

# EXECUTIVE SUMMARY

## ES-1 INTRODUCTION

The Revised Moat and Row Project (proposed project) is a dust control measure (DCM) proposed by the City of Los Angeles Department of Water and Power (LADWP) to be implemented on the dry Owens Lake bed. The environmental analysis in this draft supplemental environmental impact report (draft SEIR) is based on an evaluation of how environmental conditions would be expected to change as a result of implementing the proposed project. Public comments on the draft SEIR will provide important input for LADWP's decision on the project. This chapter summarizes the information contained in the draft SEIR, including the project description, environmental impacts, mitigation measures, and alternatives.

## ES-2 THE EIR PROCESS

LADWP, as lead agency or public agency that has the primary authority to approve the project, must certify that the SEIR is adequate according to the California Environmental Quality Act (CEQA). LADWP must consider the SEIR's environmental information when taking action on the project. Other public agencies with approval authority over the project, or elements of it, are considered responsible agencies; these agencies would consider the environmental effects of the project based on this draft SEIR.

The draft SEIR has been released for public review to receive comments from interested parties on its completeness and adequacy in disclosing the environmental effects of the proposed project. Written responses to substantial environmental points raised in comments will be prepared and published. Together, the draft SEIR, comments received on the draft SEIR, and the responses to comments will constitute the final SEIR.

## ES-3 SUMMARY OF THE PROJECT DESCRIPTION

### PROJECT LOCATION

The proposed project encompasses approximately 3.5 square miles of the 110-square-mile dry Owens Lake bed (which is part of the larger Owens Lake Planning Area) located in Owens Valley. Owens Lake is located approximately 5 miles south of the community of Lone Pine and approximately 61 miles south of the city of Bishop. In addition, Owens Lake is located approximately 11 miles east of the easternmost boundary of Sequoia National Park and approximately 19 miles west of the westernmost boundary of Death Valley National Park. It is bounded by State Route 136 to the north, State Route 190 to the south, and U.S. Highway 395 to the west. Part of the project is adjacent to the California Department of Fish and Game's (DFG's) Cartago Springs wildlife area. Refer to Chapter 2, "Project Description," for project vicinity and location exhibits.

### OBJECTIVES OF THE PROJECT

The primary goal of the project is to prevent emissions from the lake bed that cause or contribute to violations of the PM<sub>10</sub> NAAQS by the implementation of moat and row DCMs on the bed of Owens Lake by 2010. The dry Owens Lake bed is primarily owned and operated in trust for the people of California by CSLC. Therefore, the project must also be consistent with the State of California's obligation of land and resource stewardship. The objectives of the project are to:

- ▶ implement moat and row DCMs by April 1, 2010, pursuant to the 2008 SIP to achieve the NAAQS;
- ▶ provide clean, reliable water in a safe, environmentally responsible and cost-effective manner with excellent customer service;

- ▶ allow for the sparing use of water that would otherwise be delivered for municipal and industrial use and substantially reduce or eliminate the use of water in implementing new dust control projects on the Owens Lake bed;
- ▶ minimize or compensate for long-term, significant adverse changes to sensitive resources in the natural and human environment by implementing mitigation strategies proposed in this SEIR;
- ▶ create a dust control program with a high likelihood of success and without substantial delay;
- ▶ substantially conform to adopted plans and policies and existing legal requirements. These requirements include the National Ambient Air Quality Standards, the 1998, 2003 and 2008 SIPs and their associated EIRs, lease agreements and environmental and administrative permits with other agencies including California State Lands Commission, Lahontan Regional Water Quality Control Board, California Department of Fish and Game, United States Environmental Protection Agency and Great Basin Unified Air Pollution Control District;
- ▶ minimize the long-term consumption of natural resources (e.g., water); and,
- ▶ be consistent with the State of California's obligation to preserve and enhance the public trust values associated with Owens Lake.

## ELEMENTS OF THE PROJECT

Before its proposed revision, the project was evaluated and adopted as part of the *2008 Owens Valley PM<sub>10</sub> Planning Area Demonstration of Attainment State Implementation Plan Final Subsequent Environmental Impact Report* (2008 FSEIR) (adopted by the Great Basin Unified Air Pollution Control District [GBUAPCD] in February 2008). The 2008 FSEIR evaluated the implementation of 15.1 square miles of DCMs in the Owens Lake Planning Area. DCMs evaluated and approved included shallow flooding, moat and row elements, and application of gravel as riprap (a loose assemblage of broken stones) on berms in shallow flooding ponds or as a cap on rows in moat and row elements. Approximately 3.5 square miles of moat and row DCMs were evaluated and approved in that project. Since the 2008 FSEIR was published, changes to the design and operation and maintenance plan for the moat and row DCMs have been proposed.

Implementing the proposed project would result in changes to the design of the moat and row elements, and a more robust operations and maintenance plan is proposed. These changes were not known when the 2008 FSEIR was prepared; therefore, an analysis of their environmental effects is required under CEQA. However, these changes affect only the moat and row dust control areas, not the larger dust control program evaluated in the 2008 FSEIR. In cases where only minor additions or changes to a previous EIR are required to make the previous EIR apply to the changed project, CEQA Section 15163 allows the preparation of a supplement to a previous certified EIR if any of the conditions that require the preparation of an SEIR are present. Further, CEQA states that the S EIR need contain only the information necessary to make the previous EIR adequate.

The proposed project involves a change to only one element of the larger dust control program evaluated in the 2008 FSEIR. Most of the issues related to land use (e.g., geology, hydrology, land use, hazards, public services and utilities, recreation, mineral resources, agricultural resources, noise, and land use itself) were sufficiently evaluated in the 2008 FSEIR, and implementing the proposed project would not result in any new significant impacts in these areas. For this reason, LADWP has determined that an SEIR that focuses on the issues of construction-related air quality, visual resources, and biological resources would comply with CEQA requirements. Consistent with Sections 15162 and 15163 of the State CEQA Guidelines, this SEIR evaluates the impacts that would result from implementing the changed project that were not identified in the 2008 FSEIR or that would be more severe significant impacts under the proposed project.

LADWP proposes to reduce dust emissions on the dry Owens Lake bed, particularly achieving adopted control efficiencies for PM<sub>10</sub>, through the construction of landform features called moats and rows. Moat and row DCMs would be constructed on 3.5 square miles of the Owens Lake bed. See Chapter 2, “Project Description,” for additional project details.

## **SUMMARY OF ALTERNATIVES TO THE PROJECT**

Three alternatives were evaluated as part of the 2008 FSEIR .

- ▶ Shallow Flooding Alternative
- ▶ All Managed Vegetation Alternative
- ▶ Gravel Application Alternative

This draft SEIR also evaluated two alternatives to the proposed project:

- ▶ No-Project Alternative – continuation of 2008 SIP and
- ▶ Off-Site Alternative.

### **SHALLOW FLOODING ALTERNATIVE**

The Shallow Flooding Alternative involves implementing the shallow flooding DCM over 15.1 square miles of the Owens Lake bed, including the 3.5 square miles of moat and row dust control areas (DCAs). No other DCMs would be implemented on Owens Lake. Shallow flooding generally consists of wetting emissive lake bed surfaces sufficiently to control dust emissions between October 1 and June 30 of each year. Approximately 75% of the DCAs would be wetted to achieve 99% dust control efficiency. Water would be released on the lake bed and would spread across the surface. Approximately 3–4 acre-feet of water would be used annually per acre of shallow flooding DCAs. In areas where moat and row DCMs are proposed (3.5 square miles of lake bed), this alternative would require installation of additional shallow flooding infrastructure (e.g., mainline, submain, lateral, and raiser pipes; perimeter berms; tailwater recycling facilities). Construction activities would result in disturbances to the lake bed throughout the 3.5-square-mile DCA; therefore, construction-related air quality impacts would be similar.

Although construction activities would result in comparable environmental impacts (e.g., air quality), implementing the Shallow Flooding Alternative would provide greater habitat for biological species of concern, thereby resulting in a net biological benefit. Implementing this alternative would change the visual landscape from a dried lake bed to a wet lake bed, which is representative of historical conditions. Therefore, although views would be changed, they would be changed to reflect historic natural conditions and would be considered to be less adverse than under the proposed project. The 2008 FSEIR concluded that the Shallow Flooding Alternative would meet most of the 2008 FSEIR project objectives; however, because this alternative would entail the use of shallow flooding, the objective to minimize the long-term use of natural resources (e.g., water) and the objective to implement a DCM that minimizes the use of water to the maximum extent practical would not be met. Overall, this alternative would result in reduced environmental impacts compared to the proposed project but would not meet important project objectives related to conservation of natural resources. Further, with regard to objectives established for this SEIR, this alternative would not meet the objectives to allow for the sparing use of water for non-municipal and industrial uses or to eliminate the use of water for new dust control measures on Owens Lake. *[Lesser]*

### **ALL MANAGED VEGETATION ALTERNATIVE**

The All Managed Vegetation Alternative involves implementing the managed vegetation DCM over 15.1 square miles of the Owens Lake bed, including the 3.5 square miles proposed for moat and row DCAs. No other DCMs would be implemented on Owens Lake. Under this alternative, vegetation would be planted in approximately 40-

acre blocks and would be irrigated by a system of turnouts and pipelines. Implementing this alternative would require installation of infrastructure (e.g., mainline, submain, lateral, and riser pipes; irrigation lines; fertilizer injection; water treatment systems) in the 3.5-square-mile moat and row DCA. Construction activities would result in disturbances to the lake bed throughout the 3.5-square-mile DCA; therefore, construction-related air quality impacts would be similar. However, implementing this alternative would result in the complete transformation of the moat and row DCA from a sandy lake bed surface to planted vegetation. These changes would affect the habitat of a biological species of concern (i.e., snowy plover) to a greater degree. Further, implementing the moat and row DCM would result in changes within a maximum 33% of the DCA, whereas the All Managed Vegetation Alternative would cover a greater percentage of the DCA; therefore, habitat impacts would be greater under this alternative. With regard to visual impacts, this alternative, like the proposed project, involves installation of human-made features (i.e., rows of vegetation) and would change views of the lake bed. The magnitude of the changes would be comparable to the changes that would occur under the proposed project but would present a different visual landscape (i.e., vegetation vs. moats and rows).

The 2008 FSEIR concluded that the All Managed Vegetation Alternative would meet most of the 2008 FSEIR project objectives; however, because of the time needed for vegetation to reach the level of growth required for dust control, the likelihood for success would be difficult to achieve by April 2010, as prescribed in the 2008 SIP. Further, implementing this alternative would result in greater biological habitat impacts compared with the proposed project. Finally, with regard to the objectives established for this SEIR, this alternative would not meet the objective to eliminate the use of water for new dust control measures on Owens Lake. Overall, impacts would be greater under this alternative. *[Greater]*

## **GRAVEL APPLICATION ALTERNATIVE**

The Gravel Application Alternative involves applying gravel to cover 15.1 square miles of the Owens Lake bed, including the 3.5 square miles proposed for the moat and row DCMs. After the gravel cover is applied, limited maintenance would be required to preserve the gravel blanket. The gravel would be visually monitored to ensure that the gravel blanket was not filled with sand or dust or has not been inundated or washed out by flooding. If any of these conditions were observed, additional gravel would be transported to the project site and applied to the surface. Operation of this alternative would require an average ongoing gravel application amounting to 7,000 cubic yards per square. Construction activities would result in disturbances to the lake bed throughout the 3.5-square-mile DCA; however, implementing this alternative would require the substantial importation of rock material from off-site areas, which would require a substantial number of truck trips to deliver this material. These truck trips would generate substantially greater diesel emissions compared to the construction activities associated with the proposed project; therefore, construction-related air quality impacts would be greater under this alternative. Additionally, implementing this alternative would result in the complete transformation of the moat and row DCA from a sandy lake bed surface to an imported gravel surface. These changes would affect the habitat of a biological species of concern (i.e., snowy plover) to a similar degree as the proposed moat and row DCA. Regarding visual impacts, this alternative, like the proposed project, involves installation of human-made features (i.e., a layer of gravel) and would change views of the lake bed. The magnitude of the changes would be comparable to the changes that would occur under the proposed project but would present a different visual landscape (i.e., rocky substrate vs. moats and rows).

The 2008 FSEIR concluded that the Gravel Application Alternative would not meet most of the project 2008 FSEIR objectives. Although this alternative would conform to adopted plans and policies, it could be incompatible with the State of California's public trust values because it would cover the lake bed with nonnative (to the lake) materials. This alternative would not minimize the proposed project's impacts on sensitive biological resources, it would result in comparable impacts with environmental tradeoffs. Overall, impacts would be similar under this alternative. *[Similar]*

## **NO-PROJECT ALTERNATIVE – CONTINUATION OF EXISTING CONDITIONS**

Under the No-Project Alternative, moat and row DCMs would be constructed, operated, and maintained on the historic Owens Lake in accordance with the 2008 SIP. Although moat and row DCMs were approved, as outlined in the 2008 FSEIR, the moat and row DCM likely would not be implemented because LADWP probably would not be able to secure and acquire necessary environmental permits from regulatory agencies (e.g., DFG and CSLC). DFG and CLSC raised concerns over specific features of the moat and row DCMs related to potential impacts on wildlife and other issues. . These concerns resulted in revisions to the design of the DCMs, as discussed and analyzed in this draft SEIR. Without the changes proposed for the moat and row DCMs, the regulatory agencies would not issue their permits for the moat and row DCMs; therefore, this element of the 2008 SIP would not be implemented. Without implementation of the moat and row DCM, LADWP would not be able to meet the important dust control objectives outlined in the 2008 SIP. Therefore, implementation of the No-Project Alternative would result in a conflict with implementation of an adopted air quality plan.

## **OFF-SITE ALTERNATIVE**

Off-site alternatives generally are considered in EIRs when one of the means to avoid or eliminate the significant impacts of a proposed project is to develop the project in a different, available location. They also are considered to provide a greater range of possible alternatives to consider in the decision-making process. The key question is whether an off-site alternative is available that would feasibly attain most of the basic objectives of the proposed project and that would avoid or substantially lessen any of the environmental effects of the project (State CEQA Guidelines Section 15126.6[a]). The basic objective of the proposed project is to implement a revised design of moat and row DCMs on the historic Owens Lake bed. The moat and row DCM was originally approved as part of the 2008 FSEIR project (approved by GBUAPCD in February 2008).

The proposed project would need to be located in the historic Owens Lake bed because the main objective of the DCM is to reduce PM<sub>10</sub> emissions created on the dry lake bed. Goals and objectives of the proposed project would not be applicable to any sites other than the historic Owens Lake bed. In addition, the specific locations of dust control areas to construct DCMs were determined and identified as part of the 1998 SIP, 2003 Revised SIP, and 2008 SIP. Given this consideration, there are no alternative sites that can feasibly meet the project objectives. For this reason, an off-site alternative is not evaluated further in this SEIR.

## **ENVIRONMENTALLY SUPERIOR ALTERNATIVE**

In addition to the discussion and comparison of impacts of the alternatives to the proposed project, CEQA Section 15126.6 requires that the “environmentally superior” alternative among the alternatives considered be selected and the reasons for such selection disclosed. In general, the environmentally superior alternative is the alternative that would generate the fewest or least severe adverse impacts. The No-Project Alternative was considered in this analysis, but it would not achieve any goals or objectives of the proposed project and would not achieve dust control efficiencies needed to protect public health in and around Owens Lake. Although other alternatives were evaluated as part of the 2008 FSEIR, two alternatives (i.e., All Shallow Flooding, All Managed Vegetation) were determined to not be feasible because of long-term use of natural resources (e.g., water). The third alternative (i.e., Gravel Application) was determined to result in comparable impacts as the project. No other alternatives are available that could feasibly and have been proven to reduce dust emissions at Owens Lake.

CEQA requires the lead agency to identify an alternative that is feasible and superior to the proposed project; however, in this case, the proposed project is the environmentally superior alternative. The All Shallow Flooding Alternative would have been identified as the environmentally superior alternative, but it had already been considered and rejected in the 2008 FSEIR. No other environmentally superior alternatives are available that would attain most of the proposed project’s basic objectives. The primary purpose of the proposed project was to improve on a previously approved project because of environmental concerns raised by DFG and CSLC and

implement DCMs that require little or no water. As a result, the proposed project is the environmentally superior alternative.

## **ES-4 SUMMARY OF ENVIRONMENTAL IMPACTS AND RECOMMENDED MITIGATION MEASURES**

Table ES-1, presented at the end of this chapter, summarizes the project-specific environmental impacts of the project, the level of significance of the impact before mitigation, recommended mitigation measures, and the level of significance of the impact after implementation of the mitigation measures.

Implementing the proposed project would result in a project-level significant and unavoidable adverse impact and a considerable contribution to a significant cumulative impact in one area: air quality.

## **ES-5 AREAS OF CONTROVERSY**

Section 15123 of the State CEQA Guidelines requires the summary section of an EIR to identify “areas of controversy known to the lead agency.” The following issues, in no order of importance, are controversial issues known to LADWP:

- ▶ impacts on snowy plover and its habitat,
- ▶ impacts on wildlife movement,
- ▶ delay in implementation of the 2008 SIP, and
- ▶ visual impacts of the proposed project (e.g., density, character).

**Table ES-1  
Summary of Environmental Impacts and Mitigation Measures**

Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>3.1 Biological Resources</b>			
<p><b>3.1-1: Effects on Western Snowy Plover.</b> Implementation of the proposed project would result in the loss of up to 1,503.8 acres of suitable habitat for western snowy plover within moat and row cells. Under mitigation measure Biology-14 (Long-term Habitat Management Plan) of the 2008 FSEIR, LADWP has committed to managing 1,000 acres of shorebird and snowy plover habitat, and maintaining an additional 523 or more acres of habitat specifically for snowy plover, in perpetuity. These long-term habitat benefits for snowy plover would compensate for habitat impacts within moat and row cells. The loss of suitable snowy plover habitat within moat and row cells would be less than significant. Additionally, implementation of previously-approved Phase 7 shallow flood DCAs would result in the creation of 3,177 acres of additional snowy plover habitat.</p> <p>Other potential direct and indirect impacts of the project include potential loss of snowy plover individuals as a result of construction and operations and maintenance activities; isolation and loss of plover broods within fence grids; entrapment within moats; and increased predation by corvid species as a result of fence construction and additional corvid perch opportunities near plover nesting habitat. These potential impacts to individuals and brood movements would result in potentially significant adverse effects on western snowy plover.</p>	<p>LTS, PS</p>	<p><b><i>Mitigation Approach and Incorporation of Measures from the 2008 FSEIR</i></b></p> <p>The 2008 FSEIR includes 14 mitigation measures intended to reduce or compensate for project impacts to biological resources; 11 of these address potential impacts to western snowy plover. Measures from the FSEIR are provided in their entirety in Appendix C. Consistent with the requirements of CEQA, LADWP is required to implement these measures as a condition of approval of the 2008 SIP. The GBUAPCD has approved a Mitigation Monitoring and Reporting Program that will monitor and document the implementation of these mitigation measures. Because many of the previously adopted mitigation measures would apply to the project, they are hereby incorporated by reference into this Draft SEIR and are presented below in their entirety except where changes are necessary to address the specific elements of the project considered herein.</p> <p>The following nine measures from the 2008 FSEIR, which address potential effects on western snowy plover, have been incorporated by reference with no revisions.</p> <p><b>Mitigation Measure 3.1-1 (Biology-1 in 2008 FSEIR): Lake Bed Worker Education Program</b></p> <p><b>Mitigation Measure 3.1-2 (Biology-2 in 2008 FSEIR): Preconstruction Surveys for Western Snowy Plover</b></p> <p><b>Mitigation Measure 3.1-3 (Biology-3 in 2008 FSEIR): Snowy Plover Nest Speed Limit</b></p> <p><b>Mitigation Measure 3.1-4 (Biology-4 in 2008 FSEIR): Lighting Best Management Practices</b></p> <p><b>Mitigation Measure 3.1-5 (Biology-7 in 2008 FSEIR): Toxicity Monitoring Program</b></p>	<p>LTS</p>

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**Table ES-1  
Summary of Environmental Impacts and Mitigation Measures**

Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
		<p><b>Mitigation Measure 3.1-6 (Biology-9 in 2008 FSEIR): Plover Identification Training</b></p> <p><b>Mitigation Measure 3.1-7 (Biology-10 in 2008 FSEIR): Long-Term Monitoring Program for Western Snowy Plover</b></p> <p><b>Mitigation Measure 3.1-8 (Biology-12 in 2008 FSEIR): Habitat Management Program for Nesting Snowy Plovers</b></p> <p><b>Mitigation Measure 3.1-9 (Biology-14 in 2008 FSEIR): Long-Term Habitat Management Plan</b></p> <p><i>Replacement Mitigation Measures</i></p> <p>In the 2008 FSEIR, the discussion of wildlife movements concluded that “sand fencing constructed on tops of moat and row elements would potentially obstruct the movement of wildlife through the area. Therefore, further analysis of potential impacts to terrestrial wildlife is warranted.” Measure Biology-13, which prescribes gaps in sand fencing or alternative passage features (e.g., culverts, etc.) within moat and row grids, was included to mitigate for this potential effect. Consistent with the 2008 FSEIR recommendation, further analysis of moat and row elements and effects on wildlife movements was conducted as part of this SEIR (see <i>Effects on Brood Movements and Habitat Connectivity</i> for snowy plover, above; and <i>Impact 3.1-2, Effects on Wildlife Movements, Corridors, and Access to Nursery Sites</i> for other species, below). Based on the results of this focused analysis, the type of mitigation specified in Measure Biology-13 from the FSEIR is not considered necessary to mitigate for significant effects on wildlife movement identified in this SEIR. However, fence gaps to facilitate movement are recommended to mitigate for potentially significant effects on snowy plover broods at site T1A-1 (sand fence only). Therefore, Measure Biology-13 is replaced here by Mitigation Measure 3.1-10 to mitigate specifically for potential effects on plover brood movements at site T1A-1.</p>	

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Summary of Environmental Impacts and Mitigation Measures**

Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
		<p>To minimize or avoid effects of proposed fencing on movements of snowy plover broods at Cell T1A-1, LADWP shall install and maintain additional fence gaps within the three fence blocks located in the northeast corner of the cell. Based on the movement behaviors of snowy plover, fence gaps designed to facilitate brood movements shall be regularly distributed over relatively short distances, and easily encountered by fast-moving plovers. Plover broods must be able to physically fit through fence gaps, and must be able to visually locate the gaps efficiently during movements. The following describes the design considerations and specifications for installing fence gaps to facilitate plover movements. The final design shall be developed and implemented in consultation with DFG, CSLC, and GBUAPCD, and will be subject to the approval of DFG.</p> <p>Fence gaps shall be installed using one of two basic design options: (1) vertical gaps beneath fences, or (2) horizontal gaps along fences (i.e., fence breaks).</p> <p><i>Option 1</i></p> <p>If vertical gaps are implemented, a minimum 2-inch gap shall be installed beneath the entire length of fencing. This gap size is considered sufficient for plover broods (including chicks and adults) to fit beneath fences (Page, pers. comm., 2008). Within 30 days prior to the core brooding season (March 15–August 15) each year, the sand fence shall be inspected, and maintained at that time if necessary, to ensure a minimum 2-inch gap beneath the fence.</p> <p>A 2-inch gap beneath a fence could be difficult for plovers to detect from a distance, due to its low visual profile relative to the surrounding landscape. For example, the average range of surface relief recorded at nest sites on Owens Lake was 1.5–8.2 inches (PRBO 2000, 2001, 2002); in some locations, this natural microtopography could obstruct a plover’s visual detection of a 2-inch movement gap. To minimize or offset this potential detection problem, vertical gaps designed to facilitate brood movements shall</p>	

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		<p>extend along the entire fence length.</p> <p><i>Option 2</i></p> <p>If horizontal gaps along fences are installed, they shall be spaced no greater than 100 feet apart (i.e., no more than 100 feet of fence between two gaps); and the combined width of all fence gaps shall total a minimum of 10% of the total fence perimeter length. Gaps shall be maintained throughout the snowy plover brooding season (March 15–August 15).</p> <p>Although the minimum size and spacing of fence gaps to facilitate movement by snowy plovers is not known, Page (pers. comm., 2008) estimated that approximately 1-foot-wide gaps placed every 10 feet along fence rows could potentially allow for unimpeded movements. For developing a range of feasible options to meet this mitigation measure, it is assumed that these guidelines for gap size and frequency can generally be extrapolated as follows: based on 1 foot of gap within a 10-foot segment (i.e., a gap occupies 10% of the fence perimeter), all fence gaps shall total a minimum of 10% of the total fence perimeter (e.g., over a 500-foot fence perimeter, a minimum total of 50 feet within a gap condition would be required). Therefore, based on 1 foot of gap within a 10-foot segment (i.e., a gap occupies 10% of the fence length), all fence gaps shall total a minimum of 10% of the total fence perimeter length (e.g., over a 500-foot fence perimeter, a total of 50 feet within a gap condition shall be required).</p> <p>The ability of broods to visually locate horizontal gaps is probably affected by the relationship between gap frequency and size; as the spacing between gaps increases (and distance from a plover at a given location to a gap increases), the size of individual gaps required for visual detection from a given location increases. Therefore, in addition to maintaining a minimum of 10% of total fence perimeter within a gap condition, gaps shall be spaced regularly and no more than 100 feet apart. It is assumed that this</p>	

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		<p>maximum spacing of gaps would allow for sufficient opportunity for broods to meet their daily movement requirements.</p> <p><i><b>Revised Mitigation Measures</b></i></p> <p><b>Mitigation Measure 3.1-11 (Revises Measure Biology-11 in 2008 FSEIR): Corvid Management Plan</b></p> <p>This measure is presented as originally written in the 2008 FSEIR (as Biology-11), except where revised specifically for this Draft SEIR to mitigate for potential impacts of the revised moat and row project. Measure Biology-11 was revised to add specificity regarding design of sand fencing and fence posts for deterring perching by corvids. Revisions to the original measure are shown below as track-changes.</p> <p>To reduce potential direct and cumulative impacts to western snowy plover and other migratory shorebirds within the project area due to increased predation on shorebird young and eggs from potential corvid population increases on Owens Lake resulting from construction of dust control measures, the City of Los Angeles Department of Water and Power shall continue to implement the corvid management plan resulting from the 2003 SIP with an extension of one year within the project area, or comparable corvid control measures, to the satisfaction of the California Department of Fish and Game, that are capable of achieving the same performance standard of no substantial net increase in corvid predation of native nesting shorebirds (including eggs). The corvid management plan was implemented in 2005 and may conclude in 2011 depending on success. Components of the corvid management plan include lake bed trash management procedures associated with dust control measures, utilization of Nixalite or the functional equivalent on all structures greater than 72 inches in height (increased from the original 60 inches in height) to minimize perching of corvids and raptor species on dust control equipment where they can easily observe shorebirds during the nesting season, burial of power and communication lines on all</p>	

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		<p>lake bed areas below the elevation of 3,600 feet, and use of harassment techniques for corvids in specific instances where corvids are proving to be particularly harmful to nesting shorebirds.</p> <p>Specifically in conjunction with the Moat &amp; Row dust control measure, the corvid management techniques shall be expanded to specify that the sand fencing <del>fabric and</del> <u>(including fence posts)</u> shall be designed to prevent perching by corvids, within 0.25 mile of occupied nesting shorebird habitat. Occupied nesting shorebird habitat will be evaluated on an annual basis, in collaboration with DFG, to identify areas requiring perch deterrents. The annual habitat evaluation will attempt to identify potential shifts in occupied nesting habitat over time. The use of sand fencing on top of rows within the Moat &amp; Row areas will be considered under this mitigation measure as exceeding the height of 72 inches. <del>thereby requiring the utilization of Nixalite or the functional equivalent on top of sand fencing.</del> <u>Sand fence design to deter perching by corvids shall include the installation of: (1) Nixalite or the functional equivalent on the tops of fence posts; and (2) monofilament line or the functional equivalent along and above the sand fence fabric. To avoid a potential avian collision hazard, monofilament or other line shall be installed no greater than two inches above the top of sand fence fabric. Within 30 days prior to the brooding season (March 15–August 15) each year, the perch deterrent structures shall be inspected and maintained at that time, if necessary.</u></p> <p>The corvid management plan shall be implemented by a wildlife biologist familiar with the sensitive shorebird populations within the project area and familiar with corvid management techniques. The qualifications of the wildlife biologist shall be submitted to the California Department of Fish and Game for review. Lethal methods of corvid control such as shooting or poisoning shall not be implemented initially due to public and government agency concerns in the project region for such control methods and to prevent putting workers at risk from such control measures. If it is later determined that corvids are having a significant impact on</p>	

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		<p>shorebird populations within the project area and direct removal of corvids is a viable alternative, proposed control methods would be presented to the Great Basin Unified Air Pollution Control District and the California Department of Fish and Game for approval prior to implementation of the additional control measures. The corvid management plan includes a yearly written report estimating the lake bed nesting and foraging corvid population size, documenting the results of the corvid management techniques, documenting the observed effectiveness of the techniques in minimizing corvid impacts on shorebirds within the lake bed, and suggesting improvements for corvid management within the lake bed. Effectiveness may be determined based on the corvid population size on the lake bed. Copies of the yearly reports shall be submitted to the Great Basin Unified Air Pollution Control District and the California Department of Fish and Game no later than December 31 of each corvid management year. If after the sixth year of reporting in 2011, the Great Basin Unified Air Pollution Control District determines that the corvid management program is effective and that corvids are not impacting snowy plover populations, then the reporting schedule shall phase out in the same time frame as shown in Table 3.2.5-1 (<u>of the 2008 FSEIR</u>). However, the corvid management practices shall be continuously implemented.</p> <p><b><i>New Mitigation Measures</i></b></p> <p>2008 FSEIR Mitigation Measure Biology-10, Long-Term Monitoring Program for Western Snowy Plover, was required to confirm that overall numbers of snowy plovers within DCAs do not decrease below baseline levels (defined in Measure Biology-10 as 2002 levels, or 272 plovers). In addition to this general population survey, the following measure focuses on monitoring specifically to detect entrapment of plovers within moats, and implementation of remedial measures if needed. The monitoring purpose, timing and duration, frequency, and survey methodologies would differ between Measure Biology-10 and monitoring required to detect</p>	

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		<p>moat entrapment. Therefore, the following is recommended as an additional measure.</p> <p><b>Mitigation Measure 3.1-12: Monitoring and Adaptive Management for Moat Entrapment of Snowy Plover</b></p> <p>To minimize or avoid potential moat entrapment of western snowy plovers, LADWP shall develop and implement a moat monitoring and adaptive management strategy. Although entrapment of snowy plovers within moats is assumed to be infrequent, in the absence of empirical data or other observations, there is reasonable uncertainty about this assumption. Therefore, this monitoring and adaptive monitoring approach is recommended to address this uncertainty, identify specific incidences of plover entrapment or mortality, and mitigate for significant effects.</p> <p><b>Monitoring and Adaptive Management Purpose and Guidelines</b></p> <p>The purpose of the monitoring and adaptive management strategy is to: (1) determine whether moat entrapment or loss of plovers occurs due to moat design or other elements (e.g., side slope angle, presence of water); (2) identify and implement site-specific corrective actions that would minimize or avoid any additional impact; and (3) if necessary, identify whether compensatory measures for significant losses or entrapment are required. This analysis assumes that repeated and regular observations of plover entrapment or mortality would indicate a potentially significant adverse effect. Specific adaptive management response thresholds are discussed below under “4. Response Triggers.”</p> <p>The moat monitoring and adaptive management strategy shall:</p> <ul style="list-style-type: none"> <li>▶ be developed in consultation with DFG, CSLC, and GBUAPCD, and will be subject to the approval of DFG;</li> <li>▶ be completed prior to initiating moat construction; and</li> </ul>	

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		<ul style="list-style-type: none"> <li>▶ where appropriate, maintain consistency with and tier from existing monitoring programs, such as the Toxicity Monitoring Program (2008 FSEIR Measure Biology-7), and the Long-Term Monitoring Program for Western Snowy Plover (2008 FSEIR Measure Biology-10).</li> </ul> <p><b>Monitoring and Adaptive Management Components</b></p> <p>The moat monitoring and adaptive management strategy shall include the following components:</p> <ul style="list-style-type: none"> <li>▶ a monitoring schedule, including the timing and frequency of monitoring;</li> <li>▶ a description of monitoring locations and procedures;</li> <li>▶ selection of indicators for identifying the type and extent of impacts to snowy plover due to moat entrapment;</li> <li>▶ specific quantitative response triggers to indicate thresholds requiring management action;</li> <li>▶ a list of corrective management actions appropriate for each type and extent of impact; and</li> <li>▶ documentation and reporting requirements.</li> </ul> <p>Guidelines for developing these six elements are summarized below.</p> <p><i>1. Implementation Schedule, Timing, and Frequency</i></p> <p>Moat monitoring shall be conducted during the snowy plover brooding season (March 15–August 15) for a minimum of two full brooding seasons after completion of project construction. Until the end of the first full brooding season after project construction, monitoring shall be conducted twice per week. If no entrapments (defined in “3. Entrapment Indicator,” below) are observed during this initial period, the frequency of monitoring may be reduced to once per week for the second complete brooding season.</p>	

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		<p>Monitoring shall commence immediately after construction of any perimeter moat is complete, if during the snowy plover brooding season. Otherwise, monitoring shall commence at the start of the following brooding season. If after two full brooding seasons of monitoring, it is determined that there is no evidence of significant moat entrapment or mortality, this monitoring requirement may be discontinued. However, if at any point within the monitoring period corrective management actions are required (i.e., response triggers or thresholds are met), monitoring shall be continued for an additional two full brooding seasons after corrective actions are implemented to ensure effectiveness of the action. This monitoring cycle shall be repeated until significant mortality or entrapment ceases to occur during a two-year cycle.</p> <p>2. <i>Monitoring Locations and Procedures</i></p> <p>Monitoring surveys shall be conducted at all moats forming the perimeter of moat and row cells identified as high or moderate risk of interacting with snowy plover individuals or broods (T37-1, T37-2, and T1A-3). In the event that any entrapment of snowy plover is observed in moats, moats forming the perimeter of moat and row cells identified as low risk of interacting with snowy plover (T32-1, T12-1, and T1A-4) shall be added to this monitoring and adaptive management program. All monitoring shall be conducted by wildlife biologists familiar with snowy plover identification, movement patterns, and life history requirements. Monitoring protocols shall be developed to determine the presence and condition of plovers in moats, and to document existing moat conditions where entrapment is observed. Key information collected during monitoring shall include, but is not limited to:</p> <ul style="list-style-type: none"><li>▶ specific locations of all areas surveyed;</li><li>▶ locations of all snowy plovers detected inside or within 100 feet of moats (using global positioning system [GPS]);</li></ul>	

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		<ul style="list-style-type: none"> <li>▶ age or life stage (juvenile, adult), behavior, and condition of individuals found within moats (including injury, death, and the identified cause of adverse condition, if possible);</li> <li>▶ moat side-slope measurements where plovers are found, and within 200 feet of these locations;</li> <li>▶ presence, depth, and quality (including salinity) of water in moats, where plovers are found (water quality data collection will follow that described for surface water monitoring of moat and row cells in the 2008 FSEIR Mitigation Measure Hydrology-2); and</li> <li>▶ incidental observations of snowy plovers and other wildlife species made during monitoring surveys.</li> </ul> <p>Any live shorebird found within a moat shall be observed at a distance for a minimum of 15 minutes, or until it exits the moat.</p> <p><i>3. Entrapment Indicator</i></p> <p>Moat entrapment shall be indicated and quantified by the number of plover mortalities or other observed entrapments within a moat per breeding season. In addition to mortality, “entrapment” shall include an incidence of a live bird that: (1) visibly attempts but is unable to exit the moat for 15 minutes or more, (2) is caught within the moat’s substrate (e.g., mud), or (3) does not attempt to exit the moat and appears injured or in otherwise poor condition to do so. Any observed mortality or entrapment will be reported to DFG within 48 hours of documenting the incident. (This timeframe is consistent with reporting standards for observed avian mortalities established in Mitigation Measure Biology-9 of the 2008 FSEIR [GBUAPCD 2008]).</p> <p><i>4. Response Triggers</i></p> <p>The threshold for requiring corrective actions is three or more snowy plover moat entrapments per DCA per calendar year. (The maximum number of observed entrapments per year that could</p>	

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		<p>occur without requiring corrective actions under this measure would range from two birds at any one DCA to six birds across the three monitored DCAs [T37-1, T37-2, and T1A-3].) If three or more entrapments at any DCA are observed, corrective adaptive management actions shall be required within the moat(s) where entrapments were detected.</p> <p>It is assumed that a loss of plovers up to this threshold would not significantly increase juvenile or adult mortality rates above existing levels or substantially affect the overall snowy plover population size, due to the following factors:</p> <ul style="list-style-type: none"> <li>▶ The threshold number is small relative to the overall snowy plover population size and productivity. In 2008, 478 adults and 39 broods were counted over a portion of Owens Lake; during the period of 2003–2008, the number of broods counted annually ranged from 18 to 52 (PRBO 2008). These counts include only the broods and adults observed during one-week lake-wide surveys conducted in late May to early June. Because adults often initiate multiple nesting attempts (sometimes up to three) and produce multiple broods during a breeding season, these numbers represent only a proportion of the broods produced at Owens Lake during a breeding season. Also, not all areas of suitable habitat were included in all years of the lake-wide surveys.</li> <li>▶ The Owens Lake population appears viable, based on reproductive success metrics and an increasing population trend. Although juvenile or adult survival rates for the Owens Lake population have not been estimated, the number of nests and nest success rates have been relatively high. The most complete lake-wide nesting data are from 2002 and 2003. In 2002, when 272 adults were counted, 128 nests were located; and the average nest hatching rate was 82.5%. In 2003, when 401 adults were counted, 199 nests were located; and the average hatching rate was 80%.</li> </ul>	

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		<ul style="list-style-type: none"> <li>▶ Multiple nesting attempts, particularly those initiated by a pair after a nest or brood has failed, would compensate for some loss during the breeding season.</li> </ul> <p>5. <i>Corrective Adaptive Management Actions</i></p> <p>If the response threshold is met, LADWP shall notify DFG as soon as possible and within three business days of the incident. In coordination with DFG, CSLC, and GBUAPCD, LADWP shall implement corrective management actions as appropriate depending on the cause of moat entrapment (e.g., slope, presence of water, or other).</p> <p>Appropriate corrective actions for entrapment due to moat side-slopes could include one or more of the following:</p> <ul style="list-style-type: none"> <li>▶ add escape ramps every 100 feet within the identified problem moat;</li> <li>▶ add rip-rap to side-slopes; and</li> <li>▶ reduce side slopes within the identified problem moat, to the maximum extent feasible without substantially compromising overall dust control effectiveness.</li> </ul> <p>Appropriate corrective actions for entrapment due to the presence of water in moats could include one or more of the following:</p> <ul style="list-style-type: none"> <li>▶ add rip-rap to bottoms of moats, so that the top of rip-rap exceeds the maximum water and mud level observed in moats during the breeding season; and</li> <li>▶ reduce side slopes within the identified problem moat, to the maximum extent feasible without substantially compromising overall dust control effectiveness.</li> </ul> <p>If the monitoring and adaptive management process indicates that corrective actions are not effective, or if actions are determined to not be feasible, then LADWP shall work collaboratively with DFG, CSLC, and GBUAPCD to develop a revised action or provide on-</p>	

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		<p>or off-site habitat enhancement and protection as compensation. Revised corrective actions or habitat enhancement shall require approval by DFG.</p> <p><i>6. Reporting Requirements</i></p> <p>LADWP shall provide summaries of monitoring methods and results to DFG, CSLC, and GBUACD within 60 days of completing each monitoring season. Reports shall include summaries of all detections of snowy plover or other shorebirds in and around moats; their behavior, state or condition when detected; side-slopes and water depths measured in association with each detection; and whether any mortalities or other entrapments were observed. After completing the second year of monitoring, annual reports that summarize the cumulative results of monitoring efforts shall also be submitted to DFG, CSLC, and GBUACD.</p> <p><b>Integration with Existing Snowy Plover Monitoring and Management</b></p> <p>The specific monitoring and adaptive management program for moat entrapment could be incorporated directly into existing plover monitoring and management commitments as appropriate, including as an element of the Long-term Monitoring Program for Western Snowy Plover (Mitigation Measure 3.1-8; Measure Biology-10 in the 2008 FSEIR) or the Long-term Habitat Management Plan (Mitigation Measure 3.1-9; Measure Biology-14 in the 2008 FSEIR).</p>	
<p><b>3.1-2: Effects on Wildlife Movements, Corridors, and Access to Breeding Sites.</b> The project site is dominated by barren alkali playa and does not provide suitable habitat for most wildlife species. None of the cells are located within, or required for travel between, important foraging or breeding habitats for any wildlife species; and they do not impose movements barriers between high-suitability habitats for any species. Any potential effects on wildlife movements would be less than significant.</p>	LTS	No mitigation is required.	LTS

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<b>3.2 Air Quality</b>			
<p><b>3.2-1: Project-Generated Emissions of Criteria Air Pollutants and Precursors.</b> Implementing the proposed project would not result in the generation of short-term construction emissions beyond the level analyzed in the 2008 FSEIR, because the proposed modifications would not require additional daily land disturbance, heavy-duty equipment use, or construction personnel beyond the levels previously evaluated. However, construction of the proposed project (moat and row elements) would cause the delay of implementation of moat and row DCMs, a relatively small part of the overall DCM program, beyond the time frame specified in the 2008 SIP. Thus, implementation of the proposed project, as proposed, would technically conflict with the applicable air quality plan, resulting in a slight potential for an increase in the number of days when violations of the NAAQS and exposure of sensitive receptors would occur. This impact would be considered significant.</p>	S	<p><b>Mitigation Measure(s) for Impact 3.2-1</b></p> <p>The technical conflict with the 2008 SIP (i.e., delay in implementation of 3.5 square miles of DCMs by 6 months) is caused by the need for project changes to address wildlife impact concerns. LADWP is committed to implement all the proposed DCMs, if approved, as quickly as feasible. No other measures are reasonably available to reduce the potential impacts resulting from this conflict. This impact would remain significant and unavoidable until the moat and row project is implemented</p>	SU
<b>3.3 Visual Resources</b>			
<p><b>3.3-1: Potential Degradation of a Scenic Vista.</b> Although the Sierra Nevada and Inyo Mountains are considered a scenic vista in the area surrounding Owens Lake, are highly visible from all locations surrounding Owens Lake, and create panoramic background views from numerous locations along Owens Valley, views of these mountains would not change and would not be blocked or otherwise altered by the proposed project. This impact would be less than significant.</p>	LTS	No mitigation is required.	LTS

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<p><b>3.3-2: Potential Degradation of the Visual Character of Owens Lake.</b> Views of moat and row elements at the project site would be indistinguishable, barely perceptible, or would not change the dramatic backdrop or natural feel of the overall landscape of Owens Lake because of their distance from the viewer, the size of the features in relation to the elevation of the viewpoints and surrounding mountains, and the predominant natural features of the surrounding landscape would be retained. Therefore, construction of moat and row elements at the project site would not result in substantial degradation of the viewshed as viewed by motorists traveling along U.S. 395, SR 190, or SR 136 or by visitors to the lakebed. This impact would be less than significant.</p>	LTS	No mitigation is required.	LTS
<p><b>3.3-3: Potential Construction-related Visual Impacts.</b> Construction activities at the project site would result in a change in the existing visual character of Owens Lake. However, changes to views of individual moat and row cells would be temporary and brief. This impact would be less than significant.</p>	LTS	No mitigation is required.	LTS

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