

EXECUTIVE SUMMARY

1. BACKGROUND

In 1991, Los Angeles Department of Water and Power (LADWP) and Inyo County approved the Inyo County/Los Angeles Long Term Water Agreement (Agreement) that provides environmental protection of the Owens Valley from the effects of groundwater pumping and water exports while maintaining a reliable water supply for the City of Los Angeles. The Agreement and a Final Environmental Impact Report (1991 EIR) were then submitted to the Court with a joint request to end ongoing litigation. Shortly thereafter, concerns about the legal adequacy of the 1991 EIR were raised by state agencies and environmental groups.

In 1994, the Court ordered the County and LADWP to respond to certain of these issues. After several years of settlement discussions among all parties, a Memorandum of Understanding (MOU) was executed that provides resolution over the concerns about the 1991 EIR, particularly related to the adequacy of mitigation described in the EIR for impacts due to historic pumping and diversion activities in the Owens Valley. The MOU was lodged with the court which in June 1997, discharged its writ ending the litigation between Inyo and LADWP and freeing the parties to implement the Agreement and the 1991 EIR mitigation measures. Parties to the MOU include LADWP, Inyo County, California Department of Fish and Game, State Lands Commission, Sierra Club, and Owens Valley Committee and Carla Scheidlinger.

2. ORIGINS AND OBJECTIVES OF THE LORP

The Lower Owens River Project (LORP) was identified in the 1991 EIR as mitigation for impacts related to groundwater pumping by LADWP from 1970 to 1990. 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. Finally, the MOU specifies that LADWP and Inyo County prepare an EIR for the LORP and issue a draft EIR within 36 months of execution of the MOU (i.e., June 2000), and that flows in the river begin within 72 months of the MOU execution (i.e., June 2003). Under the LORP, natural habitats will be created and enhanced consistent with the needs of certain habitat indicator species through the application of appropriate flow and land management practices.

The LORP will be implemented through a joint effort by LADWP and Inyo County. The U.S. Environmental Protection Agency (EPA) will provide funding for the project, but will not be actively involved in the implementation of the project. Regulatory agencies, including the California Department of Fish and Game, Lahontan Regional Water Quality Control Board, and U.S. Army Corps of Engineers, will influence the LORP through various permits and approvals.

As provided in the MOU, the LORP will be adaptively managed. This means that, subject to funding limitations and consistency with the MOU, project management will be modified if ongoing monitoring and analysis reveal that such modification is necessary to ensure the successful implementation of the project and the attainment of the project goals. The LORP includes a long-term monitoring plan for collecting and analyzing data on the progress toward meeting the LORP goals.

3. LORP PLAN ENVIRONMENTAL REVIEW

The MOU specifies that LADWP and the County will direct and assist Ecosystems Sciences (MOU LORP consultant) in the preparation and implementation of the LORP ecosystem management plan. A

draft LORP Plan was issued for review by parties to the MOU in May 1999, and a revised plan was issued in August 2002.

The MOU also specifies that LADWP, as the CEQA Lead Agency, and Inyo County as a CEQA Responsible Agency, will jointly prepare the EIR on the project. LADWP is the CEQA Lead Agency because it has the primary responsibility for the project through discretionary actions to fund and physically implement the LORP. A portion of the funding for the LORP will be derived from federal grant funds provided by EPA. The allocation of such funds from EPA to Inyo County and LADWP is a federal action by EPA subject to the environmental review requirements of the National Environmental Policy Act (NEPA). Hence, a federal Environmental Impact Statement was prepared for the LORP, and incorporated into a joint EIR/EIS document.

The Draft EIR/EIS on the LORP was issued on November 1, 2002. The public review and comment period began on November 1, 2002 and ended on January 14, 2003. A total of 241 written comment letters were received on the Draft EIR/EIS. In addition, public meetings were held in Lone Pine on December 4, 2002 and in Bishop on December 5, 2002 to receive oral comments on the Draft EIR/EIS. A total of 19 people provided oral comments at the two meetings.

After the publication of the Draft EIR/EIS, the MOU parties continued to hold additional negotiations to resolve the dispute over the two alternatives for the pump station capacity presented in the Draft EIR/EIS and other issues related to the MOU. In February 2004, the MOU parties reached an agreement, and a Stipulation and Order was entered in Inyo County Superior Court (Case Number S1CVCV01-29768, Sierra Club and Owens Valley Committee v. City of Los Angeles et al., February 13, 2004). This February 2004 Stipulation and Order specifies the following with respect to the LORP project description:

- The maximum flow to be diverted by the pump station from the river will be 50 cfs. (See Section 2.4.)
- 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 (not to exceed \$500,000 in any given year). Matching funds will be in addition to the funds provided by LADWP for saltcedar control under the Inyo County/Los Angeles Long Term Water Agreement. LADWP will commence providing funding by matching the \$560,000 Wildlife Conservation Board (WCB) grant that was awarded to the County in February 2004. (See Section 2.2.2 and Section 10.4.4.)

The LORP project description presented in Section 2.0 of this Final EIR/EIS reflects these requirements specified in the Stipulation and Order. In addition, the Stipulation and Order specifies an implementation schedule for the LORP, and requires that the baseflow of 40 cfs be achieved in the river no later than April 1, 2006 (see also Section 2.2.3 "Schedule and Phasing").

Appendix J (Volume 2) of this Final EIR/EIS presents the written comment letters on the Draft EIR/EIS and the written transcripts of the two public meetings, and Appendix K (Volume 3) presents responses to these comments. Please note that URS Corporation, consultant to Inyo County for the Draft EIR/EIS, assigned numbers to the comment letters; specific number series (61 through 69 and 71 through 79) were not used.

Throughout 2003 and until early May 2004, LADWP, EPA, and Inyo County coordinated closely to prepare the Final EIR/EIS, with the objective of reaching consensus on all issues among the three agencies. However, in order to meet the court-established deadline to release the Final EIR/EIS by June 23, 2004, LADWP informed Inyo County Superior Court on May 10, 2004 that LADWP would complete

the document on its own, without further consultation with EPA and Inyo County. On May 11, 2004, LADWP informed EPA and Inyo County that LADWP would strive to incorporate the comments that had been received from the two agencies thus far, and also invited the two agencies to submit any additional comments by May 14 for LADWP's consideration and incorporation to the extent possible within the remaining time available. Therefore, this Final EIR/EIS reflects the consensus reached on the issues discussed by the three agencies as of May 2004.

4. ELEMENTS OF THE LORP

The MOU provides that natural habitats will be created and maintained consistent with the needs of certain "habitat indicator" species through flow and land management in the project area. The MOU identifies the four physical features of the LORP, which are described below.

Lower Owens River Riverine-Riparian Ecosystem

The goal for the Lower Owens River Riverine-Riparian System is to create and sustain healthy and diverse riparian and aquatic habitats and a healthy warmwater recreational fishery with habitat for native fish species. The MOU specifies that a baseflow of 40 cubic feet per second (cfs) will be established from the River Intake to the pump station near the Owens River Delta. This reach is approximately 62 river miles long. The MOU also specifies an annual seasonal habitat flow of up to 200 cfs. The annual amount of the seasonal habitat flow will depend on the runoff amount in Owens Valley each year.

Owens River Delta Habitat Area

The goal for the Delta Habitat Area under the MOU is to enhance and maintain approximately 325 acres of existing wetland habitat within the Delta. The management action for creating and enhancing habitats in the Delta is to establish baseflows to the Delta with an average annual flow of 6 to 9 cfs, as specified in the MOU. Within the 6 to 9 cfs annual average flow, four pulse flows of 20 to 30 cfs will be released to the Delta for short periods of time. The daily baseflow would be the amount necessary to maintain Delta conditions and to conserve water for use in the Delta during other times of the year (within the 6-9 cfs annual average and a minimum of 3 cfs) and for delivery to Los Angeles. In addition, higher flows may pass through the pump station to the Delta during the annual seasonal habitat flows in the Lower Owens River of up to 200 cfs.

The MOU includes a pump station to be located between Keeler Bridge and the Lower Owens River Delta. The facility is designed to capture flows in the river and divert the water to the Owens Lake dust control project, or to the Aqueduct for use by LADWP. Water that is not captured will be by-passed to the Delta. The pump station will include a rock/earthen/concrete diversion structure placed across the river, a facility pad with an enclosed pump building, and ancillary facilities including service roads, in-channel sediment basins, a power line, and pipelines.

Blackrock Waterfowl Habitat Area

The MOU specifies that a 1,500-acre off-river area with a mixture of pasture and wetlands be enhanced through flow and land management to benefit wetlands and waterfowl. Approximately 500 acres of the habitat area are to be flooded at any given time when runoff is forecasted to be average or above average with reductions in water supplies in less than average runoff years. The proposed flooding will increase wetland productivity and diversity, which is consistent with the approach described in the LORP Plan. The management units would be subject to periodic cycles of wetting and drying so that one to three management units would be wholly or partially flooded at any given time. Various physical

improvements to existing ditches, berms, and spillgates will be necessary to manage water conveyance and flooding in the management units

Off-River Lakes and Ponds

The MOU specifies that existing off-river lakes and ponds near the Blackrock Waterfowl Habitat Area be maintained for fisheries, waterfowl, shorebirds, and other animals through flow and land management. The off-river lakes and ponds identified in the MOU are: Billy Lake, Goose Lake, Thibaut Ponds, and Upper and Lower Twin Lakes. The MOU includes goals for “habitat indicator species” related to the actions at the off-river lakes and ponds.

Other LORP Management Actions

The LORP also includes a land management plan for LADWP leases within the LORP project area. It focuses on enhancing native habitat diversity while allowing for sustainable grazing. New riparian pastures and riparian and upland utilization rates would be established. Other actions include protection of rare plant populations, establishment of off-river watering sources to reduce use of the river and off-river ponds for cattle watering, and monitoring of grazing utilization throughout the lease areas to ensure that grazing rates maintain the long-term productivity of the rangelands.

Threatened and endangered species are considered in the LORP Plan. The LORP actions would protect and enhance habitat for these species; however, the LORP does not include any actions to create sanctuaries for these species, nor does the project include any deliberate actions to introduce, manage, or enhance populations of these species. Although the MOU specifies that a Habitat Conservation Plan will be prepared as one part of the LORP Plan, LADWP has concluded, after conferring with MOU parties, to delay initiating the development of an HCP until the LORP has been approved or implemented.

5. SUMMARY OF ENVIRONMENTAL IMPACTS

The LORP is designed to improve environmental conditions, but may cause incidental and unintended adverse environmental impacts, many of them temporary. The objective of the EIR/EIS is to evaluate the impacts of the proposed LORP in order to allow LADWP, the County, and EPA to make informed decisions on how to minimize impacts of the project. The significance of individual impacts was classified as shown below.

- **Class I Impacts - Unavoidable Significant Impacts.** The impacts cannot be avoided if the project is implemented, and cannot be mitigated to a level of insignificance. For these impacts, LADWP (as the CEQA Lead Agency) must issue a "Statement of Overriding Considerations" under CEQA if the project is approved. This statement is a finding that the project should be implemented even though it will cause significant impacts to the environment. Inyo County must issue the same finding when it takes action on the project as the CEQA Responsible Agency. EPA must explain in their Record of Decision why these impacts are acceptable in light of the project benefits.
- **Class II Impacts - Significant Environmental Impacts that can be Mitigated to a Less than Significant Level.** For these impacts, the EIR/EIS identifies mitigation measures that will avoid significant impacts. LADWP and Inyo County must adopt those mitigation measures if the project is approved.
- **Class III Impacts - Other Environmental Impacts that are Considered Adverse but not Significant.** Mitigation measures are recommended to minimize these adverse impacts, but the lead agencies are not required to adopt them.

▪ Class IV Impacts - Beneficial Impacts.

CEQA requires that the lead agency identify feasible measures for all significant impacts (Class I and Class II), if available, that would mitigate those impacts to a less than significant level. These measures must be adopted by the lead agency if they are considered feasible. Mitigation measures for less than significant impacts are voluntary under CEQA. Under NEPA, feasible mitigation measures for all impacts must be identified whether they are significant or not. The federal lead agency need not adopt the mitigation measures identified in an EIS, but should identify all relevant, reasonable mitigation measures that could alleviate the environmental effects of a proposed action. Accordingly, in the Draft EIR/EIS, mitigation measures were identified as CEQA mitigation or NEPA mitigation. During the preparation of the Final EIR/EIS, LADWP determined that, with the exception of Mitigation Measure P-2 (as numbered in the Draft EIR/EIS), all mitigation measures that were identified in the Draft EIR/EIS to further reduce Class III impacts (i.e., voluntary mitigation) will be adopted by LADWP. It should also be noted that Mitigation Measures AQ-1 and AQ-2 were revised since the publication of the Draft EIR/EIS and will be adopted by LADWP as revised and presented in the Final EIR/EIS. Table S-1 presents all mitigation measures that will be adopted by LADWP.

The EIR/EIS includes a comprehensive analysis of the potential environmental impacts of the LORP, and an analysis of various alternatives. The environmental impacts that are evaluated in the EIR/EIS include: water quality, native and game fish, wetlands and riparian habitats, upland habitats, wildlife, threatened and endangered species, cultural resources, air quality, and public health. Based on the analyses in the EIS/EIR, the LORP is expected to cause the following significant, unmitigable impacts (Class I). These impacts are also listed in Table S-1.

1. During the first several years of the project, the baseflows and seasonal habitat flows could degrade water quality along the river, primarily downstream of Mazourka Canyon Road. The interactions of increased flows with organic sediments in the channel may reduce dissolved oxygen levels and increase hydrogen sulfide and ammonia levels. These impacts would be minimized to the extent feasible by flow management actions, but cannot be entirely avoided. There is no feasible mitigation measure to fully avoid this impact.
2. The temporary adverse water quality conditions during the initial releases to the river could adversely affect fish due to the depletion of oxygen, and possible increase in hydrogen sulfide and ammonia. The poor water quality could cause fish kills along the river downstream of Mazourka Canyon Road. Both the 40 cfs baseflow and the seasonal habitat flows of up to 200 cfs could potentially cause water quality degradation. The fishery is expected to recover once water quality conditions improve. There is no feasible mitigation measure to fully avoid this impact.

The LORP is expected to cause various other environmental impacts that could be mitigated to less than significant levels (Class II), that are minimal in nature (Class III), or beneficial (Class IV). These impacts and mitigation measures are listed in Table S-1.

6. ALTERNATIVES

Several alternatives were evaluated in the EIS/EIR that could potentially avoid or reduce the significant environmental impacts (Class I). They are listed in Table S-2. LADWP has determined that these alternatives are not preferable to the proposed project because of one or more of the following reasons: (1) they are infeasible; (2) they may cause other incidental environmental impacts; (3) they would unnecessarily delay the implementation of the LORP, and/or (4) the effectiveness of the alternative in reducing the significant impact is uncertain.

**TABLE S-2
SUMMARY OF ALTERNATIVES TO AVOID SIGNIFICANT IMPACTS**

Significant Impact of the Proposed Project (Class I)	Alternatives to Avoid or Reduce the Impact	Feasible? (as Determined by Lead Agencies)	Does the Alternative Have Other Significant Impacts?
Water quality degradation and fish kills during initial flows (two impacts)	Release Regime 1 - Gradual Baseflows and Deferred Seasonal Habitat Flows	No. While technically feasible t, not environmentally superior to the proposed project and infeasible due to delay in establishment of 40 cfs baseflows	No. However, this alternative would further delay achievement of LORP goals.
	Release Regime 2 - Begin with Seasonal Habitat Flows to Flush the System (in July following completion of the pump station)	No. While technically feasible, not environmentally superior to the proposed project and infeasible due to potential delay in establishment of 40 cfs baseflows	Possible greater water quality impacts and fish kills during the first seasonal habitat flow release, but potentially reduced water quality impacts and fish kills during establishment of the 40-cfs baseflow
	Release Regime 3 - Delay Releases for Baseflows Until Winter	No. While technically feasible, not environmentally superior to the proposed project and infeasible due to delay in establishment of 40 cfs baseflows	Possible greater water quality impacts and fish kills during first seasonal habitat flow release and would delay establishment of 40 cfs baseflows thus delaying achievement of LORP goals

The EIR/EIS also addressed various alternatives to elements of the LORP designed to generally reduce impacts and/or potentially increase the effectiveness of the LORP in achieving the stated objectives. These alternatives are listed in Table S-3. LADWP has determined that some of these alternatives are feasible, but are not preferable to the proposed project and will not be adopted.

**TABLE S-3
SUMMARY OF OTHER ALTERNATIVES**

Alternative	Is it Feasible? (as Determined by Lead Agencies)	Does it <i>Avoid or Lessen</i> Significant Impacts of the Proposed Project	Does it Involve Any <i>New</i> Significant Impacts?
150 cfs Pump Station – Section 11.4.1	Yes	No	No
Delta Modifications – Section 11.4.2	No	No	Yes, significant wetland losses due to berm construction in the Delta
Alternative Releases for the Seasonal Habitat Flows – Section 11.4.3	Yes	No	Possibly, there is a higher potential for flows being diverted outside the Delta through the overflow channel. This impact could range from significant and adverse to beneficial.
Alternative Pulse Flow Regimes for the Delta – Section 11.4.4	Yes	No	No
Cowbird Trapping – Section 11.4.5	Yes	No	No
Native Fishes in Blackrock – Section 11.4.6	No	No	Yes, possible high mortality of native fishes during transition from wet to dry cycles.
Modified Flooding Regime in Blackrock – Section 11.4.7	Yes	No	No
Alternative Sediment Stockpiling Sites – Section 11.4.8	Yes	(Since publication of the Draft EIR/EIS, the sediment stockpile area has been changed to two upland locations to avoid impacts to the wetland located in the oxbow area.)	No

**TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES
LOWER OWENS RIVER PROJECT**

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
<i>CLASS I IMPACTS: SIGNIFICANT AND UNAVOIDABLE</i>		
<i>Water Quality</i>		
The proposed 40-cfs baseflow and seasonal habitat flows could degrade water quality due to the depletion of oxygen, and the possible increase in hydrogen sulfide and ammonia levels. These impacts are only expected to occur along the wetted reach of the river, from Mazourka Canyon Road to the pump station site, where the organic sediment deposits are present, affecting about 37 channel miles of the 62-mile length of the river. It is anticipated that water quality conditions will improve under the 40-cfs baseflows over time, but may be subject to periodic disturbance by the seasonal habitat flows of up to 200 cfs. The time required to stabilize water quality under the baseflows and seasonal habitat flows is unknown. (Section 4.4.3.1)	No feasible mitigation measures are available to reduce or avoid the significant, short-term water quality impacts associated with the initial release regime for the 40-cfs baseflows and seasonal habitat flows.	Significant
<i>Game and Native Fish</i>		
The temporary adverse water quality conditions during the initial releases to the river could adversely affect fish due to the depletion of oxygen, and possible increase in hydrogen sulfide and ammonia. The poor water quality could cause fish kills along the river downstream of Mazourka Canyon Road. Both the 40-cfs baseflow and the 200 cfs seasonal habitat flow are expected to cause water quality degradation. The fishery is expected to recover once water quality conditions improve.	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.	Significant.

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS II IMPACTS: SIGNIFICANT, BUT MITIGABLE		
<i>Hydrology</i>		
There is a potential for localized overbank flooding that could affect public roads and lease roads that cross the river (e.g., Mazourka Canyon Road, Manzanar-Reward Road, and Keeler Road). This impact could occur if floating debris clogs the culverts and bridges at these crossings, primarily under the seasonal habitat flows. (Section 4.3.2)	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.	Less than significant
<i>Wildlife, Including Special Status Species</i>		
The mechanical removal of limited tule stands could disturb nesting birds by destroying cover and nests, altering breeding behavior, and displacing breeding pairs. At least one special status species could be affected – the least bittern. (Section 4.7.2)	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.	Less than significant
<i>Wetlands, Riparian Habitat, and Upland Habitats</i>		
Prior to the initial releases, LADWP will mechanically remove sediments and marsh vegetation from 10,800 feet of the river downstream of the River Intake. A temporary 20-foot wide haul road will be established on the top of the west bank for the excavator and trucks. It will be created by driving over the existing vegetation in flat areas, and by minor grading where the terrain is uneven. Several temporary roads will be created perpendicular to the main haul road to provide access to an existing dirt road along the Aqueduct. Establishment of these roads would result in the short-term disturbance of about 8 acres of desert sink scrub. (Section 4.5.2)	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.	Less than significant

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS II IMPACTS: SIGNIFICANT, BUT MITIGABLE		
<p>The construction of the pump station would cause general disturbance to upland vegetation from equipment staging, overland travel between work areas, and construction of the service roads. About 21.5 acres of desert greasewood scrub would be temporarily disturbed. (Section 5.1.2)</p>	<p>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.</p>	<p>Less than significant</p>
<p>Construction work in the Blackrock Waterfowl Habitat Area would disturb about 20 acres for berms and 11 acres for ditches, consisting primarily of desert sink scrub. The berms would be allowed to revegetate naturally, although the tops of the berms would be used for vehicular access. Ditches would be used for conveying water, and as such, would be converted to open water or wetland habitat. The construction-related disturbance zone around the margins of berms and ditches would be allowed to revegetate naturally. The success of natural revegetation of new berms and construction related disturbances zones is uncertain. There is a potential for invasion of non-native exotics in dry areas, and saltcedar in moist areas. (Section 7.1.3)</p>	<p>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 three years after construction.</p>	<p>Less than significant</p>
<p>The proposed flow management along the river will encourage the recruitment of native plants. However, it could also potentially increase the distribution and abundance of perennial pepperweed,</p>	<p>V-1. (This measure also applies to impacts associated with saltcedar infestations. See below.) Implement Measures to Minimize New Infestations. LADWP shall implement the following actions to minimize infestations of noxious weeds:</p>	<p>Less than significant</p>

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS II IMPACTS: SIGNIFICANT, BUT MITIGABLE		
<p>Russian knapweed, and other noxious non-native weeds which could displace native vegetation. (Section 10.4.3)</p>	<ol style="list-style-type: none"> 1. Construction and other disturbance of substrates will be minimized. 2. When possible, good water circulation will be provided in project wetlands to minimize accumulation of salts to prevent saltcedar infestation. 3. The use of fire for vegetation management will be minimized. 4. To the extent possible, LADWP will initiate flow releases and initiate dry phases within the Blackrock area between November 1 and March 15 (i.e., when saltcedar is not producing seed) to minimize the chance of invasion by saltcedar. 5. Construction equipment will be maintained “weed free” by washing and inspecting equipment used in weed-infested areas prior to moving to another site. 6. On-site fill materials for construction will be used to the extent possible. If off-site fill materials are necessary, they will be taken from borrow pits located in areas that are free of noxious weeds. <p>V-2. Provide Funding to the Inyo-Mono County Agricultural Commissioner. LADWP shall provide \$50,000 per year to the Agricultural Commissioner to fund the monitoring and control of new infestations of perennial pepperweed and other noxious weeds (excluding saltcedar) in the LORP project area for the first 7 years of LORP implementation. In addition, LADWP shall provide \$150,000 per year for the first 7 years to the Agricultural Commissioner to fund the control of existing perennial pepperweed and other noxious weed populations outside of the LORP area that could serve as seed sources for the LORP area.</p> <p>The Agricultural Commissioner will develop protocols for monitoring and controlling infestations based upon past experience and current literature. Based on the protocols, the Agricultural Commissioner will use the funds to identify and treat new infestations of noxious weeds within the LORP area in a timely manner, with priority given to the riparian areas. Existing infestations outside of the LORP area that could serve as seed sources for the LORP area will also be monitored and treated. A Memorandum of Understanding between the Agricultural Commissioner and LADWP will be entered into, and will outline the responsibilities of each agency under the protocols.</p>	

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS II IMPACTS: SIGNIFICANT, BUT MITIGABLE		
	<p>V-4. Conduct Training Program for LADWP Personnel and Lessees. (This measure also applies to impacts associated with saltcedar and New Zealand mud snail infestations. See below.) 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.</p>	
<p>The rewatering of the river would create new wetted channel areas, including areas that are barren. Once wetted, these areas would be susceptible to saltcedar infestation. In view of the extent of existing saltcedar populations within the LORP area that could serve as seed sources, the invasiveness and persistence of saltcedar, and the new areas that could be susceptible to saltcedar infestation as a result of LORP, the potential increase in saltcedar resulting from the project is considered significant, but mitigable. (Section 10.4.3)</p>	<p>V-1. (See above)</p> <p>V-3. Provide Funding to and Coordinate with the Inyo County Saltcedar Control Program. In addition to LADWP’s contribution to the existing Inyo County Saltcedar Control Program, LADWP will provide funding to Inyo County in order for the County’s Saltcedar Control Program to implement the following measures (the measures described below are in addition to the activities that will be conducted as part of the continuation of the existing Inyo County Saltcedar Control Program described in Section 10.4.1.6.):</p> <ul style="list-style-type: none"> • Monitoring and Treatment of New Saltcedar Infestations <p>Protocols for monitoring and treating new saltcedar infestations in the project area will be developed and implemented by the Inyo County Saltcedar Control Program in cooperation with LADWP. The protocols will include, but not be limited to, the following:</p> <ol style="list-style-type: none"> 1. Prioritization for monitoring and treatment of areas that are to undergo a change in hydrologic status and that do not have an established cover of native plants. 1. Provisions for treating new saltcedar infestations, including protocols for treating saltcedar near rare plant populations. 	<p>Less than significant</p>

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS II IMPACTS: SIGNIFICANT, BUT MITIGABLE		
	<ol style="list-style-type: none"> 1. Provisions for annual pedestrian monitoring of project areas potentially subject to saltcedar infestations. 1. Provisions for annual follow-up treatments of previously treated saltcedar infestations. <ul style="list-style-type: none"> • 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: <ol style="list-style-type: none"> 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. 1. 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. 1. 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 	

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS II IMPACTS: SIGNIFICANT, BUT MITIGABLE		
	for the program will be an ongoing post-implementation cost (Section 2.2.2.2). V-4. (See above)	
<i>Cultural Resources</i>		
The clearing of the channel immediately downstream of the River Intake will require establishment of access roads along about 2 miles of the western bank, and several additional roads to provide access from the river to the nearest existing service road. Establishment and use of these construction-related roads and/or use of construction equipment during the channel clearing work could potentially affect several known archeological and historic sites. (Section 4.8.4)	<p>CRR-1. LADWP shall implement the following management actions to avoid impacts on cultural resources during the channel clearing work:</p> <ul style="list-style-type: none"> • 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. 	Less than significant

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS II IMPACTS: SIGNIFICANT, BUT MITIGABLE		
<p>No known prehistoric or archeological sites are known to occur along the margins of the Lower Owens River, within the floodplain that would be affected by the baseflows and seasonal habitat flows. However, there is a remote possibility that unknown archeological sites or cultural deposits could be affected by the new flows. (Section 4.8.4)</p>	<p>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 archeologist, 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).</p>	<p>Less than significant</p>
<p>There is a potential to encounter unknown archeological resources during construction at the pump station site. The probability is considered very low. (Section 5.4.1)</p>	<p>CRP-1. LADWP shall implement the following management actions to avoid impacts on cultural resources during construction of the pump station:</p> <ul style="list-style-type: none"> • LADWP shall notify representatives of regional Native American Tribes prior to beginning earthwork for the pump station. Interested Tribal representatives shall be invited to participate (on a volunteer basis) in the monitoring of the earthwork. • A qualified archaeologist shall be present during earthwork for the pump station to monitor for and avoid cultural resources. In the event that prehistoric or historic cultural material is encountered, the archaeologist 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 by the archaeologist, LADWP shall coordinate the monitoring, investigations, and actions with appropriate Native American parties. If any investigations are conducted, interested Tribal representatives would be invited to participate (on a volunteer basis). 	<p>Less than significant</p>

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS II IMPACTS: SIGNIFICANT, BUT MITIGABLE		
<p>One of the proposed ditches in the Blackrock Waterfowl Habitat Area will be located in proximity to two archeological sites. Disturbance of these sites would be considered a potentially significant, but mitigable impact. (Section 7.3.1)</p>	<p>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:</p> <ul style="list-style-type: none"> • 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. 	<p>Less than significant</p>
<i>Public Health and Safety</i>		
<p>The LORP will result in hundreds of acres of new open water and marsh habitat along the river, at Blackrock, and at the Delta. These new habitats would provide more opportunities for mosquitoes to breed, which could result in increased nuisance and public health risks to communities and residents near these areas, and to the people engaged in outdoor recreation. (Section 10.3)</p>	<p>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:</p> <ul style="list-style-type: none"> • 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) <p>These components are described in greater detail in Appendix H. 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</p>	<p>Less than significant</p>

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
<i>CLASS II IMPACTS: SIGNIFICANT, BUT MITIGABLE</i>		
	<p>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.</p> <p>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 Section 2.2.2.2.</p>	

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS III IMPACTS: ADVERSE, BUT NOT SIGNIFICANT		
<i>Water Quality</i>		
LADWP will remove channel sediments in the river immediately downstream of the River Intake prior to the release of water. The physical disturbance to these sediments may cause short-term water quality impacts when the initial releases are made because there will be loose sediments and vegetative debris. However, this impact is expected to be short-term and localized. (Section 4.4.3.2)	No mitigation required.	Less than significant
On rare occasions, LADWP may remove stands of cattail and bulrush that obstruct flows in the river. Mechanical removal could cause localized water quality impacts by increasing turbidity and suspended sediments at and downstream of the work areas. In addition, it is likely that the excavated sediments associated with the root mass could increase biological oxygen demand, reduce dissolved oxygen concentrations, and increase concentrations of undesirable constituents such as ammonia and sulfur compounds. The water quality impacts are expected to be temporary and localized and are expected to improve within hours. (Section 4.4.3.2)	No mitigation required.	Less than significant
Construction of the pump station facilities and maintenance desilting of the forebay would cause downstream sedimentation. The impact is expected to be minor in magnitude, localized, and temporary. (Section 5.1.2)	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.	Less than significant

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS III IMPACTS: ADVERSE, BUT NOT SIGNIFICANT		
There is potential for accidental spills of fuel, lubricating oils, paints, and concrete during construction of the pump station. Depending upon the size and location of the spill, and the time of year, contaminants could be discharged to the river and adversely affect water quality. (Section 5.1.2)	See P-2 above	Less than significant
<i>Wildlife, Including Special Status Species</i>		
Active cattail and bulrush removal would only be considered in rare instances, and probably only be considered where there are significant constrictions along the river or at culverts. Extensive removal or active management of tule stands to retard the expansion of tule growth or to increase open water habitat (i.e., for habitat purposes) would not be considered unless it is determined that the benefits outweigh the environmental effects of such measures and only if funding for such work is obtained from sources other than LADWP or the County. If supplemental funding is not available, it is possible that no action would be taken to respond to, or prevent, this effect. As such, there is a potential for the amount of cattail and bulrush marsh to proliferate at the expense of open water habitat. (Section 4.7.2)	No mitigation required.	Less than significant
Mechanical removal of cattail and bulrush stands would require access routes to the wetted channel for equipment, staging areas for truck and equipment maneuvering, and a temporary dewatering site. Establishment of these temporary work areas could disturb wetland and riparian vegetation. (Section 4.7.2)	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.	Less than significant
The pump station site contains a wide variety of upland, wetland, aquatic, and riparian habitats that provide high quality forage and shelter for wildlife. Conversion of this site to a large forebay with 17 acres of mostly open water would benefit waterfowl, but to the detriment of riparian-dependent bird species. The overall habitat wildlife diversity and productivity of the site are expected to decrease as a consequence. This impact would be partially offset by the anticipated overall increase in riparian woodland habitat due to the rewatering of the river, and the associated increase in wildlife productivity and diversity along the river. (Section 5.2.1)	No mitigation required.	Less than significant

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS III IMPACTS: ADVERSE, BUT NOT SIGNIFICANT		
<p>The new power line will employ vertical construction with conductors spaced at least 4 feet apart (vertical distance), which minimizes the risk of raptors or other large birds becoming electrocuted by touching both conductors simultaneously. The distance between the existing and new power lines (12 feet or more) will also be sufficient to prevent electrocution. In addition, the vertical construction does not include a crossbar, which minimizes the potential for large birds to perch on the pole. Since the new power line will parallel existing infrastructure, including the existing power line and Highway 395, it minimizes any fragmentation of open landscapes, which helps to minimize bird collisions. Therefore, the risk of bird collision with and/or electrocution from the new power line is expected to be low.</p>	<p>No mitigation required.</p>	<p>Less than significant</p>
<p>The potential for increase in predation on plovers and other shorebirds from the increase in power poles is expected to be low due to the use of vertical construction, which minimizes the area available for ravens and raptors to perch or nest. (Section 5.2.2)</p>	<p>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).</p>	<p>Less than significant</p>
<p>With implementation of LORP, there is potential for the New Zealand mud snail to spread to the project area due to increased recreational uses and the hydrologic connection to the Owens River upstream of the River Intake, where the snails currently exist. Implementation of LORP may allow for colonization of New Zealand mud snails, but would not be the only cause of the colonization. Hence, the potential introduction of the New Zealand mud snail into the Lower Owens River is considered an adverse, but not significant impact.</p>	<p>V-4. Conduct Training Program for LADWP Personnel and Lessees. (See above under mitigation measure for impacts associated with noxious weed infestations.)</p> <p>V-5. Coordinate with CDFG to Implement Public Outreach Program for Preventing the Spread of New Zealand Mud Snails. 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.</p>	<p>Less than significant</p>

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS III IMPACTS: ADVERSE, BUT NOT SIGNIFICANT		
	<p>V-6. Implement Measures to Prevent Spread of New Zealand Mud Snails during Project Construction and Maintenance. During project construction and maintenance, LADWP and the County will completely dry construction equipment between use in water infested with New Zealand mud snails and non-infested water. If this is not feasible, the equipment will be steam cleaned before being used in non-infested water.</p>	
<i>Wetlands, Riparian Habitats, and Upland Habitats</i>		
<p>Over time, the rewatering of the river is predicted to convert about 2,343 acres of alkali scrub/meadow (an upland vegetation) and 531 acres of alkali meadow (upland phase) to various wetland and riparian vegetation types due to inundation effects and altered hydrologic conditions along the river. (Section 4.5.2)</p>	<p>No mitigation required.</p>	<p>Less than significant</p>
<p>Prior to the initial releases, LADWP will mechanically remove sediments and marsh vegetation from 10,800 feet of the currently dry river channel downstream of the River Intake. This action would result in the removal of 3.7 acres of emergent freshwater marsh currently dominated by cattails. This impact is considered adverse but not significant because new emergent wetlands will be created over time along the entire lower Owens River due to in response to the rewatering, including along the margins of the wetted channel along this reach. (Section 4.5.2)</p>	<p>No mitigation required.</p>	<p>Less than significant</p>
<p>Construction activities in the river channel for the pump station diversion would temporarily disturb about 2.0 acres of vegetated wetlands (freshwater marsh, riparian forest, and alkali meadow). Most of these areas would recover through natural processes, only a small area would be affected relative to the extent of wetlands at the site, and there would be an overall gain in wetland and riparian habitats along the river associated with the LORP, including an expected increase in the extent and productivity of emergent wetlands along the river upstream of the pump station. (Section 5.1.2)</p>	<p>No mitigation required.</p>	<p>Less than significant</p>

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS III IMPACTS: ADVERSE, BUT NOT SIGNIFICANT		
Construction of the pump station facilities (i.e., paved yard, pump station sump and building, service roads, and sediment stockpile areas) would result in the permanent loss of 4.46 acres of greasewood scrub. Mitigation is not considered necessary due to the small area involved and compensation by the gain of acres of marsh/wet alkali meadow and alkali meadow and other habitats. (Section 5.1.2)	No mitigation required.	Less than significant
Creation and maintenance of the sediment basin at the pump station would result in the permanent conversion of 0.37 acres of freshwater marsh and 1.01 acres of riparian woodland to the open water of the forebay. The acreages involved are minimal and would be offset by the overall gain in similar wetland and riparian vegetation types that is anticipated to occur along the river due to the LORP. (Section 5.1.2)	No mitigation required.	Less than significant
Construction of the western and eastern service roads to the sediment basin would result in the permanent loss of 1.85 acres of alkali meadow and 0.05 acre of riparian woodland. The acreages involved are minimal and would be offset by the overall gain in similar wetland and riparian vegetation types that is anticipated to occur along the river due to the LORP. (Section 5.1.2)	No mitigation required.	Less than significant
The diversion structure would permanently displace about 0.15 acres of upland vegetation and about 0.30 acre of riparian woodland in the river channel. (Section 5.1.2)	No mitigation required.	Less than significant
The establishment of the forebay at the pump station would result in the permanent loss of about 4.1 acres of alkali meadow and 7.5 acres of freshwater marsh, as these vegetation types would be converted to open water. The acreages involved are minimal and would be offset by the overall gain in similar wetland and riparian vegetation types that is anticipated to occur along the river due to the LORP. (Section 5.1.2)	No mitigation required.	Less than significant
The creation of the forebay would result in the loss of 5.3 acres of Mojave riparian forest from the river channel due to the effects of permanent inundation. Riparian forest is limited along the Lower Owens River, and as such, is considered a sensitive habitat. (Section 5.1.2)	No mitigation required.	Less than significant

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS III IMPACTS: ADVERSE, BUT NOT SIGNIFICANT		
Construction of the power line would disturb upland desert scrub due to limited overland travel and installation of the poles. (Section 5.1.3)	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.)	Less than significant
Installation of the power line could result in inadvertent disturbance of a freshwater seep is present within 100 feet of the proposed route, about 2000 feet north of Highway 395 on the margins of Owens Lake. (Section 5.1.3)	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.	Less than significant
<p>Based on the results of the HEC-RAS model, if the proposed seasonal habitat flows overtop banks over time, there is a potential for a large fraction of the river flows to be diverted to the west and outside the Delta Habitat Area. It is likely that these habitats would be replaced through natural colonization and succession processes along the new overflow channel. However, there is a potential for a net overall reduction in the areal extent of aquatic and wetland habitats due to flows being conveyed west of the Delta through natural hydraulic processes.</p> <p>Upon implementation of the project, LADWP does not propose to physically increase the channel capacity by excavating the channel or raising the western banks along the river upstream of the Delta. However, with implementation of adaptive management measures (e.g., adjusting baseflows and/or pulse flows to the Delta [within the 6 to 9 cfs annual average] and/or physically increasing channel capacity), the potential diversion of flows from the center of the Delta is considered a less than significant impact. (Section 6.3.3)</p>	No mitigation required.	Less than significant

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
<i>CLASS III IMPACTS: ADVERSE, BUT NOT SIGNIFICANT</i>		
<p>Based on the analysis presented in Sections 6.3.1 (Impact Assessment No. 1 prepared by Ecosystem Sciences and White Horse Associates), 6.3.3, 6.3.4, and 6.3.5, LADWP, as CEQA lead agency, has determined that impacts to existing aquatic and wetland habitats of the Delta would range from beneficial to less than significant. LADWP concurs with the model of the Delta presented in Impact Assessment No. 1 which describes the Delta as a basin that fills to capacity then overflows and, consequently, that the water needs of existing vegetation (including and evapotranspiration and freshwater in the root zone) are met if there is an outflow from the Delta. Since the proposed baseflows will be established to ensure a minimal amount of outflow from the Delta throughout the first year (thereby exceeding the water demands of the Delta wetlands that exist at that time), Per LADWP's analysis, the proposed baseflows will be sufficient to at least maintain the vegetated wetlands that exist at the time of project initiation. The release of the four pulse flows and the bypass of seasonal habitat flows would provide higher flows (thereby spreading water over a larger area than under baseflow conditions) at key times of the year to enhance vegetated wetlands and aquatic habitats.</p>	<p>No mitigation required.</p>	<p>Less than significant</p>
<p>The repair of existing spillgates and the installation of new spillages in the Blackrock Waterfowl Habitat Area would temporarily disturb upland and wetland habitats in man-made ditches. This impact is considered adverse, but not significant because the impacts would be very small in area (less than 3,000 square feet at any single site), and temporary. Wetlands in the affected ditches would recover quickly after construction. (Section 7.1.3)</p>	<p>No mitigation required.</p>	<p>Less than significant</p>

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS III IMPACTS: ADVERSE, BUT NOT SIGNIFICANT		
<i>Air Quality</i>		
<p>Emissions from channel clearing near the River Intake prior to releases to the river, construction activities at the pump station site, sediment stockpiling, and construction activities in the Blackrock Waterfowl Habitat Area would contribute to degradation of air quality conditions in the valley, but are unlikely to cause air quality violations. The pollutant of concern is particulate matter (PM10). In addition, occasional controlled burns at Blackrock would contribute to degradation of air quality conditions in the valley, but are unlikely to cause air quality violations because they would be implemented under a permit from the Great Basin Unified Air Pollution Control District, which only allows burns to occur when meteorological conditions will ensure sufficient dispersion to avoid violations. (Sections 4.9, 5.3.2, and 7.4.2)</p>	<p>AQ-1. To minimize dust/ PM₁₀ emissions during construction activity, as necessary, one or more of the following measures shall be implemented:</p> <ul style="list-style-type: none"> • 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. <p>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.</p>	<p>Less than significant</p>
<p>The initial rewatering of the river will cause short-term adverse water quality impact that could result in objectionable odors from off-gassing of the organic sediments. People that are located adjacent to the river during the initial releases could be exposed to these gases, which could be unpleasant. Individuals that are on the river banks could be exposed to high concentrations that could cause respiratory distress. The magnitude of this impact is expected to be very low because few people reside adjacent to the river, or will be present along the river during the initial rewatering. The potential exposure to objectionable gasses and odors during the initial rewatering is considered an adverse but not significant impact. (Section 4.9)</p>	<p>No mitigation required. <i>Note: If LADWP and the County become aware that hydrogen sulfide and/or methane is arising from the river, efforts to warn people who may visit the river of the situation (i.e., the posting of warning signs and/or notification of media) will be undertaken by LADWP and the County.</i></p>	<p>Less than significant</p>

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS III IMPACTS: ADVERSE, BUT NOT SIGNIFICANT		
<i>Cultural Resources</i>		
<p>The proposed modifications to the River Intake do not involve any demolition and are all reversible. JRP (2001) also assessed whether the proposed modifications could be defined as a “substantial adverse change” as defined under the CEQA Guidelines. “Substantial adverse change” includes demolition, destruction, relocation, and alteration of a historic structure such that its significance would be impaired. JRP (2001) concluded that the proposed modifications would not significantly alter the significance or integrity of the structure, and as such, would not cause a significant impact under CEQA. Therefore, project impacts on the River Intake are considered a less than significant impact. (Section 4.8.4)</p>	<p>No mitigation required.</p>	<p>Less than significant</p>
<p>Several structural obstacles to flow will be removed from the river channel prior to the commencement of releases for the Phase 1 baseflows. Of the 16 structures that were evaluated by JRP (2004), up to 11 may be removed or modified prior to initial flow releases. None of the 16 resources is considered significant, or eligible for inclusion on the National Register of Historic Places. Therefore, removal and modification of these structures would represent a less than significant impact. (Section 4.8.4)</p>	<p>No mitigation required.</p>	<p>Less than significant</p>
<p>Installation of the power line could cause inadvertent disturbance to an isolated find, four prehistoric sites, and four historic sites. It appears that all sites would be avoided. Incidental or accidental disturbance would not be significant impact because none of the resources are considered significant, nor eligible for inclusion on the National Register of Historic Places. (Section 5.4.2)</p>	<p>CRP-2. LADWP shall implement the following management actions during installation of the power line:</p> <ul style="list-style-type: none"> • 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. 	<p>Less than significant</p>
<p>Five historic architectural features occur in the Blackrock Waterfowl Habitat Area. There is a potential for disturbance to one or more of these features during the replacement of existing spillgates. This impact would not be significant because none of the resources are considered significant, nor eligible for inclusion on the National Register of Historic Places. (Section 7.3.2)</p>	<p>No mitigation required.</p>	<p>Less than significant</p>

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS III IMPACTS: ADVERSE, BUT NOT SIGNIFICANT		
<i>Rangelands</i>		
<p>LADWP expects that the grazing management actions proposed under LORP, combined with the increase in forage in riparian areas from rewatering the river, will result in no change or a net reduction in livestock drift onto public lands. However, the potential for localized increase in livestock drift under LORP cannot be eliminated (e.g., from establishment of stockwater areas closer to public lands). Therefore, this impact is considered adverse, but not significant. (Section 9.3.2)</p>	<p>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.</p>	<p>Less than significant</p>
<i>Recreation</i>		
<p>Future increased recreational activities in the LORP project area could have adverse impacts on biological resources, grazing operations, cultural resources, existing recreational uses, and roadways. LORP includes monitoring for recreation impacts and implementation of management strategies to address these impacts. (Section 10.1.2)</p>	<p>RC-1. When LADWP and Inyo County personnel observe and/or receive complaints or concerns about negative impacts related to recreational activity, LADWP or Inyo County shall review the issue and investigate as necessary. For verified impacts or concerns for potential impacts related to recreation in the LORP area, LADWP and/or Inyo County shall implement recreation management strategies, as relevant (see Section 2.9).</p> <p>RC-2. LADWP shall conduct a training program for LADWP and Inyo County personnel working within the LORP area on identification and reporting of cultural resources or potential threats to cultural resources at LAWDP or Inyo County facilities in the Owens Valley. Personnel will be instructed on how to identify and report cultural resources encountered in the field, and will also receive an overview of the procedures that must be implemented should impacts or threats to cultural resources be documented. The training will be accomplished through either a multi-media (e.g., video) presentation or a seminar conducted by a professional archaeologist in consultation with local Tribes (as listed in Section 4.8.2) and other methods as deemed appropriate. As new personnel are hired or when training is updated, a refresher course will be provided. Visual aids such as photographs or sample artifacts, if available, will be used to familiarize LADWP and Inyo County personnel with cultural resources that may be present in the project area.</p>	<p>Less than significant</p>

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS III IMPACTS: ADVERSE, BUT NOT SIGNIFICANT		
<i>Public Health and Safety</i>		
Concerns have been raised regarding safety issues associated with a sudden increase in river flows under LORP (i.e., seasonal habitat flows). However, the seasonal habitat flows will be ramped up and down typically over 8 to 14 days and will not be a sudden release of water. Furthermore, the gradient of the river is small, and the river has a meandering channel. Therefore, flow velocity of the baseflows and seasonal habitat flows will not create hazardous conditions for recreational users along the river.	No mitigation required.	Less than significant

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS IV IMPACTS: BENEFICIAL IMPACTS		
<i>Water Quality</i>		
Under the proposed program for off-river lakes and ponds, the amount of water provided to Coyote/Grass Lakes Complex and Goose Lake may be greater than under existing conditions due to the need to create flows in the channels downstream of Goose Lake that will connect to the river. There will be an inflow and outflow from these lakes sufficient to sustain the artificial corridor below the lake, but the lake elevations will remain unchanged from current conditions. The greater inflows and outflows at these lakes may improve water quality and increased turnover rates in the lakes. (Section 8.4)	Not applicable	Not applicable
<i>Wetlands and Riparian Habitats</i>		
The rewatering of the river will increase the amount of wetlands along the river by about 3,000 acres. Wetlands to be created include riparian forest, alkali meadow, and marsh/alkali wet meadow. (Section 4.5.2)	Not applicable	Not applicable
<i>Native and Game Fish</i>		
The re-watering will have an overall beneficial impact on the warmwater fishery by increasing its productivity (more area) and providing more diverse habitat to support less common species such as the brown trout and smallmouth bass. (Section 4.6.2)	Not applicable	Not applicable
The establishment of permanently watered fish corridors between Goose Lake and the river as part of the riverine-riparian enhancement program could increase fish production in the lakes by allowing recruitment of fish from the river, as well as providing opportunities for lake and pond fish to feed and reproduce in the ditches between the lakes and the Aqueduct, and between the lakes and the river. (Section 7.1.3)	Not applicable	Not applicable

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS IV IMPACTS: BENEFICIAL IMPACTS		
<i>Wildlife, Including Special Status Species</i>		
The creation of new and enhanced wetlands and aquatic habitats at the Blackrock Waterfowl Habitat Area and the increased flows at the Delta Habitat Area would increase the opportunities for resident, migratory, and overwintering birds (primarily shorebirds and waterfowl). The long-term establishment of a significant acreage of new open water habitats and associated marsh habitats will be beneficial for many migratory birds along the Pacific Flyway. The development of a wooded riparian corridor along the Lower Owens River by re-watering will provide more opportunities for a variety of resident and migratory riparian breeding birds. (Section 7.2.2)	Not applicable	Not applicable
The addition of flows to the Lower Owens River is expected to increase extent, quality, and diversity of habitat for wildlife, particularly for birds. (Section 4.7.2)	Not applicable	Not applicable.
<i>Rangelands</i>		
The establishment of pastures with seasonal restrictions and exclosures proposed under LORP will result in a reduction of acreage available for grazing over existing conditions. Initially, this reduction in available acreage will temporarily reduce the amount of forage available for livestock grazing. However, once the river is rewatered under LORP, available forage will increase and improve in condition. In addition, the establishment of utilization rates, modification in timing and duration of grazing, and changes in livestock distribution will also improve rangeland conditions by improving plant vigor and seedling recruitment of forage species. Plant and soil conditions on the leases would improve due to these actions, resulting in a beneficial impact to rangelands. (Section 9.2.1)	Not applicable	Not applicable

TABLE S-1 (continued)

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS IV IMPACTS: BENEFICIAL IMPACTS		
<i>Biological Resources (in general)</i>		
<p>In general, implementation of the proposed grazing management actions (i.e., creation of riparian pastures; modification of utilization rates in both riparian and upland pastures; and creation of rare plant, wetland, and waterfowl exclosures) would reduce current grazing impacts to existing biological resources. Beneficial impacts include increased plant production and cover in riparian areas, which would provide more food for small mammals and birds, and cover for ground- and understory-nesting birds. Cattle will graze riparian areas for a shorter period of time, resulting in less frequent disturbance to ground- and understory-nesting birds. The application of appropriate grazing strategies in the LORP project area would complement the habitat enhancements anticipated along the river and in the Blackrock and Delta areas where a greater diversity and abundance of aquatic and terrestrial species are anticipated. (Section 9.2.2)</p>	Not applicable	Not applicable
<i>Rare Plants</i>		
<p>The proposed grazing strategies are expected to improve the reproductive success and long-term survival of rare plant populations. Therefore, impacts to these populations from future grazing strategies are considered beneficial. (Section 9.2.2)</p>	Not applicable	Not applicable
<i>Recreation</i>		
<p>The LORP would improve outdoor recreational opportunities in the Owens Valley, particularly for anglers (by improving warmwater fishery) and for hikers and birdwatchers (by habitat improvements along the river, at Blackrock and at the Delta). (Section 10.1.2)</p>	Not applicable	Not applicable