance of the area. A biologist will monitor the success of the relocation. A monitoring plan will be submitted to and approved by CDFG and BLM.</p>	Prior to and during construction	LADWP USFS BLM			
BIO-17	<p><i>Protect the bald eagle and golden eagle.</i></p> <p>17a If construction occurs during bald eagle and golden eagle breeding season, preconstruction surveys shall be conducted, in accordance with USFWS protocol requirements, for the Project area in regions with suitable habitat. Any active nests shall have an appropriate exclusion buffer established. This buffer shall be established based on existing conditions in consultation with the LADWP, USFS, BLM, CDFG and/or USFWS.</p> <p>17b Whenever bald eagles and golden eagles are observed within 100 yards of the construction area, construction shall be halted and shall not resume until the eagles leave.</p> <p>17c If a helicopter will be used for construction or maintenance, the aircraft must be no closer than 1,000 feet vertical or horizontal distance from communal roost sites.</p>	Prior to and during construction	LADWP USFS BLM			
BIO-18	<p><i>Protect California condor.</i></p> <p>18a For all Project activities taking place immediately adjacent to or within known condor-occupied areas, a qualified biologist will monitor all construction activities and assist LADWP in the implementation of the monitoring program. The résumé of the proposed biologist(s) will be provided to the BLM and USFS for concurrence. This biologist(s) will be referred to as the authorized biologist hereafter. The authorized biologist will be present during all activities immediately adjacent to or within known condor-occupied areas. The authorized biologist shall notify the construction manager, and the construction manager, in consultation with the biologist, will have the authority to halt all activities until appropriate corrective measures have been completed. If condors are observed in helicopter construction areas, LADWP shall avoid further helicopter use until the animals have left the area. The authorized biologist will have radio contact with the Project foreman, who will be in radio contact with the helicopter pilot. The biologist will provide information to LADWP to avoid conflicts with condors. All condor sightings in the Project area will be reported to the USFWS and USFS (on NFS lands). LADWP will coordinate with USFWS on the construction schedule and helicopter work areas</p>	During construction	LADWP USFS BLM			

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	<p>to determine if any condors have been tracked or observed in the vicinity of the Project area. If condors are observed in helicopter construction areas, LADWP shall avoid further helicopter use until the animals have left the area and the USFWS will be notified immediately. Should condors be found roosting within 0.5 mile of the construction area, no construction activity shall occur between one hour before sunset to one hour after sunrise, or until the condors leave the area. Should condors be found nesting within 1.5 miles of the construction area, no construction activity will occur until further authorization from the USFWS and USFS (on NFS lands).</p> <p>18b Microtrash. All trash is required to be disposed of as written in the Proper Disposal of Construction Waste Plan for the Project. Additional language has been added to this Plan to address the disposal of microtrash. Workers will be trained on the issue of microtrash – what it is, its potential effects to California condors, and how to avoid the deposition of microtrash. In addition, all workers will properly dispose of their trash throughout the day and daily sweeps of the work area will occur to collect and remove trash in locations with the potential for California condors to occur.</p> <p>18c California Condor Worker Education Program. LADWP will develop a flyer that will be distributed to all workers on the Project concerning information on the California condor. Information to be included consists of the following: species description with photos and/or drawings indicating how to identify the California condor and how to distinguish condors from turkey vultures and golden eagles; protective status and penalties for violation of the Endangered Species Act; avoidance measures being implemented on the Project; and contact information for communicating condor sightings.</p> <p>18d Reporting. All California condor sightings in the Project area will be reported directly to the USFWS, USFS, and BLM (as appropriate). Before commencement of helicopter activity, LADWP will coordinate with a USFWS condor biologist to determine if any condors have been tracked or observed in the vicinity of the Project area.</p>					
BIO-19	<p><i>Protect California spotted owl.</i></p> <p>Before construction activities within suitable habitat, LADWP shall have a qualified biologist conduct USFS protocol surveys for the California spotted owl to establish or confirm the location of nests within the Project. The résumés of the proposed biologists shall be provided to the USFS for concurrence. If nests or breeding pairs are found during the surveys, the limited operating period (LOP) will be applied according to the ANF Land Management Plan (Standard 20 – Part 3). No Project-related activities will be allowed within these dates (February 1 to August 15) or until chicks have fledged. Where a biological evaluation by a qualified ornithologist determines that a nest site would be shielded from planned activities by topographic or other features that would minimize disturbance, the buffer distance may be reduced upon approval of the USFS on NFS lands. In addition, no helicopter overflights shall be authorized without USFS approval. If approved, minimum altitudes will be 300 feet above a territory at an altitude designated by the USFS. This buffer may be adjusted through consultation with the USFS.</p>	Prior to and during construction	LADWP USFS			
BIO-20	<p><i>Protect American badger, Mohave ground squirrel, Tehachapi pocket mouse, and kit fox.</i></p> <p>20a. In areas identified as suitable habitat during the 2008 surveys, preconstruction surveys will occur for badgers, ground squirrels, pocket mice, and kit foxes. If present and feasible, construction would be avoided in or adjacent to occupied habitat during breeding season.</p> <p>20b. LADWP will consult with CDFG to see if a 2081 Permit for incidental take of Mohave Ground Squirrel is required.</p>	Prior to and during construction	LADWP USFS BLM			
BIO-21	<p><i>Protect sensitive bat species.</i></p> <p>21a LADWP shall conduct a pre-construction survey (e.g., vegetation removal, grading) for roosting bats within 200 feet of Project activities within 15 days before any grading of rocky outcrops or removal of trees (particularly trees 12 inches in diameter or greater than 4.5 feet above-grade with loose bark or other cavities).</p> <p>1) LADWP shall also conduct surveys for roosting bats during the maternity season (March 1 to July 31) within 300 feet of Project activities. Trees, rocky outcrops, and mine features shall be surveyed by a qualified bat biologist (i.e., a biologist holding a CDFG collection permit and a Memorandum of Understanding with CDFG allowing the biologist to handle bats). Surveys duration shall be a minimum of one day and one evening. The résumé of the biologist shall be provided to the USFS and BLM (as appropriate) for concurrence before any Project activities.</p> <p>2) If active maternity roosts or hibernacula are found, the rock outcrop or tree occupied by the roost shall be avoided (i.e., not removed) by the Project, if feasible. If avoidance of the maternity roost is not feasible, the bat biologist shall survey (through the use of radio telemetry or other CDFG/USFS/BLM approved methods) for nearby alternative maternity colony sites. If the bat biologist determines, in consultation with and with the approval of the CDFG, USFS, and BLM (as appropriate), that there are alternative roost sites used by the maternity colony and young are not present, no further action is required, and it will not be necessary to provide alternative roosting habitat (i.e., Mitigation Measure BIO-21b would not apply, although Mitigation Measure BIO-21c would still apply). However, if there are no alternative roost sites used by the maternity colony, Mitigation Measure</p>	Prior to and during construction	LADWP USFS BLM			

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	<p>BIO-21b is required. If no active roosts are found, no further action is required. If active maternity roosts are absent, but a hibernaculum (i.e., a non-maternity roost) is present, Mitigation Measure BIO-21b is not necessary, but Mitigation Measure BIO-21c is required.</p> <p>21b Provision of substitute roosting bat habitat. If a maternity roost will be impacted by the Project, and no alternative maternity roosts are in use near the site, substitute roosting habitat for the maternity colony shall be provided on, or close to, the Project site no less than three months before the eviction of the colony. Alternative roost sites will be constructed in accordance with the specific bats' requirements in coordination with CDFG and ANF. By making the roosting habitat available before eviction (Mitigation Measure BIO-21c), the colony will have a better chance of finding and using the roost. Large concrete walls (e.g., on bridges) on south or southwestern slopes that are retrofitted with slots and cavities are an example of structures that may provide alternative roosting habitat appropriate for maternity colonies. Alternative roost sites must be of comparable size and proximal in location to the impacted colony. The appropriate agencies shall also be notified of any hibernacula or active nurseries within the construction zone. Construction will not proceed in proximity of active hibernacula or nurseries until approved by appropriate agencies. Exclude bats before demolition of roosts. If non-breeding bat hibernacula are found in towers or trees scheduled to be removed or in crevices in rock outcrops within the grading footprint, the individuals shall be safely evicted upon the approval of appropriate agencies and under the direction of a qualified bat biologist, by opening the roosting area to allow airflow through the cavity or other means determined appropriate by the bat biologist (e.g., installation of one-way doors). The résumé of the bat biologist shall be provided to the CDFG, USFS, and BLM (as appropriate) for concurrence before any Project activities. In situations requiring one-way doors, a minimum of one week shall pass after doors are installed, and temperatures should be sufficiently warm for bats to exit the roost, because bats do not typically leave their roost daily during winter months in southern coastal California. This action should allow all bats to leave during the course of one week. Roosts that need to be removed in situations where the use of one-way doors is not necessary in the judgment of the qualified bat biologist shall first be disturbed by various means at the direction of the bat biologist at dusk to allow bats to escape during the darker hours, and the roost tree shall be removed or the grading shall occur the next day (i.e., there shall be no less or more than one night between initial disturbance and the grading or tree removal).</p> <p>1) If an active maternity roost is in an area to be impacted by the Project, and alternative roosting habitat is available, the demolition of the roost site must commence before maternity colonies form (i.e., before March 1) or after young are flying (i.e., after July 31) using the exclusion techniques described above.</p> <p>21c Survey for bat nursery colonies. A CDFG-approved biologist shall conduct a habitat assessment for bat nursery colonies before any construction activity. The approved biologist shall then conduct a survey for bat nursery colonies or signs of such colonies before construction. Direct impacts to a nursery colony site shall not be allowed, and approach of, or entrance to, an active nursery colony site shall be prohibited. Before any blasting or drilling in the vicinity of a nursery colony site, the CDFG-approved biologist shall work with the construction crew to devise and implement methods to minimize potential indirect impacts to the nursery colony site from falling rock or substantial vibration (while a nursery colony is active). The methods shall include an option to halt any construction activity that would cause falling rock, substantial vibration impacts, or any other construction-related impact to a nursery colony as determined by the approved biologist, until the colony is inactive. Should falling rock block the entrance to a nursery colony site, the contractor shall work with the approved biologist to reopen an entrance to the site.</p> <p>21d If habitat must be removed for construction to continue, a two-step removal process will be implemented. The two-step removal process will involve permitted biologists to alter the habitat outside of the season of use (i.e., outside of hibernating/maternity season) to make the habitat less suitable, and the following day the habitat will be removed under the supervision of the permitted biologist.</p>					
BIO-22	<p><i>Protect special-status herpetofauna.</i></p> <p>An authorized biologist with demonstrated expertise with special-status herpetofauna shall monitor all construction activities and assist LADWP in the implementation of the monitoring efforts. The résumé of the proposed biologist will be provided to the USFS or BLM (as appropriate) for concurrence before the onset of ground-disturbing activities. The authorized biologist will be present during ground-disturbing activities immediately adjacent to or within habitat that supports populations of the special-status herpetofauna. Any special-status herpetofauna found within a Project impact area shall be captured by the authorized biologist and relocated to suitable habitat outside the impact area. If the installation of exclusion fencing is deemed necessary by the authorized biologist, the authorized biologist will direct the installation of the fence. Exclusion fencing will only be used for special-status herpetofauna that are not protected by CESA, unless specifically authorized by an ITP, or are not considered Fully Protected Species under Fish and Game Code or Title 14 of the CCR. Clearance surveys for special-status herpetofauna shall be conducted by the authorized biologist before the initiation of construction each day. Authorized non-federal biologists will have the appropriate CDFG scientific collection permit.</p>	During construction	LADWP USFS BLM			

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BIO-23	<i>Protect desert tortoise and habitat loss.</i>	Prior to and during construction	LADWP USFS BLM			
	23a In areas of suitable desert tortoise habitat, preconstruction clearance surveys according to USFWS protocol will be conducted by authorized biologists. Surveys will be conducted by an authorized biologist and will provide 100 percent coverage of all areas to be disturbed during construction. All desert tortoise burrows and burrows constructed by other species that might be used by desert tortoises will be examined to assess occupancy of each burrow by desert tortoises and processed in accordance with the current USFWS guidelines (USFWS 2009d). If tortoise is observed or sign is found, construction activities will be monitored by a biologist authorized by the USFWS. If no tortoise sign is found, monitoring by an authorized biologist would not be required. Should a tortoise wander into non-monitored construction sites, all ground-disturbing activities will stop and a biologist approved to handle desert tortoise will be called to the site to move the tortoise out of harm's way, and the remainder of construction in desert tortoise habitat shall be monitored by an authorized biologist.					
	23b Vehicular traffic during construction in desert tortoise habitat will be confined to existing routes of travel to and from the Project site, and cross-country vehicle and equipment use outside designated work areas will be prohibited. Where new access is required outside of existing roads (e.g., new spur roads) or the construction zone, the route will be clearly marked (i.e., flagged and/or staked) prior to the onset of construction and desert tortoise clearance surveys will be conducted. During the desert tortoise active season (March to May and September to October), speed limits along Project roads shall be limited to 15 mph in desert tortoise habitat.					
	23c Burrows within the construction zone or along access routes shall be flagged by the authorized biologist so that the qualified biologist would be able to more easily locate them during construction. The authorized biologist shall be on-site to monitor all construction that occurs in the vicinity of flagged burrows and to ensure that desert tortoise impacts are avoided during Project construction. All desert tortoise burrows or pallets in the construction area shall be excavated by the USFWS-authorized biologist if they cannot be avoided by Project realignment. The construction area includes the expansion area of the Barren Ridge Switching Station (235 feet) and 500 feet total or 250 feet on either side of the new 230 kV transmission line. The 250 feet on either side of the transmission line account for the access roads, spur roads, tower assembly, and installation. The staging sites and concrete batch plants will not be placed within the desert tortoise habitat.					
	23d Desert tortoises that are found above ground in active construction areas shall be placed out of harm's way in the shade of a shrub or other cover location by the USFWS and BLM-authorized biologist. Any desert tortoise removed from burrows shall be placed in an unoccupied burrow of approximately the same size as the one from which it was removed. Tortoises shall not be placed more than 1,000 feet from where they were found. If an existing burrow is unavailable, the authorized biologist shall construct or direct the construction of a burrow of similar size, shape, depth, and orientation as the original burrow. Desert tortoises moved during inactive periods would be monitored for at least one week after placement in the new burrows to ensure their safety. of its own accord, activities would be halted until the authorized biologist is able to move it out of harm's way.					
	23e Any time a vehicle is parked, the ground around and under the vehicle shall be inspected for desert tortoises before the vehicle is moved. If a desert tortoise is observed, it shall be left to move on its own. If the tortoise does not move within 15 minutes, the authorized biologist shall relocate the tortoise out of harm's way, but no more than 1,000 feet from its original location. Moving desert tortoise from harm's way will only occur on the transmission line portions of the Project. A desert tortoise translocation plan may be needed if desert tortoises are found within the Barren Ridge Switching Station expansion site; the authorized biologist shall contact the USFWS for guidance on developing this plan.					
	23f Within potential desert tortoise habitat areas, vehicles shall not exceed 20 miles per hour on access roads during the period of highest desert tortoise activity (March 1 through October 31).					
	23g Tower foundations or other excavations that pose a potential to entrap or injure desert tortoise shall be inspected three times daily until the foundation or other structure is in place and the excavation is filled in. Excavations also will include an escape ramp.					
	23h The Project Worker Environmental Awareness Program (WEAP) will include information on desert tortoise. The program will be presented to all personnel who will be onsite at any time, including but not limited to contractors, contractors' employees, supervisors, inspectors, and subcontractors. This program will be presented in English and Spanish, if appropriate, and contain information concerning the biology and distribution of the desert tortoise as it is relevant to the Proposed Action, its legal status and occurrence in the proposed Project area, the definition of "take" and associated penalties, the terms and conditions of this biological opinion, measures designed to minimize the effects of construction activities, the means by which employees can facilitate this process, and reporting requirements to be implemented when tortoises are encountered or in cases of non-compliance with the Biological Opinion. The name of each individual trained will be recorded on a sign-in sheet and will become part of the environmental compliance permanent record.					
	23i A litter-control program will be implemented to reduce the attractiveness of the area to opportunistic desert tortoise predators such as desert kit fox, coyotes, and common ravens. Trash and food items will be disposed of properly in predator-proof containers with re-sealing lids. Trash containers will be emptied, and construction waste will be removed daily from the Project area and disposed of in					

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	<p>an approved landfill.</p> <p>23j LADWP shall report any observations of raven predation on desert tortoises in the Project area to CDFG and USFWS. In construction areas that are heavily used and in potentially occupied desert tortoise habitat, work and staging areas, including the locations of the transmission line under construction, may be fenced with approved temporary desert tortoise exclusion fencing in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat. An authorized biologist will assist in determining the boundaries of the area to be fenced in consultation with the USFWS, CDFG, and with the BLM when construction areas are within lands administered by the BLM. All workers will be advised that equipment and vehicles must remain within the fenced work areas. Installation of the fencing and any necessary surveys will be directed or conducted by an authorized biologist. The fencing will remain in place for the duration of construction activities at a particular location and will be removed when construction activities are complete.</p> <p>1) Temporary fencing should consist of 1-inch mesh or 1-inch horizontal by 2-inch vertical mesh (hardware, cloth or plastic) and be installed flush with the ground and extend at least 18 inches above-ground. Temporary tortoise-proof fencing should not be buried. In areas of high rodent activity where plastic mesh is used, temporary fencing may need more frequent monitoring to ensure no breaches exist.</p> <p>A desert tortoise authorized biologist will inspect the fencing on a biweekly basis to ensure that no holes develop that could allow desert tortoises to enter the work areas. If holes are found, they will be repaired immediately.</p> <p>2) If a desert tortoise is found within an area that has been fenced to exclude them, activities will cease until an authorized biologist moves it out of harm's way outside of the fence, no greater than 500 meters away from its original location. At this time, the fencing will be inspected for holes, and any breaches in the fence will be immediately repaired.</p> <p>23k No pets or firearms will be permitted in the work area.</p>					
BIO-24	<p><i>Protect arroyo toad and California red-legged frog.</i></p> <p>24a LADWP shall conduct USFWS-approved protocol surveys for arroyo toads and California red-legged frogs at all locations containing suitable habitat near the proposed construction sites within two years before the start of construction.</p> <p>24b If arroyo toads are detected, further surveys within the area will not be required and the avoidance measures detailed below will be followed. If no arroyo toads are detected, habitat assessments will be performed on a yearly basis to determine if the area continues to provide suitable habitat; if an area continues to provide suitable habitat, surveys will be repeated every two years until construction is completed. For all areas in which this species has been documented, LADWP shall develop and implement a monitoring plan that includes the following measures in consultation with the USFWS and USFS.</p> <p>1) LADWP shall retain an authorized biologist with demonstrated expertise with arroyo toads to monitor all construction activities in occupied arroyo toad habitat and assist LADWP in the implementation of the monitoring program. The résumés of the proposed biologists will be provided to the USFS for concurrence. This biologist will be referred to as the authorized biologist hereafter. The authorized biologist will be present during all activities immediately adjacent to or within habitat that supports populations of arroyo toad.</p> <p>2) All trash that may attract predators of the arroyo toad will be removed from work sites or completely secured at the end of each work day. Before the onset of any construction activities, LADWP shall meet on-site with staff from the USFS and the authorized biologist. LADWP shall provide information on the general location of construction activities within habitat of the arroyo toad and the actions taken to reduce impacts to this species. Because arroyo toads may occur in various locations during different seasons of the year, LADWP, USFS, USFWS, and authorized biologists will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on arroyo toads.</p> <p>3) Any arroyo toads found during clearance surveys shall be reported to the USFWS and the USFS immediately. Clearance surveys shall occur on a daily basis in areas that contain suitable habitat.</p> <p>4) If the authorized biologist determines that Project activities are disturbing the species, they shall notify the construction manager, and the construction manager, in consultation with the biologist, will have the authority to halt all activities until appropriate corrective measures have been completed.</p> <p>5) To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all times.</p> <p>6) LADWP will avoid ground disturbing activities (e.g., grading, stream crossing upgrades, parking) along access roads within a 1.0 mi (1.6 km) buffer of occupied stream habitat for arroyo toads during the activity period for arroyo toads (March through November). This date and buffer may be modified based on the existing temperature regime and habitat conditions, with Angeles National Forest approval.</p> <p>7) LADWP will limit use of the access roads in areas known to support arroyo toad within a 1.0-mile (1.6 km) buffer to daylight hours only during the activity period for arroyo toads (generally March through November). Use of these roadways during rain</p>	Prior to and during construction	LADWP USFS BLM			

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	<p>events will not occur during the activity period for arroyo toads. Vehicle speeds will be limited to 15 mph (24 kph), and no parking or loitering will occur along the access roads. An authorized biologist must permanently remove from within the Project area any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes, to the maximum extent possible and ensure that activities are in compliance with the California Fish and Game Code.</p> <p>8) No stockpiles of materials will occur in areas occupied by arroyo toads.</p> <p>9) Any spills of fluids that may be hazardous to aquatic fauna (gasoline, hydraulic fluid, motor oil, etc.) in areas that may contain arroyo toads will be reported to the USFS and USFWS within one hour.</p> <p>10) For each ac/ha of arroyo toad occupied habitat that is permanently impacted on the Angeles National Forest, five ac/ha of arroyo toad occupied habitat will be conserved in the vicinity of the impacted habitat (i.e., impacts will be offset at a habitat ratio as required by the final Biological Opinion).</p> <p>24c If California red-legged frogs are detected, further surveys within the area will not be required and the avoidance measures detailed below will be followed. If no California red-legged frogs are detected, habitat assessments will be performed on a yearly basis to determine if the area continues to provide suitable habitat; if an area continues to provide suitable habitat, surveys will be repeated every two years until construction is completed. For all areas in which this species has been documented, LADWP shall develop and implement a monitoring plan that includes the following measures in consultation with the USFWS and USFS.</p> <p>1) All trash that may attract predators of red-legged frogs will be removed from work sites or completely secured at the end of each work day.</p> <p>2) Between November 1 and March 31, no work will be authorized within one mile of occupied habitat, and no vehicular crossings at wet fords of those channels will be authorized. The one-mile buffer distance may be reduced based on the topography of the site, with the approval of the USFWS and the USFS.</p> <p>3) If and as required by USFWS, between April 1 and October 31, no work will be authorized within 0.5 mile of occupied habitat, and no vehicular crossings at wet fords of those channels will be authorized.</p> <p>4) If and as required by USFWS, from November 1 thru March 31, overflights will be restricted to a minimum altitude of 1,000 feet (305 m) from the stream bottom within 1.0 mile (1.6 km) of a California red-legged frog occupied stream.</p> <p>5) Before the onset of any construction activities, LADWP shall meet on-site with staff from the USFWS and the USFS-approved biologist (authorized biologist). The authorized biologist shall hold a current red-legged frog permit from USFWS. LADWP shall provide information on the general location of construction activities within habitat of the red-legged frog and the actions taken to reduce impacts to this species. Because red-legged frogs may occur in various locations during different seasons of the year, LADWP, USFWS, USFS, and authorized biologists will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on red-legged frogs.</p> <p>6) Where construction would occur in habitat where red-legged frogs are widely distributed, work areas will be fenced in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat. The authorized biologist will assist in determining the boundaries of the area to be fenced in consultation with the LADWP and the responsible agency(s). All workers will be advised that equipment and vehicles must remain within the fenced work areas.</p> <p>7) The authorized biologist will direct the installation of the fence and conduct a minimum of three nocturnal surveys. If red-legged frogs are observed on the final survey or during subsequent checks, the authorized biologist shall halt construction and report to the USFWS and the USFS immediately.</p> <p>8) Fencing to exclude red-legged frogs will be at least 24 inches in height.</p> <p>9) Construction activities that may occur near breeding pools or other areas where large numbers of red-legged frogs may congregate will be conducted during times of the year when individuals have dispersed from these areas (i.e., winter) or the species is dormant, unless otherwise authorized by the USFS and USFWS. The authorized biologist will assist LADWP in scheduling its work activities accordingly.</p> <p>10) Any red-legged frogs found during clearance surveys shall be reported to the USFWS and the USFS immediately. Clearance surveys shall occur on a daily basis in the work area.</p> <p>11) If the authorized biologist determines that Project activities are disturbing the species, they shall notify the construction manager, and the construction manager, in consultation with the biologist, will have the authority to halt all activities until appropriate corrective measures have been completed.</p> <p>12) LADWP shall avoid nighttime activities when red-legged frogs may be present on the access road. Traffic speed should be maintained at 15 mph or less in the work area.</p> <p>13) An authorized biologist must permanently remove from within the Project area any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes, to the maximum extent possible, and ensure that activities are in compliance with the California Fish and Game Code.</p> <p>14) No stockpiles of materials will occur in areas occupied by California red-legged frogs.</p>					

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	15) To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all times. 16) Any spills of fluids that may be hazardous to aquatic fauna (gasoline, hydraulic fluid, motor oil, etc.) in areas that may contain California red-legged frogs will be reported to the USFS and the USFWS within one hour.					
Earth Resources						
GEO-1	Foundations for towers and other structures shall be sited a safe distance from the known surface traces of all active faults.	Prior to construction	LADWP USFS BLM			
GEO-2	No structures shall be constructed within the boundaries of identified landslides where the slide material has a mean depth greater than two feet unless design techniques are implemented to reduce potential landslide hazard. Techniques could include excavating potentially unstable material resulting in a flatter more stable slope configuration; reduction of landslide driving forces by removal of earth materials at the top of the landslide; construction of buttress and/or stabilization fills; construction of retaining walls, installation of rock bolts on the face of the slope, or installation of protective wire mesh on the slope face; and/or the construction of debris impact walls at the toe of the slope to contain rock fall debris.	Prior to and during construction	LADWP USFS BLM			
	If switching stations construction within identified debris flow deposit boundaries is unavoidable, the debris flow deposit(s) shall be excavated down to bedrock beneath and upslope of the switching station, or the foundation shall be anchored in bedrock.					
PR-1	A qualified paleontologist/principal investigator shall be retained by LADWP to develop and implement a paleontological resource mitigation plan (PMTP). A qualified paleontologist is defined as an individual with a MS or Ph.D. in paleontology or geology who is experienced with paleontological procedures and techniques, who is knowledgeable in the geology and paleontology of the Project area, and who has worked as a paleontological mitigation project supervisor for at least one year. The qualified paleontologist shall attend relevant pre-construction meetings to consult with grading and excavation contractors concerning excavation schedules, paleontological field techniques, and safety issues. The PMTP shall be based on Society of Vertebrate Paleontology guidelines and meet all regulatory requirements. The PMTP shall identify construction impact areas of major/undetermined to maximum sensitivity for encountering significant resources and the depths at which those resources are likely to be encountered. Preconstruction surveys of these areas shall be conducted before commencement of construction activities. The PMTP shall outline a coordination strategy to ensure that a qualified paleontological monitor will conduct full-time monitoring of all ground disturbance in sedimentary rocks determined to have a major/undetermined to maximum sensitivity. Sedimentary rocks of low, marginal, and undetermined sensitivity shall be monitored on a part-time basis (as determined by the qualified paleontologist). Geologic rock units with zero sensitivity will not require paleontological monitoring. The PMTP shall detail the significance criteria to be used to determine which resources will be avoided or recovered for their data potential. The PMTP shall also detail methods of recovery, preparation and analysis of specimens, final curation of specimens at a federally accredited repository, data analysis, and reporting. The PMTP shall specify that all paleontological work undertaken by LADWP on public land shall be carried out by qualified paleontologists with the appropriate current permits, including, but not limited to a Paleontological Resources Use Permit (for work on public lands administered by BLM). Notices to proceed will be issued by the BLM, USFS, and other agencies with jurisdiction, following approval of the PMTP.	Prior to and during construction	LADWP USFS BLM			
PR-2	A paleontological monitor shall be retained on a full-time basis to monitor Project-related construction excavations (e.g., road grading, switching station mass grading, and tower footing boreholes and pad construction) in areas underlain by paleontological resources of maximum and major sensitivity. Project-related construction excavations in areas underlain by paleontological resources of undetermined sensitivity shall be monitored on a part-time basis, while Project-related construction excavations in areas underlain by paleontological resources of minor or zero sensitivity will not require any monitoring. A qualified paleontological monitor shall have a B.S. in geology or paleontology and have at least one year experience in the collection and salvage of fossil materials. The paleontological monitor shall work under the direction of the qualified paleontologist.	During construction	LADWP USFS BLM			
PR-3	Before the initiation of construction or ground-disturbing activities, all construction personnel shall be trained regarding the recognition of possible subsurface paleontological resources and protection of all paleontological resources during construction. Training shall inform all construction personnel of the procedures to be followed upon the discovery of paleontological resources. All personnel shall be instructed that unauthorized collection or disturbance of protected fossils on or off the right-of-way will not be allowed.	Prior to construction	LADWP			

Number	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
PR-4	When fossils are discovered, the qualified paleontologist (or paleontological monitor) shall recover them. In most cases fossil salvage activities can be completed in a short period of time. However, some fossil specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist shall be allowed to temporarily direct, divert, or halt earthwork to allow recovery of fossil remains in a timely manner. At each fossil discovery site, field data forms shall be prepared to document the geographic, geologic, stratigraphic, and taphonomic aspects of the discovery. Because of the potential for the recovering of small fossil remains, such as isolated mammal teeth, as determined by a qualified paleontologist, it may be necessary to collect bulk samples (up to 6,000 pounds) of sedimentary rock matrix. This bulk matrix sample shall then be tested by screenwashing a 200-pound subsample to determine the presence and relative abundance of identifiable microfossils. If positive results are obtained, the entire sample shall be screenwashed.	During construction	LADWP USFS BLM			
PR-5	To the extent feasible, fossil remains collected during monitoring and salvage shall be cleaned, repaired, sorted, and cataloged as part of the mitigation program. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, shall be deposited in a federally accredited repository for both vertebrate and invertebrate fossils such as the Natural History Museum of Los Angeles County or the Museum of Paleontology at the University of California, Berkeley. Funds for curation will be the responsibility of LADWP. The Project qualified paleontologist shall be authorized to submit fossils with accompanying deeds of gift for curation on behalf of LADWP. Donation of the fossils shall be accompanied by financial support for initial specimen storage (costs vary for individual institutions). A final summary report shall be completed that outlines the results of the mitigation program. This report shall include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.	During construction	LADWP USFS BLM			
Water Resources						
HYD-1	For Project construction and operation, off-road or cross-country access routes shall be preferred, as feasible, over the construction of new access roads. Such access roads would be approved in advance by the Environmental Monitor and the Project Manager and be flagged with easily seen markers. Any new access roads shall be constructed by mowing or crushing, rather than blading, wherever possible. Mowing for temporary or permanent access roads shall be limited to a 12 foot wide area on straight portions of the road (slightly wider on turns), and the mowing height shall be no less than 4 inches from finished grade. Existing crossings shall be utilized at perennial streams, wetlands, and irrigation channels to the extent feasible. New access roads not required for ongoing maintenance shall be permanently closed after construction using the most effective and least environmentally damaging methods appropriate to that specific area, with concurrence of the landowner or land manager (e.g., stockpiling and replacing topsoil, or rock replacement).	During construction and operation & maintenance	LADWP USFS BLM			
HYD-2	Roads would be built as near as possible to right angles to the streams and washes, if feasible. Culverts would be installed where necessary. All construction and maintenance activities shall be conducted in a manner that would minimize disturbance to vegetation, drainage channels, and intermittent or perennial stream banks. In addition, road construction would include dust-control measures during construction in sensitive areas. All existing roads would be left in a condition equal to or better than their condition before the construction of the transmission line.	During construction and operation & maintenance	LADWP USFS BLM			
HYD-3	New impervious areas associated with temporary construction would be restored to existing conditions, including but not limited to revegetation, to the extent possible after completion of Project construction.	Post construction	LADWP USFS BLM			
HYD-4	Stormwater drainage inside switching station walls would be designed to minimize erosion and increase sediment control. Internal runoff would be released from the switching station by means of surface drainage structures designed to filter contaminants from water flow. Drainage from the property would be collected and controlled by surface improvements, as detailed in the SWPPP.	Prior to and during construction	LADWP			
HYD-5	Structures and new access roads placed within a 100-year floodplain would be engineered so that they do not impede or redirect flood flows or raise the flood elevation.	During construction	LADWP USFS BLM			
HYD-6	Structures within the 100-year floodplain of rivers and streams would be designed to minimize the capture of flood debris to prevent flow obstructions and scouring during flood flows.	Prior to construction	LADWP USFS BLM			
HYD-7	Structures adjacent to or downslope of lakes and reservoirs would be designed to minimize damage from inundation of a seismic seiche.	Prior to construction	LADWP USFS			

* Note: Federal agencies identified would be responsible only if the mitigation measures noted are selected in their respective Records of Decision.

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Deviation Procedures

Introduction

These procedures are authorized to preclude the need for amendments to the Order necessary for minor changes in the Project's routing or location. Minor changes or modifications in Project activities are often required by LADWP following start of construction. These deviations may potentially increase or decrease impacts to waters of the state. In such cases, a Deviation, as defined in Section I of the Order, may be requested by LADWP as set forth below:

Process Steps

Who may apply: LADWP or LADWP's designated representative or agent (hereinafter, "Permittee") for this Project.

How to apply: By letter or email to the 401 staff designated as the contact for this Project.

Deviation Request: The Permittee will request verification from the State Water Board staff that the Project change qualifies as a Deviation, as opposed to requiring an amendment to the Order. The request should:

1. Describe the Project change or modification:
 - a. Proposed activity description and purpose;
 - b. Why the proposed activity is considered minor in terms of impacts to waters of the state;
 - c. How the Project activity is currently addressed in the Order; and,
 - d. Why a Deviation is necessary for the Project.
2. Describe location (latitude/longitude coordinates), the date(s) it will occur, as well as associated impact information (i.e., temporary or permanent, federal or non-federal jurisdiction, water body name/type, estimated impact area, etc.) and minimization measures to be implemented.
3. Provide a map that includes the activity boundaries with photos of the site.
4. Provide verification of any mitigation needed according to the Order conditions.
5. Provide verification from LADWP (if requestor is not LADWP) that the proposed changes or modifications do not trigger the need for a subsequent or supplemental EIR. (Cal. Code Regs., tit. 14, §§ 15162 & 15163.)

Action by State Water Board on Request: State Water Board staff will make a determination on the Deviation request within 5 working days from receipt of a complete request and notify LADWP via email of the staff determination. Determination of whether or not a Deviation request is complete is at the discretion of State Water Board staff.

Post-Discharge Deviation Reporting:

1. Within 30 calendar days of completing the approved Deviation activity, LADWP will provide a post-discharge activity report that includes the following information:
 - a. Activity description and purpose;
 - b. Activity location, start date, and completion date;
 - c. Erosion control and pollution prevention measures applied;
 - d. Impacts to water body types if applicable;
 - e. Mitigation plan if applicable; and,
 - f. Map of activity location and boundaries; post-construction photos.

Action by Water Board on Post-Discharge Activity Report: State Water Board staff will review the post-discharge Deviation Report within 10 working days from receipt of a complete report. State Water Board staff will determine, in consultation with LADWP and other regulatory agencies, if applicable, whether additional mitigation will be required. If additional mitigation is required, State Water Board staff will inform LADWP within the 10-day review period. Determination of whether or not a post-discharge activity report is complete is at the discretion of State Water Board staff.

Annual Summary Deviation Report:

1. Until a Notice of Completion of Discharges Letter is issued, include in the Annual Project Report (see Construction Notification and Reporting attachment) a compilation of all Deviation activities through the reporting period with the following information:
 - a. Site name(s).
 - b. Date(s) of Deviation approval.
 - c. Location(s) of authorized activities.
 - d. Impact area(s) by water body type prior to activity (for fill/discharge or excavation/dredge: acres, linear feet, and cubic yards) as originally authorized in the Order.
 - e. Actual impact area(s) by water body type (for fill/discharge or excavation/dredge: acres, linear feet, and cubic yards) due to Deviation activity(ies).
 - f. The net change in impact area by water body type(s) (for fill/discharge or excavation/dredge: acres, linear feet, and cubic yards). An explanation will be required for any negative values.
 - g. Mitigation to be provided (approved mitigation ratio and amount).

Action by State Water Board on Annual Deviation Report: Following issuance of a Notice of Completion of Discharges Letter, the Executive Director of the State Water Board will amend the Order to reflect all approved Deviations and the amended Order will serve as a record of actual Project activities.

Construction Notification and Reporting

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**CLEAN WATER ACT SECTION 401 CERTIFICATION and WASTE DISCHARGE
REQUIREMENTS**

PROJECT NOTIFICATION AND REPORTING COVER SHEET

Project: Barren Ridge Renewable Transmission Line Project (BR-HC, BR-RIN)
Permittee: Los Angeles Department of Water and Power
Reg. Meas. ID: 397323
Place ID: 807757
Order Effective Date: 6T

To Obtain Copies of this Form

To access this a copy of this form for future reporting:

1. Go to: http://www.waterboards.ca.gov/water_issues/programs/cwa401/certifications.shtml
2. Find this attachment to your Order in the table based on Applicant, Date, and Subject headers.

Report Submittal Instructions

1. Check the box on page 2 next to the notification you are submitting and include a signed copy of pages 1 and 2 and all information requested in the report contents section of the report type.
 - **Part A (Notifications):** Used to notify the State Water Board of specific Project schedule milestones that may affect Project billing status.
 - **Part B (Annual Report):** This report will be submitted annually from the anniversary of Project effective date until a Notice of Project Complete Letter is issued.
 - **Part C (Conditional Reports):** Submitted on a case by case basis for noncompliance, accidental discharges, or notification of in-water work.
2. Sign and date page 2 and include pages 1 and 2 with your submittal.
3. **Electronic Report Submittal Instructions:**
 - Submit reports via email to: stateboard401@waterboards.ca.gov
 - Include in the subject line of the email:
Subject: ATTN: Jeanie Mascia; Reg. Measure ID: 397323_Report

Report Type Submitted

Part A – Project Status Notifications

- Report Type 1 ☐ Commencement of Construction
- Report Type 2 ☐ Request for Notice of Completion of Discharges Letter
- Report Type 3 ☐ Request for Notice of Project Complete Letter

Part B – Conditional Notifications and Reports

- Report Type 4 ☐ Noncompliance Report
- Report Type 5 ☐ In-Water Work/Diversions Water Quality Monitoring Report
- Report Type 6 ☐ Accidental Discharge Water Quality Monitoring Report

Part C – Annual Reports

- Report Type 7 ☐ Annual Project Status Report

Responsible Party or Authorized Representative¹ for this submittal

Print Name	Affiliation and Job Title
Signature	Date

STATEMENT OF AUTHORIZATION (if necessary)

I hereby authorize _____ to act in my behalf as my agent in the submittal of this report, and to furnish upon request, supplemental information in support of this submittal.

Permittee's Signature

Date

Definitions

1. **Active Discharge Period:** The active discharge period begins with the effective date of this Order and ends on the date that the Permittee receives a Notice of Completion of Discharges Letter. The Active Discharge Period includes all elements of the Project including site construction and restoration, and any permittee responsible compensatory mitigation construction.
2. **Notice of Completion of Discharges Letter:** Letter issued by the State Water Board staff following review and approval of Request for Notice of Completion of Discharges Letter. This letter will either terminate annual fees if no post-discharge monitoring is required or initiate a change in fees from the annual active discharge fee to the annual post-discharge monitoring fee.
3. **Notice of Project Complete Letter:** Letter issued by the State Water Board staff following review and approval of Request for Notice of Project Complete Letter. Termination of annual invoicing of fees will correspond with the date of this letter.
4. **Post-Discharge Monitoring Period:** The post-discharge monitoring period begins on the date of the Notice of Completion of Discharges Letter and ends on the date of the Notice of Project Complete Letter issued by the State Water Board staff. The Post-Discharge Monitoring Period includes continued water quality monitoring or compensatory mitigation monitoring.
5. **Effective Date:** Date of Order issuance.

Map/Photo Documentation Information

1. **Map Format Information:**
Preferred map formats of at least 1:24000 (1" = 2000') detail (listed in order of preference):
 - **GIS shapefiles:** The shapefiles must depict the boundaries of all project areas and extent of aquatic resources impacted. Each shape should be attributed with the extent/type of aquatic resources impacted. Features and boundaries should be accurate to within 33 feet (10 meters). Identify datum/projection used and if possible, provide map with a North American Datum of 1983 (NAD38) in the California Teale Albers projection in feet.
 - **Google KML files** saved from Google Maps: My Maps or Google Earth Pro. Maps must show the boundaries of all project areas and extent/type of aquatic resources impacted. Include URL(s) of maps. If this format is used include a spreadsheet with the object ID and attributed with the extent/type of aquatic resources impacted.
 - **Other electronic format** (CAD or illustration format) that provides a context for location (inclusion of landmarks, known structures, geographic coordinates, or USGS DRG or DOQQ). Maps must show the boundaries of all project areas and extent/type of aquatic resources impacted. If this format is used include a spreadsheet with the object ID and attributed with the extent/type of aquatic resources impacted.
 - Aquatic resource maps marked on paper **USGS 7.5 minute topographic maps** or **Digital Orthophoto Quarter Quads (DOQQ)** printouts. Maps must show the boundaries of all project areas and extent/type of aquatic resources impacted. If this format is used include a spreadsheet with the object ID and attributed with the extent/type of aquatic resources impacted.

2. Photo-Documentation: Include a unique identifier, date stamp, written description of photo details, and latitude/longitude (in decimal degrees) or map indicating location of photo. Successive photos should be taken from the same vantage point to compare pre/post construction conditions.

Part A – Notification Reports

Report Type 1	Commencement of Construction
When to Submit	Must be received at least seven (7) days prior to start of initial ground disturbance activities.
Report Contents	<ol style="list-style-type: none"> 1. Date of commencement of construction. 2. Anticipated date when discharges to waters of the state will occur. 3. Project schedule milestones including a schedule for onsite compensatory mitigation, if applicable.

Report Type 2	Request for Notice of Completion of Discharges Letter
When to Submit	Must be received at least thirty (30) days prior to the anticipated completion of all Project construction activities.
Report Contents	<ol style="list-style-type: none"> 1. Date of construction commencement. 2. Date of Storm water Notice of Termination(s), if applicable. 3. Summary of Project construction activities to be completed within the next 30 days and anticipated date of completion, including status of post-construction storm water BMP installation. 4. Photo-documentation of all Project activity sites where the discharge of dredge and/or fill/excavation was authorized. 5. Summary of Deviation discharge quantities compared to initial authorized impacts to waters of the state, if applicable. 6. An updated monitoring schedule for restoration sites of temporary impacts to waters of the state and permittee responsible compensatory mitigation during the post-discharge monitoring period, if applicable.

Report Type 3	Request for Notice of Project Complete Letter
When to Submit	At least thirty (30) days prior to the anticipated completion of all post-discharge monitoring activities for water quality monitoring or compensatory mitigation monitoring.
Report Contents	<p>Part A: Site Restoration</p> <ol style="list-style-type: none"> 1. Final data analysis and summary showing Project site upland areas of temporary disturbance which could result in a discharge to waters of the state meet performance standards outlined in the restoration plan. 2. Final data analysis and summary showing how restored areas of temporary impacts to waters of the state meet performance standards outlined in the restoration plan. Complete photo history documenting pre-impact through site restoration. <p>Part B: Permittee Responsible Compensatory Mitigation</p> <ol style="list-style-type: none"> 1. Final data analysis and summary showing how compensatory mitigation sites meet performance standards outlined in the compensatory mitigation plan.

	<ol style="list-style-type: none"> 2. Status on the implementation of the long-term maintenance and management plan and funding of endowment. 3. Complete photo history documenting pre-impact to completion. 4. Final maps of all compensatory mitigation areas (including buffers). <p>Part C: Post-Construction Storm Water BMPs</p> <ol style="list-style-type: none"> 1. Report of BMP status and functionality.
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Part B – Conditional Reports

Report Type 4	Noncompliance Report
When to Submit	The Permittee shall report any event that does not comply with the conditions of this permit within three (3) business days of the noncompliance. If accidental discharge use Report Type 6.
Report Contents	The report shall include: the cause, the period of the noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

Report Type 5	In-Water Work and Diversions Water Quality Monitoring Report
When to Submit	Within three (3) days following the date of in-water work. Continue reporting in accordance with the approved water quality monitoring plan.
Report Contents	As required by the approved water quality monitoring plan.

Report Type 6	Accidental Discharge Water Quality Monitoring Report
When to Submit	Within three (3) business days following the date of an accidental discharge i.e., spills, visible plumes, contact with uncured concrete. Continue reporting as required by State Water Board staff.
Report Contents	<ol style="list-style-type: none"> 1. The report shall include a full description of the accidental discharge incident (i.e. location, time and date, source, discharge constituent and quantity, aerial extent, and photo documentation). 2. If applicable, any required sampling data, a full description of the sampling methods including frequency/dates and times of sampling, equipment, locations of sampling sites. 3. Locations and construction specifications of any barriers, including silt curtains or diverting structures, and any associated trenching or anchoring. 4. If applicable, documentation of notification to: <ol style="list-style-type: none"> a. California Emergency Management Agency b. County or City local health officer or the director c. California Office of Emergency Services

Part C –Annual Report

Report Type 7	Annual Report
When to Submit	Annual reports shall be submitted each year, coinciding with the anniversary of the effective date of this Order. Annual reports shall continue until a Notice of Project Complete Letter is issued to the Permittee.
Report Contents	<p>Include the information as outlined for Annual Report Topics in Part B1.</p> <p>Active Discharge Period</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Construction Summary <input checked="" type="checkbox"/> Site Restoration Status <input checked="" type="checkbox"/> Compensatory Mitigation <p>Post-Discharge Monitoring Period</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Site Restoration Status <input checked="" type="checkbox"/> Compensatory Mitigation

Part C1 – Annual Project Report Topics

Annual Report Topic 1	Construction Summary
When to Submit	With the annual report during the Active Discharge Period.
Report Contents	<ol style="list-style-type: none"> 1. Update on Project progress and schedule including initial ground disturbance, site clearing and grubbing, road construction, and site construction. 2. If applicable: <ol style="list-style-type: none"> a. Summary of Conditional Report Types 4 and 5. b. Summary of Deviations. See Deviation attachment for further information.

Annual Report Topic 2	Site Restoration Status
When to Submit	With the annual report during both the Active Discharge Period and Post-Discharge Monitoring Period.
Report Contents	<ol style="list-style-type: none"> 1. Planned date of initiation of restoration of temporary impacts to waters of the state and all upland areas of temporary disturbance which could result in a discharge to waters of the state. 2. If restoration for temporary impacts has already commenced, provide information concerning attainment of performance standards contained in the restoration plan.

Annual Report Topic 3	Compensatory Mitigation
When to Submit	With the annual report during both the Active Discharge Period and Post-Discharge Monitoring Period.
Report Contents	<p data-bbox="488 249 911 279">Part A. Permittee Responsible</p> <ol data-bbox="488 285 1398 516" style="list-style-type: none"><li data-bbox="488 285 1268 348">1. Planned date of initiation of compensatory mitigation site construction.<li data-bbox="488 354 1398 417">2. If construction is in progress a map of what has been completed to date.<li data-bbox="488 424 1398 516">3. If the compensatory mitigation site has been established, provide information concerning attainment of performance standards contained in the compensatory mitigation plan. <p data-bbox="488 552 1011 581">Part B. Mitigation Bank or In-Lieu Fee</p> <ol data-bbox="488 588 1357 680" style="list-style-type: none"><li data-bbox="488 588 1276 617">1. Status or proof of purchase of credit types and quantities.<li data-bbox="488 623 1357 653">2. Include the name of bank/ILF Program and contact information.<li data-bbox="488 659 1089 680">3. If ILF, location of project and type if known.