

**City of Los Angeles
Department of Water and Power**

**Mitigation Monitoring and Reporting
Program**

for the

Lower Owens River Project

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Section 1 - Introduction

This Mitigation Monitoring and Reporting Program (MMRP) has been developed to ensure implementation of the mitigation measures outlined in the Final Environmental Impact Report & Environmental Impact Statement (EIR/EIS) for the Lower Owens River Project (LORP) (State Clearinghouse No. 2000011075). The MMRP has been prepared by the City of Los Angeles Department of Water and Power (LADWP), the lead agency for the LORP under the California Environmental Quality Act (CEQA), in conformance with Public Resources Code Section 21081.6 and CEQA Guidelines Section 15097.

Project Description Summary. The LORP is a large-scale habitat restoration project in Inyo County, California, which will be implemented through a joint effort by LADWP and Inyo County. The LORP was identified in a 1991 Environmental Impact Report as mitigation for impacts related to groundwater pumping by LADWP from 1970 to 1990. The description of the project was augmented in a Memorandum of Understanding (MOU), signed by LADWP, Inyo County, California Department of Fish and Game (CDFG), California State Lands Commission (SLC), Sierra Club, and the Owens Valley Committee. The MOU specifies the goal of the LORP, timeframe for development and implementation, and specific actions. It also provides certain minimum requirements for the LORP related to flows, locations of facilities, and habitat and species to be addressed.

The overall goal of the LORP, as stated in the MOU, is as follows:

"The goal of the LORP is the establishment of a healthy, functioning Lower Owens River riverine-riparian ecosystem, and the establishment of healthy functioning ecosystems in the other elements of the LORP, for the benefit of biodiversity and threatened and endangered species, while providing for the continuation of sustainable uses including recreation, livestock grazing, agriculture, and other activities. "

LORP implementation includes: release of water from the Los Angeles Aqueduct to the Lower Owens River; flooding of approximately 500 acres in the Blackrock Waterfowl Habitat Area; maintenance of several off-river lakes and ponds; modifications to grazing practices; construction of minor new facilities (to facilitate the release, monitoring, etc.); and installation of a pump station to capture a portion of the water released to the river.

Mitigation Monitoring and Reporting Responsibility. Implementation and monitoring of most of the identified mitigation measures are post-implementation costs to be shared equally between LADWP and Inyo County. Operation and maintenance related to the pump station and monitoring for grazing management is solely the responsibility of LADWP. For other elements of the LORP, LADWP and Inyo County staff would share the responsibility for implementation and monitoring.

Organization of the MMRP. This MMRP presents the mitigation measures by geographic area (Riverine-Riparian System, Blackrock Waterfowl Habitat Area, Pump Station and Associated Facilities, Land Management Plan, and other mitigation measures associated with the LORP as a whole). (Note: Some mitigation measures apply to more than one area.) For each mitigation, the

timing of the measure, the party responsible for implementing the measure, the agency responsible for mitigation monitoring, and the monitoring method are identified. A line for documentation of compliance is also provided.

Acronyms and Abbreviations

Agreement	Inyo County/Los Angeles Long Term Water Agreement
BLM	Bureau of Land Management
CDFG	California Department of Fish and Game
C E Q A	California Environmental Quality Act
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
LADWP	City of Los Angeles Department of Water and Power
LORP	Lower Owens River Project
MMRP	Mitigation Monitoring and Reporting Program
MOU	Memorandum of Understanding
OVMAP	Owens Valley Mosquito Abatement Program
PM10	Particulate matter less than 10 microns in diameter
SLC	California State Lands Commission

Section 2 Riverine-Riparian System

2.1 AIR QUALITY

Mitigation Measure AQ-1

To minimize dust/ PM₁₀ emissions during construction activity, as necessary, one or more of the following measures shall be implemented:

- After clearing, grading, earth moving or excavation is complete, the disturbed area shall be treated by watering, or revegetating, or by spreading soil binders until the area is stabilized.
- During construction, use water trucks or sprinkler systems to keep areas of vehicle movement, temporary soil stockpiles, and construction disturbance damp enough to prevent dust from leaving the site. This may include wetting down such areas in the late morning and after work is completed for the day. The frequency of watering or other dust control measures may be increased when wind speed exceeds 15 mph.
- Minimize the amount of disturbed area and reduce on site vehicle speeds to 15 miles per hour or less.

2.2 BIOLOGICAL RESOURCES

Mitigation Measure F-1

In the event that the natural re-colonization of the game fishery does not occur within 5 years after water quality conditions have improved, or appears to be occurring at a very slow rate, LADWP shall implement and fund a one-time fish-stocking program (depending on availability of fish stock from state fish hatcheries) in coordination with CDFG, in the fifth year after water quality in the river has improved. Fish stocks from sources within the Owens Valley will be used preferentially. Fish stocks from outside the valley will be used if in-valley stocks are not available. The program will be designed to initiate re-colonization and to stimulate population growth to establish game fish populations within 10 years after water quality conditions have improved.

Mitigation Measure RW-1

If necessary to remove limited cattail and bulrush obstructions, mechanical removal of cattail and bulrush stands shall only occur in the fall and winter (October 1 to March 1) to avoid conflicts with breeding birds. Work outside of this time may be conducted if field surveys determine there would be no effect to nesting birds.

Mitigation Measure R-1

Temporary access roads used to clear the river channel shall be seeded with native or naturalized grasses and shrubs common to the valley, as available, after completion of the desilting operation to facilitate restoration of vegetative cover and species compatible with the surrounding vegetation: The colonization by non-native aggressive or noxious weeds shall be inhibited by weed control for 3 years after construction.

Mitigation Measure RW-2

Impacts to wetland and riparian habitats adjacent to the work area shall be minimized by making use of existing barren areas for staging, operations, and stockpiling; crushing vegetation in the work area rather than clearing or grading it; and mulching areas denuded during operations with vegetative debris to encourage natural revegetation and discourage noxious weeds.

2.3 CULTURAL RESOURCES

Mitigation Measure CRR-1

LADWP shall implement the following management actions to avoid impacts on cultural resources during the channel clearing work:

- LADWP shall work with a qualified archaeologist to locate the temporary access road for the channel clearing work to avoid the two historic sites identified in the field survey by Far Western (2003).
- Temporary construction fencing shall be installed along the perimeter of the area where these two historic sites are located to avoid construction equipment, vehicles, or personnel from accidentally entering and disturbing the site.
- Temporary construction fencing shall be installed between the sediment stockpile area and the adjacent prehistoric site to avoid heavy equipment and or sediment spoil from accidentally entering and disturbing the site.
- Installation of temporary fencing referenced above shall be conducted under the supervision of a qualified archaeologist.
- LADWP shall notify representatives of regional Native American Tribes prior to beginning earthwork for the channel clearing work. Interested Tribal representatives shall be invited to be present (on a volunteer basis) during earthwork.
- In the event that previously unknown prehistoric or historic cultural material is encountered, a qualified archaeologist will be contacted and will investigate the find and determine if it represents an intact deposit or archaeological site. LADWP shall implement the recommendations of the archaeologist concerning measures to protect or salvage the site. If prehistoric cultural material is identified, LADWP shall coordinate the investigations and actions to be taken with appropriate Native American parties.

Mitigation Measure CRR-2

In the event that previously unknown prehistoric or historic cultural material is observed in areas subject to LORP-related flows or earthwork, LADWP shall retain a qualified archeologist to investigate the find and determine if it represents an intact deposit or archeological site. LADWP shall implement the recommendations of the archeologist concerning measures to protect or salvage the site. If prehistoric cultural material is identified by the archaeologist, LADWP shall coordinate these investigations and actions to be taken with appropriate Native American parties. If any investigations are conducted, interested Tribal representatives would be invited to participate (on a volunteer basis).

2.4 HYDROLOGY

Mitigation Measure H-1

During seasonal habitat flows, Inyo County shall monitor culverts and bridges on County roads along the river and LADWP shall monitor culverts on other roads to determine the potential for debris plugs to form at road crossings. Obstructive debris will be removed as necessary to minimize flooding the roads.

Impact: Localized overbank flooding that could affect public roads and lease roads that cross the river if floating debris clogs the culverts and bridges, primarily under the seasonal habitat flows

Timing: Life of project (during seasonal habitat flows)

Party Responsible for Implementation:

Agency Responsible for Monitoring:

Monitoring Method:

Documentation of Compliance:

LOWER OWENS RIVER PROJECT
MITIGATION MONITORING AND REPORTING PROGRAM

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Section 3 Pump Station and Associated Facilities

3.1 AIR QUALITY

Mitigation Measure AQ-1

To minimize dust/ PM₁₀ emissions during construction activity, as necessary, one or more of the following measures shall be implemented:

- After clearing, grading, earth moving or excavation is complete, the disturbed area shall be treated by watering, or revegetating, or by spreading soil binders until the area is stabilized.
- During construction, use water trucks or sprinkler systems to keep areas of vehicle movement, temporary soil stockpiles, and construction disturbance damp enough to prevent dust from leaving the site. This may include wetting down such areas in the late morning and after work is completed for the day. The frequency of watering or other dust control measures may be increased when wind speed exceeds 15 mph.
- Minimize the amount of disturbed area and reduce on site vehicle speeds to 15 miles per hour or less.

Mitigation Measure AQ-2

LADWP shall stabilize the sediment stockpile at the pump station site as necessary to minimize wind-blown dust from the stockpile. Methods to reduce fugitive dust emissions include revegetating the pile, armoring it with a layer of coarse materials, soil binders, or water application.

3.2 BIOLOGICAL RESOURCES

Mitigation Measure P-1

Upland areas disturbed during construction at the pump station site shall be regraded to create natural contours that match adjacent topography, then shall be seeded with native plant species. Restoration shall commence within one year of completion of the pump station. The goal of the restoration shall be to restore plant species and cover to pre-construction conditions over time. The species included shall be based on the species removed, availability of seeds or plant materials, and ability to cultivate each species. The colonization by non-native aggressive or noxious weeds shall be inhibited by weed control for three years after construction. Revegetation methods, plant maintenance, performance goals, and monitoring methods shall be based on: (1) the guidance in Inyo County's Revegetation Plan prepared pursuant to the Agreement; and (2) results of LADWP's ongoing experimental dryland revegetation studies in the Owens Valley. A 7-year monitoring and maintenance program shall be implemented to ensure successful establishment of the plants. The following are the mitigation goals for revegetation: (1) at least 50 percent of the native perennial species present at the site prior to construction shall be established by year 3 and persist through year 7; (2) plant cover shall achieve 50 percent of pre-construction cover values by year 5 and 65 percent by year 7; (3) newly established plants shall exhibit normal growth rates and healthy conditions for at least two years without supplemental watering and weeding; and (4) cover by non-native noxious weeds shall not exceed pre-construction conditions.

Mitigation Measure P-3

The area of temporary disturbance associated with construction of the power line shall be minimized to the extent feasible by using overland travel to reach pole sites, prohibiting construction of new roads, and minimizing soil disturbance such as scraping or excavation, except where necessary to ensure safe passage or to complete construction.

Section 3 – Pump Station and Associated Facilities

Mitigation Measure P-4

The small freshwater seep along the power line shall be avoided during construction by marking its boundary on construction drawings and flagging them in the field prior to construction activities to indicate an environmentally sensitive area to be avoided.

Mitigation Measure P-5

Power poles installed for the LORP pump station that are located within 0.25 mile of Owens Lake will be equipped with anti-predator perches (aluminum combs or other appropriate devices placed on top of poles or other potential perching sites).

Mitigation Measure CRP-2

LADWP shall implement the following management actions during installation of the power line:

- LADWP shall notify representatives of regional Native American Tribes prior to beginning construction of the power line. Interested Tribal representatives shall be invited to be present (on a volunteer basis) during construction.

Impact:	Potential disturbance of unknown cultural resources during construction of the power line	
Timing:	Prior to construction of power line	
Party Responsible for Implementation:	LADWP	
Agency Responsible for Monitoring:	LADWP	
Monitoring Method:	Review of contact logs/notes regarding notification of Native American Tribes	
Documentation of Compliance:	Date:	Initial:

3.4 WATER QUALITY

Mitigation Measure P-2

The Storm Water Pollution Prevention Plan (SWPPP) to be prepared under the provisions of the required Construction General Storm Water NPDES Permit shall specifically include measures to: (1) prevent erosion from the construction site and from the post-construction site that could cause sedimentation into the river, with a focus on stabilizing the river banks to prevent sloughing and erosion during the initial river flows and due to water level fluctuations in the forebay; and (2) prevent discharge of construction materials, contaminants, washings, concrete, fuels, and oils into the river from construction equipment and vehicles. These measures shall include, at a minimum, physical devices to prevent sedimentation and discharges (e.g., silt fencing, hay bales), and routine monitoring of these devices and the conditions of the river downstream of the pump station site.

Section 4 Blackrock Waterfowl Habitat Area

4.1 AIR QUALITY

Mitigation Measure AQ-1

To minimize dust/ PM₁₀ emissions during construction activity, as necessary, one or more of the following measures shall be implemented:

- After clearing, grading, earth moving or excavation is complete, the disturbed area shall be treated by watering, or revegetating, or by spreading soil binders until the area is stabilized.
- During construction, use water trucks or sprinkler systems to keep areas of vehicle movement, temporary soil stockpiles, and construction disturbance damp enough to prevent dust from leaving the site. This may include wetting down such areas in the late morning and after work is completed for the day. The frequency of watering or other dust control measures may be increased when wind speed exceeds 15 mph.
- Minimize the amount of disturbed area and reduce on site vehicle speeds to 15 miles per hour or less.

4.2 BIOLOGICAL RESOURCES

Mitigation Measure B-1

Temporarily disturbed upland habitats in the Blackrock Waterfowl Habitat Area shall be seeded with native or naturalized grasses and shrubs common to the valley, as available, after construction of berms and ditches to facilitate restoration of vegetative cover and species compatible with the surrounding vegetation. The colonization by non-native weeds shall be inhibited by weed control for 3 years after construction.

4.3 CULTURAL RESOURCES

Mitigation Measure B-2

LADWP shall implement the following management actions to avoid impacts on cultural resources during construction of the proposed ditch to be located in proximity of the two known prehistoric sites in the Blackrock area:

- LADWP shall notify representatives of regional Native American Tribes prior to beginning construction of the proposed ditch to be located in proximity of the two known prehistoric sites. Interested Tribal representatives shall be invited to be present (on a volunteer basis) during the construction of the ditch.
- LADWP shall work with a qualified archaeologist to locate the proposed ditch to avoid the two known prehistoric sites identified in the field survey by Far Western (2001).
- Temporary protective fencing shall be placed between the known prehistoric sites and proposed ditch areas if construction work will occur within 100 feet of these sites. A qualified archaeologist shall supervise the placement of temporary protective fencing.
- All vehicles shall remain on the road in the vicinity of the known prehistoric sites.
- If construction must occur within 25 feet of these sites, an archaeologist shall monitor construction activities.

Impact:	Potential disturbance of known archaeological sites during construction of a ditch in the Blackrock Waterfowl Habitat Area
Timing:	Prior to and during ditch construction
Party Responsible for Implementation:	LADWP and construction contractor ;
Agency Responsible for Monitoring:	LADWP
Monitoring Method:	1 Monitoring by a professional archaeologist Review of construction plans and specification if fencing is warranted Review of contact logs/notes regarding notification of Native American Tribes
Documentation of Compliance:	Date: _____ Initial: _____

Section 5 Land Management Plan

5.1 RANGELANDS

Mitigation Measure LM-1

If it is determined by BLM or SLC that the rangeland management actions proposed under LORP are resulting in a substantial increase in cattle drift, the grazing management plan(s) for the relevant lease(s) shall be modified to incorporate herd and grazing practices to reduce drift. These lease-specific measures shall be developed in consultation with BLM (Blackrock, Twin Lakes, Island, Lone Pine, Intake, and Thibaut Leases) or SLC (Delta Lease) and shall include specific measures to discourage unauthorized drift, such as strategic placement of watering troughs and salt blocks/supplements and coordination of grazing rotation patterns between the LADWP and BLM pastures. The effectiveness of these measures shall be evaluated in the LORP monitoring and adaptive management program.

Impact:	Potential increase in livestock drift onto public lands
Timing:	Life of project
Party Responsible for Implementation:	LADWP and LADWP Lessees
Agency Responsible for Monitoring:	LADWP, BLM, and SLC
Monitoring Method:	1 Review contact logs/notes with BLM and SLC Review grazing management plans
Documentation of Compliance:	Date: _____ Initial: _____

Section 6 — Other Mitigation Measures Associated with the LORP as a Whole

2. Provisions for treating new saltcedar infestations, including protocols for treating saltcedar near rare plant populations.
3. Provisions for annual pedestrian monitoring of project areas potentially subject to saltcedar infestations.
4. Provisions for annual follow-up treatments of previously treated saltcedar infestations.

• **Treatment of Saltcedar Seed Sources**

If the ongoing Inyo County Saltcedar Control Program is not able to achieve the priorities for the control of existing saltcedar populations in the LORP area identified in Section 10.4.1.6, the control of existing saltcedar populations will be completed as part of this mitigation measure.

• **Coordination** In addition to the above, the

program will include:

1. LADWP will provide to the Saltcedar Control Program reports and data compiled through the LORP monitoring program concerning flows and water levels related to the river baseflow and seasonal habitat flows, releases to the Delta, and water levels at the Off-River Lakes and Ponds and in the Blackrock area.
2. LADWP will notify the Saltcedar Control Program of the timing and extent of annual seasonal habitat flows, increased flow releases to Blackrock units, pulse flows to the Delta, and other changes in land management that could cause a new infestation of saltcedar.
3. LADWP will provide to the Saltcedar Control Program work products relevant to saltcedar control that are prepared through the LORP monitoring program, such as maps, imagery, etc.

• **Funding**

LADWP will provide matching funds for LORP saltcedar control equal to the amount obtained by the County up to a total of \$1.5 million as described in Section 10.4.1.6. The intent of this mitigation measure is to suppress increases in saltcedar resulting from LORP implementation. If continuation of the LORP-focused saltcedar control program is required and the matching funds described above are exhausted, funding for the program will be an ongoing post-implementation cost (EIR/EIS Section 2.2.2.2).

Section 6 — Other Mitigation Measures Associated with the LORP as a Whole

Mitigation Measure V-4

LADWP shall conduct a training program for LADWP and Inyo County personnel, lessees, and their employees working within the LORP area on identification and reporting of noxious weeds, including saltcedar, and New Zealand mud snails. The training will be conducted at LADWP or Inyo County facilities in the Owens Valley. The Eastern Sierra Weed Management Area Noxious Weed Identification Handbook will be provided to program participants. The instruction will detail how to accurately describe their locations to aid in verification and timely response and identify the agencies to which sightings of the species should be reported. As new personnel are hired or when training is updated, a refresher course will be provided. In addition, photos of relevant deleterious species will be posted in the assembly rooms of appropriate LADWP and Inyo County facilities.

Mitigation Measure V-5

Upon the implementation of the LORP, LADWP, in coordination with the California Department of Fish and Game, shall expand the existing public outreach program for preventing the spread of New Zealand mud snails to cover the LORP area. LADWP will post information signs instructing the public on how to identify New Zealand mud snails and notifying recreational users to take precautionary measures to prevent the spread of New Zealand mud snails. The signs will be posted at key access points to the LORP area, such as Mazourka Canyon Road, Manzanar Reward Road, the pump station, and the Delta. The precautionary measures that will be described on the signs include: scrubbing and rinsing waders, boots, watercraft, and equipment before leaving the water (using hot water or drying will enhance this measure); disposing of fish entrails in proper trash receptacles; and reporting to the Non-indigenous Aquatic Species Toll Free Hotline if this species is observed.

Impact:	; Potential increase in the distribution and abundance of New Zealand mud snails	
Timing:	One time upon project implementation and maintained as necessary	
Party Responsible for Implementation:	; LADWP and CDFG	
Agency Responsible for Monitoring:	LADWP and CDFG	
Monitoring Method:	; Review of signage	
Documentation of Compliance:	Date:	Initial:

Section 6 – Other Mitigation Measures Associated with the LORP as a Whole

6.2 PUBLIC HEALTH AND SAFETY

Mitigation Measure PS-1

LADWP shall enter into an agreement with OVMAP to abate the potential increase in mosquitoes resulting from the LORP. Mitigation Measure PS-1 has three components:

- Pre-project and post-implementation surveillance, monitoring, and control (to be performed by OVMAP)
- Agency coordination and LORP management adjustments (to be performed by LADWP)
- Public education, program administration, and reporting (to be performed by OVMAP)

These components are described in greater detail in Appendix H (see below). The agreement between LADWP and OVMAP will include the provisions in Appendix H. In addition, the agreement will describe the areas to be monitored and treated, the range of control methods to be used, and reporting requirements. As the impacts from mosquito production created by the LORP are better understood and as methods for mosquito control improve, LADWP and OVMAP may agree to modify the provisions of the scope of work, as long as LORP-related mosquito populations continue to be prevented from reaching nearby communities.

OVMAP estimates that the annual cost to fully implement Mitigation Measure PS-1 could be approximately \$109,000, depending on the severity of the impact (L. Kirk, pers. comm., December 2003). This is considered an ongoing post-implementation cost that will continue for the life of the project. Post-implementation costs are to be shared equally by LADWP and the County as described in EIR/EIS Section 2.2.2.2.

Appendix H – Scope of work for the implementation of Mitigation Measure PS-1

- Pre-project and post-implementation surveillance, monitoring, and control (to be performed by OVMAP):
 - 1 Obtain a baseline of pre-project mosquito sources and populations using New Jersey light traps and/or encephalitis virus surveillance (EVS) CO₂ baited traps at various sites throughout the project area. The traps would be located between the project area and the communities of Keeler, Lone Pine, Olancho, Independence, Fort Independence, and Aberdeen. Monitor these traps on a weekly basis during the mosquito season (April – October) preceding project implementation. In late summer, test mosquitoes for the presence of diseases.