3.2 BIOLOGICAL RESOURCES

As a result of the Initial Study, the Great Basin Unified Air Pollution Control District (District) determined that the 2008 Owens Valley PM_{10} Planning Area Demonstration of Attainment State Implementation Plan (proposed project) had the potential to result in impacts to biological resources, thus requiring the consideration of mitigation measures or alternatives, in accordance with Section 15063 of the State of California Environmental Quality Act Guidelines (State CEQA Guidelines).[1] Therefore, this issue has been carried forward for detailed analysis in this Subsequent Environmental Impact Report (EIR). This analysis was undertaken to identify opportunities to avoid, reduce, or otherwise mitigate potential significant impacts to biological resources and to identify potential alternatives. In general, the proposed project would be implemented in areas that currently consist of lake bed (frequently referred to as playa).

The analysis of biological resources consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions at the proposed project area, thresholds for determining if the proposed project would result in significant impacts, anticipated impacts (direct, indirect, and cumulative), mitigation measures, and level of significance after mitigation. The biological resources at the proposed project site were evaluated with regard to a query of the California Natural Diversity Database (CNDDB), a review of the U.S. Geological Survey (USGS) 7.5-minute series topographic quadrangles, and the Nation Wetlands Inventory, and published and unpublished literature. The characterization and evaluation of biological resources was undertaken in light of the Conservation and Open Space element of the Inyo County General Plan,[2] the 1997 State Implementation Plan (SIP) EIR,[3] the 1998 SIP Addendum EIR,[4] the 2000 North Sand Sheet Shallow Flooding Project Mitigated Negative Declaration (MND),[5] the 2001 Southern Zones Dust Control Project MND,[6] and the 2003 SIP EIR.[7]

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[1] Great Basin Unified Air Pollution Control District. 27 February 2007. *2008 Owens Valley PM_{10} Planning Area Demonstration of Attainment State Implementation Plan Initial Study*. State Clearinghouse Number 2007021127. Bishop, CA.

[2] Inyo County Planning Department. December 2001. *Inyo County General Plan, Conservation and Open Space Element*. Independence, CA.

[3] Great Basin Unified Air Pollution Control District. 2 July 1997. *Owens Valley PM_{10} Planning Area Demonstration of Attainment State Implementation Plan Final Environmental Impact Report*. State Clearinghouse Number 96122077. Bishop, CA.

[4] Great Basin Unified Air Pollution Control District. 1998. *Owens Valley PM_{10} Planning Area Demonstration of Attainment State Implementation Plan Addendum No.1 to the Final Environmental Impact Report*. State Clearinghouse Number *No. 96122077*. Bishop, CA.

[5] City of Los Angeles Department of Water and Power. April 2000. *Mitigated Negative Declaration North Sand Sheet Shallow Flooding Project, Owens Lake Dust Mitigation Program, Owens Lake, California*. Prepared by: CH2M HILL, Santa Ana, CA.

[6] City of Los Angeles Department of Water and Power. August 2001. *Mitigated Negative Declaration Southern Zones Dust Control Project, Owens Lake Dust Mitigation Program, Owens Lake, California*. Prepared by: CH2M HILL, Santa Ana, CA.

[7] Great Basin Unified Air Pollution Control District. February 2004. *2003 Owens Valley PM_{10} Planning Area Demonstration of Attainment State Implementation Plan Integrated Environmental Impact Report*. State Clearinghouse House Number 2002111020. Prepared by: Sapphos Environmental, Inc., Pasadena, CA.

This analysis also considered the results of all previously completed plant community mapping and direct surveys for special status plant and animal species conducted between April 2002 and May 2006 (Appendix D, *Biological Resources Technical Report*).[8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26] Supplemental surveys were undertaken at the proposed project area to accurately characterize the environmental baseline condition with respect to biological resources. Field efforts included plant community mapping, special status species surveys within the proposed project area, and special status bird surveys within the Owens Lake basin conducted between January 2007 and June 2007. Special status species are listed pursuant to the federal or state Endangered Species Acts (ESAs) as California

[8] California Department of Fish and Game. 1994. *Final Report: Riparian and Wetland Breeding Bird Surveys, Inyo County, California, with Emphasis on the Yellow-billed Cuckoo and the Snowy Plover*. Contract # FG-23 19. Prepared by: Kern River Research Center, Weldon, CA.

[9] Great Basin Unified Air Pollution Control District. June 1994. *Owens Valley PM_{10} Planning Area Best Available Control Measures State Implementation Plan*. Bishop, CA.

[10] Great Basin Unified Air Pollution Control District. 23 October 1996. *Owens Lake PM_{10} Planning Area Demonstration of Attainment State Implementation Plan, Project Alternatives Analysis*. Bishop, CA.

[11] Great Basin Unified Air Pollution Control District. 2 July 1997. *Owens Valley PM_{10} Planning Area Demonstration of Attainment State Implementation Plan Final Environmental Impact Report*. State Clearinghouse Number 96122077. Bishop, CA.

[12] Great Basin Unified Air Pollution Control District. 1998. *Survey of Aquatic Invertebrates Associated with Irrigation Waters on Owens Lake at the Agrarian Project Site and the South Flood Irrigation Project Site*. Prepared by: Dr. David Herbst, Bishop, CA.

[13] Great Basin Unified Air Pollution Control District. 1998. *Owens Valley PM_{10} Planning Area Demonstration of Attainment State Implementation Plan Addendum No.1 to the Final Environmental Impact Report*. State Clearinghouse Number *No. 96122077*. Bishop, CA.

[14] Great Basin Unified Air Pollution Control District. 2000. *Biological and Cultural Resource Assessment for Two New Air Monitoring Sites at Owens Valley, Inyo County, CA*. Bishop, CA.

[15] City of Los Angeles Department of Water and Power. February 2000. *Initial Study for North Sand Sheet Shallow Flooding Project; Owens Lake Dust Mitigation Program, Owens Lake, California*. Prepared by: CH2M HILL, Santa Ana, CA.

[16] City of Los Angeles Department of Water and Power. 2001. *Rare Plant Survey Report Owens Dry Lake Dust Control Project Sites*. Los Angeles, CA.

[17] City of Los Angeles Department of Water and Power. August 2001. *Mitigated Negative Declaration Southern Zones Dust Control Project, Owens Lake Dust Mitigation Program, Owens Lake, California*. Prepared by: CH2M HILL, Santa Ana, CA.

[18] CH2MHILL. 2001. *Summary of Surveys for Shorebirds and Other Waterbirds at Owens Lake in 2001*. Prepared by: T.D. Ruhlen and G.W. Page, Point Reyes Bird Observatory, Stinson Beach, CA.

[19] CH2MHILL. 2002. *Summary of Surveys for Snowy Plovers at Owens Lake, March 1 through April 30, 2002*. Prepared by: T.D. Ruhlen and G.W. Page, Point Reyes Bird Observatory, Stinson Beach, CA.

[20] Sapphos Environmental, Inc. 2002. *MFR 01, Initiation of Wildlife Monitoring at Owens Lake*. Pasadena, CA.

[21] Sapphos Environmental, Inc. 2002. *MFR 02, Wildlife Monitoring at Owens Lake May 2002*. Pasadena, CA.

[22] Sapphos Environmental, Inc. 2002. *MFR 03, Wildlife Monitoring at Owens Lake June 2002*. Pasadena, CA.

[23] Sapphos Environmental, Inc. 2002. *MFR 04, Wildlife Monitoring at Owens Lake July 2002*. Pasadena, CA.

[24] CH2MHILL. July 2004. *Results of the 2004 Breeding Season Surveys for Snowy Plovers, American Avocets, and Common Ravens at Owens Lake*. Prepared by: G. W. Page and T. D. Ruhlen, Point Reyes Bird Observatory, Stinson Beach, CA.

[25] Sapphos Environmental, Inc. 21 September 2004. *Biological Resources Technical Report: Bartlett Point and Ash Point Air Quality Monitoring Stations*. Pasadena, CA.

[26] Great Basin Unified Air Pollution Control District. February 2004. *2003 Owens Valley PM_{10} Planning Area Demonstration of Attainment State Implementation Plan Integrated Environmental Impact Report*. State Clearinghouse House Number 2002111020. Prepared by: Sapphos Environmental, Inc., Pasadena, CA.

Species of Special Concern, Bureau of Land Management (BLM) sensitive species, or locally important species as determined by local agencies or the California Department of Fish and Game (CDFG).

3.2.1 Regulatory Framework

This regulatory framework identifies the federal, state, and local statutes, ordinances, or policies that govern the conservation and protection of biological resources that must be considered by the District Governing Board during the decision-making process for projects that have the potential to affect biological resources.

Federal

National Environmental Policy Act

The National Environmental Policy Act (NEPA) and its supporting federal regulations establish certain requirements that must be adhered to for any project "…financed, assisted, conducted or approved by a federal agency…." In making a decision on the issuance of federal grant monies or a permit to conduct work on federal lands for components of the proposed project, the federally designated lead agency pursuant to NEPA is required to "…determine whether the proposed action may significantly affect the quality of the human environment." Only those portions of the proposed project conducted on Bureau of Land Management (BLM) land may require compliance with this regulation, which is approximately 11.44 acres. Anticipated approvals from the BLM include temporary and permanent right-of-way grants on federal lands.

Federal Endangered Species Act

The federal ESA defines species as "endangered" and "threatened" and provides regulatory protection for listed species. The federal ESA provides a program for conservation and recovery of threatened and endangered species, and conservation of designated critical habitat that the U.S. Fish and Wildlife Service (USFWS) has determined is required for the survival and recovery of these listed species. Section 9 of the federal ESA prohibits the "take" of species listed by USFWS as threatened or endangered. "Take" is defined as "...to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in such conduct." In recognition that take cannot always be avoided, Section 10(a) of the federal ESA includes provisions for take that is incidental to, but not the purpose of, otherwise lawful activities. Section 10(a)(1)(B) permits (incidental take permits) may be issued if take is incidental and does not jeopardize the survival and recovery of the species.

Section 7(a)(2) of the federal ESA requires all federal agencies, including the USFWS and the BLM, to evaluate projects with respect to any species proposed for listing or already listed as endangered or threatened and any proposed or designated critical habitat for the species. Federal agencies must undertake programs for the conservation of endangered and threatened species, and are prohibited from authorizing, funding, or carrying out any action that will jeopardize a listed species or destroy or modify its critical habitat.

As defined in the federal ESA, "individuals, organizations, states, local governments, and other non-Federal entities are affected by the designation of critical habitat only if their actions occur on Federal lands, require a Federal permit, license, or other authorization, or involve Federal funding."

Due to the potential presence of federally listed species (one plant, nine wildlife) in the vicinity of the proposed project study area, project compliance with the federal ESA was considered in this

evaluation. The one listed plant species and nine listed wildlife species that have the potential to be present within the proposed project area are as follows: Owens Valley checkerbloom (*Sidalcea covillei*), Owens tui chub (*Gila bicolor snyderi*), Owens pupfish (*Cyprinodon radiosus*), desert tortoise (*Gopherus agassizii*), bald eagle (*Haliaeetus leucocephalus*), Swainson's hawk (*Buteo swainsoni*), American peregrine falcon (*Falco peregrinus anatum*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), least Bell's vireo (*Vireo bellii pusillus*), and Mohave ground squirrel (*Spermophilus mohavensis*). All federally listed species were determined to be absent in the proposed project area as a result of directed surveys.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act makes it unlawful to pursue, capture, kill, or possess any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and the countries of the former Soviet Union. Similar to the federal ESA, the Migratory Bird Treaty Act authorizes the Secretary of the Interior to issue permits for incidental take.

Due to presence of many migratory birds on the proposed project site, project compliance with the Migratory Bird Treaty Act was considered in this evaluation. Nesting birds and the contents of the nest within the proposed project site are afforded protection during the nesting season pursuant to the Migratory Bird Treaty Act.

Section 404 of the Federal Clean Water Act

Section 404 of the federal Clean Water Act, which is administered by the U.S. Army Corps of Engineers (USACOE), regulates the discharge of dredged and fill material into waters of the United States. USACOE has established a series of nationwide permits that authorize certain activities in waters of the United States, provided that a proposed activity can demonstrate compliance with standard conditions. In general, USACOE requires an individual permit for an activity that will affect an area equal to or in excess of 0.3 acre of waters of the United States. Projects that result in impacts to less than 0.3 acre of waters of the United States can normally be conducted pursuant to one of the nationwide permits, if consistent with the standard permit conditions. USACOE also has discretionary authority to require an Environmental Impact Statement for projects that result in impacts to an area between 0.1 and 0.3 acre. Use of any nationwide permit is contingent on the activities having no impacts to endangered species.

Wetlands are typically not dust emissive. However, some wetland areas may have been disturbed by lake bed sediments and may require restoration to a functional wetland to gain dust emission compliance. Emissive areas are those that contain less than 50 percent vegetative cover or less than 75 percent saturated soil. Emissive versus non-emissive classifications are determined by the District. The proposed project area includes "waters of the United States" that are subject to the jurisdiction of USACOE pursuant to Section 404 of the Clean Water Act.

Owens Basin Wetland and Aquatic Species Recovery Plan: Inyo and Mono Counties, California

The Owens Basin Wetland and Aquatic Species Recovery Plan is a recovery plan focused on delisting Owens pupfish, Owens tui chub, and Fish slough milk-vetch (*Astragalus lentiginosus* var. *piscinensis*), as well as protecting species of concern so that listing is unnecessary. The Owens Basin covers an area of approximately 1,952,133 acres in east central California. The Owens Basin lies along the southwest boundary of the Great Basin and the northwest boundary of the Mojave Desert, and varies in elevation

from 2,900 feet to 14,500 feet above mean sea level. This recovery plan covers portions of Mono and Inyo counties. In addition, this recovery plan provides conservation measures and a strategy for recovery of the listed and proposed species as well as the species of concern.

Due to the potential presence of Owens pupfish and Owens tui chub in the proposed project area, and other sensitive species considered in the Owens Basin Wetland and Aquatic Species Recover Plan, project compliance with the Owens Basin Wetland and Aquatic Species Recover Plan was considered in this evaluation.

State

California Endangered Species Act

The California ESA prohibits the take of listed species except as otherwise provided in state law. Unlike the federal ESA, the California ESA applies the take prohibitions to species petitioned for listing (state candidates). State lead agencies are required to consult with the CDFG to ensure that any actions undertaken by that lead agency are not likely to jeopardize the continued existence of any state-listed species or result in destruction or degradation of required habitat. CDFG is authorized to enter into Memoranda of Understanding (MOUs) with individuals, public agencies, universities, zoological gardens, and scientific or educational institutions to import, export, take, or possess listed species for scientific, educational, or management purposes.

Due to the potential presence of state-listed rare, threatened, or endangered species on the proposed project site, project compliance with the California ESA was considered in this evaluation. One known state-listed species, the American peregrine falcon, is present in the proposed project area. This species does not nest in the proposed project site and was only observed on one day within the project boundaries. In addition, the proposed project site is located within the historic range of several state-listed species that were the subject of directed surveys: one plant, Owens Valley checkerbloom; two fish, Owens tui chub, Owens pupfish; one reptile, desert tortoise; four birds, bald eagle, Swainson's hawk, western yellow-billed cuckoo, least Bell's vireo; and one mammal, Mohave ground squirrel. None of the aforementioned species were determined to present within the proposed project area.

Section 2080 and 2081 of the State Fish and Game Code

Section 2080 of the State Fish and Game Code (Code) states that "no person shall import into this state [California], export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission [State Fish and Game Commission] determines to be an endangered species or threatened species, or attempt any of those acts, except as otherwise provided in this chapter, or the Native Plant Protection Act, or the California Desert Native Plants Act."

Pursuant to Section 2081 of the Code, the CDFG may authorize individuals or public agencies to import, export, take, or possess, any state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through permits or MOUs if:

- The take is incidental to an otherwise lawful activity
- Impacts of the authorized take are minimized and fully mitigated
- The permit is consistent with any regulations adopted pursuant to any recovery plan for the species
- The applicant ensures adequate funding to implement the measures required by CDFG

CDFG shall make this determination based on available scientific information and shall include consideration of the ability of the species to survive and reproduce.

Due to the potential presence of state-listed rare, threatened, or endangered species on the proposed project site, Section 2080 and 2081 of the Code was considered in this evaluation.

Native Plant Protection Act

The Native Plant Protection Act includes measures to preserve, protect, and enhance rare and endangered native plants. The list of native plants afforded protection pursuant to the Native Plant Protection Act includes those listed as rare and endangered under the California ESA. The Native Plant Protection Act provides limitations on take as follows: "...no person will import into this State, or take, possess, or sell within this State" any rare or endangered native plant, except in compliance with provisions of the act. Individual landowners are required to notify the CDFG at least 10 days in advance of changing land uses to allow the CDFG to salvage any rare or endangered native plant material.

Due to the presence of state-listed rare, threatened, or endangered plant species habitat on the proposed project site, the Native Plant Protection Act was considered in this evaluation. However, no plant species protected by this act have been observed within the proposed project site.

California Desert Native Plants Act

Section 3503 and 3503.5 of the State Fish and Game Code

These sections of the Code provide regulatory protection to resident and migratory birds and all birds of prey within the State of California, including the prohibition of the taking of nests and eggs unless other provided for by the Code.

Due to the documented presence of resident and migratory birds and birds of prey on the proposed project site, Sections 3503 and 3503.5 of the Code were considered in this evaluation.

Section 1600 of the State Fish and Game Code

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California are subject to the regulatory authority of the CDFG pursuant to Sections 1600 through 1603 of the Code, and require preparation of a Streambed Alteration Agreement. Pursuant to the Code, a stream is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Based on this definition, a watercourse with surface or subsurface flows that support or have supported riparian vegetation is a stream and is subject to CDFG jurisdiction. Altered or artificial waterways valuable to fish and wildlife are subject to CDFG jurisdiction. CDFG also has jurisdiction over dry washes that carry water ephemerally during storm events. There are CDFG jurisdiction waterways located within the proposed project area that would be require City of Los Angeles Department of Water and Power (LADWP) to obtain a Streambed Alteration Agreement.

Local

Inyo County General Plan

The Owens Lake bed is primarily owned and operated in trust for the people of the State of California by the State Lands Commission, and while not subject to local regulatory authority by the Inyo County, the County's General Plan recognizes the location of state and federally owned lands at Owens Lake. Although the State Lands Commission is not subject to the regulatory authority of local jurisdictions, the relevant goals and policies of the Inyo County General Plan have been summarized to inform the District Governing Board, the State Lands Commission, other trustee and responsible agencies, and the public of ability of the proposed project to conform to the relevant goals and policies of the County General Plan.

The Inyo County General Plan includes the following goals and policies related to biological resources:[27]

- Maintain and enhance biological diversity and healthy ecosystems throughout the County
  - Regulatory Compliance
  - Preservation of Riparian Habitat and Wetlands
  - Restoration of Biodiversity
  - Limitation for Environmental Resource Areas
  - Development Outside of Habitat Areas
  - Preservation of Wildlife Corridors
  - Preservation of Noxious Weeds
  - Restoration of Owens River

- Provide a balanced approach to resource protection and recreational use of the natural environment
  - Coordination on Management of Adjacent Lands
  - Appropriate Access for Recreation
  - Hunting and Fishing
  - Nature as Education

The Inyo County General Plan defines three general areas of biological resources: sensitive natural communities, special-status species, and wetlands and other waters of the United States. Pertaining to wetlands, the Inyo County General Plan Policy Goal BIO-1.2 (Preservation of Riparian Habitat and Wetlands) states that Inyo County may consider an area a wetland if it is lacking one or more of the three parameters (hydrophytic vegetation, hydric soil, wetland hydrology) set forth by the USACOE but provides important wetland functions and values, such as wildlife habitat and water quality maintenance.

[27] Inyo County Planning Department. December 2001. *Inyo County General Plan*. Independence, CA.

3.2.2 Existing Conditions

The description of existing condition for biological resources includes a brief summary of the surveys that were undertaken to characterize the resources recommended for analysis in Appendix G to the State CEQA Guidelines and the resulting characterization of plant communities; state-designated sensitive habitats; federally and state-listed rare, threatened, and endangered species; wetland and other federal and state waters; and wildlife corridors and nursery areas.

Survey Methods

Field surveys were undertaken to characterize the environmental baseline conditions for biological resources, including plant communities; state-designated habitats; listed endangered, threatened, rare, or plant and wildlife species; sensitive plant and wildlife species; and locally important plant and wildlife species. Directed surveys and habitat assessments were guided by information on the distribution, description, habitat requirements, and reproduction of plant and wildlife resources gathered from the literature review: listing packages prepared by the USFWS; [28,29,30,31] CNDDB; California Wildlife Habitat Relationship System database;[32] Owens Basin Wetland and Aquatic Species Recovery Plan: Inyo and Mono Counties, California;[33] previously completed environmental documentation, including recent field efforts conducted between April 2002 and May 2006 in preparation of the 2003 SIP EIR; and several other documents.[34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52] All

[28] U.S. Fish and Wildlife Service. 1985. "Final listing of Owens Tui Chub as Endangered." *Federal Register,* (50 FR 31592). Washington, DC: Office of the Federal Register National Archives and Records Administration.

[29] U.S. Fish and Wildlife Service. 1967. "Final listing of Owens Pupfish as Endangered." *Federal Register*, (32 FR 4001). Washington, DC: Office of the Federal Register National Archives and Records Administration.

[30] U.S. Fish and Wildlife Service. 1990. "Final listing of Desert Tortoise as Threatened." *Federal Register*, (55 FR 12178-12191). Washington, DC: Office of the Federal Register National Archives and Records Administration.

[31] U.S. Fish and Wildlife Service. 1986. "Final listing of least Bell's Vireo as Endangered." *Federal Register*, (51 FR 16474-16482). Washington, DC: Office of the Federal Register National Archives and Records Administration.

[32] California Department of Fish and Game. 2002. *California Wildlife Habitat Relationships System*. Sacramento, CA.

[33] U.S. Fish and Wildlife Service. 2006. *Owens Basin Wetland and Aquatic Species Recovery Plan: Inyo and Mono Counties, California*. Portland, OR.

[34] California Department of Fish and Game. 1994. *Final Report: Riparian and Wetland Breeding Bird Surveys, Inyo County, California, with Emphasis on the Yellow-billed Cuckoo and the Snowy Plover*. Contract #FG-23 19. Prepared by: Kern River Research Center, Weldon, CA.

[35] Great Basin Unified Air Pollution Control District. June 1994. *Owens Valley PM_{10} Planning Area Best Available Control Measures State Implementation Plan*. Bishop, CA.

[36] Great Basin Unified Air Pollution Control District. 23 October 1996. *Owens Lake PM_{10} Planning Area Demonstration of Attainment State Implementation Plan, Project Alternatives Analysis*. Bishop, CA.

[37] Great Basin Unified Air Pollution Control District. 2 July 1997. *Owens Valley PM_{10} Planning Area Demonstration of Attainment State Implementation Plan Final Environmental Impact Report*. State Clearinghouse Number 96122077. Bishop, CA.

[38] Great Basin Unified Air Pollution Control District. 1998. *Survey of Aquatic Invertebrates Associated with Irrigation Waters on Owens Lake at the Agrarian Project Site and the South Flood Irrigation Project Site*. Prepared by: Dr. David Herbst, Bishop, CA.

[39] Great Basin Unified Air Pollution Control District. 16 November 1998. *Owens Valley PM_{10} Planning Area Demonstration of Attainment State Implementation Plan, Addendum No. 1 to the Final Environmental Impact Report*. State Clearinghouse Number 96122077. Bishop, CA.

[40] Great Basin Unified Air Pollution Control District. 2000. *Biological and Cultural Resource Assessment for Two New Air Monitoring Sites at Owens Valley, Inyo County, CA*. Bishop, CA.

surveys were undertaken in accordance with the USFWS, CDFG, or California Native Plant Society (CNPS) standards and protocols for such surveys. Survey methods for plant and wildlife resources are described in the Biological Resources Technical Report (Appendix D).

The determination of presence or absence of federally protected wetlands, as defined in Section 404 of the Clean Water Act, conforms to the protocols specified in the *Corps of Engineers Wetlands Delineation Manual*,[53] as modified by the U.S. Supreme Court case *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, No. 99–1178 (January 9, 2001)[54] and guidance following the U.S. Supreme Court case *Rapanos v. United States and Carabell v. U.S. Army Corps of Engineers*,[55] as well as the Arid West Region supplement to the Corps of Engineers Wetland Delineation Manual (Appendix D). [56] Sapphos Environmental, Inc. conducted field surveys of all areas potentially subject to the jurisdiction of CDFG, on June 19, 21, and 22, 2007, using methods consistent with CDFG's *A Field Guide to Streambed Alteration Agreements* (Appendix D). Preparation for the jurisdictional delineation included the consideration of previously prepared jurisdictional

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[41] City of Los Angeles Department of Water and Power. February 2000. *Initial Study for North Sand Sheet Shallow Flooding Project; Owens Lake Dust Mitigation Program, Owens Lake, California*. Prepared by: CH2M HILL, Santa Ana, CA.

[42] City of Los Angeles Department of Water and Power. 2001. *Rare Plant Survey Report Owens Dry Lake Dust Control Project Sites*. Los Angeles, CA.

[43] City of Los Angeles Department of Water and Power. August 2001. *Mitigated Negative Declaration Southern Zones Dust Control Project, Owens Lake Dust Mitigation Program, Owens Lake, California*. Prepared by: CH2M HILL, Santa Ana, CA.

[44] CH2MHILL. 2001. *Summary of Surveys for Shorebirds and Other Waterbirds at Owens Lake in 2001*. Prepared by: T.D. Ruhlen and G.W. Page, Point Reyes Bird Observatory, Stinson Beach, CA.

[45] CH2MHILL. 2002. *Summary of Surveys for Snowy Plovers at Owens Lake, March 1 through April 30, 2002*. Prepared by: T.D. Ruhlen and G.W. Page, Point Reyes Bird Observatory, Stinson Beach, CA.

[46] Sapphos Environmental, Inc. 2002. *MFR 01, Initiation of Wildlife Monitoring at Owens Lake*. Pasadena, CA.

[47] Sapphos Environmental, Inc. 2002. *MFR 02, Wildlife Monitoring at Owens Lake May 2002*. Pasadena, CA.

[48] Sapphos Environmental, Inc. 2002. *MFR 03, Wildlife Monitoring at Owens Lake June 2002*. Pasadena, CA.

[49] Sapphos Environmental, Inc. 2002. *MFR 04, Wildlife Monitoring at Owens Lake July 2002*. Pasadena, CA.

[50] CH2MHILL. July 2004. *Results of the 2004 Breeding Season Surveys for Snowy Plovers, American Avocets, and Common Ravens at Owens Lake*. Prepared by: G. W. Page and T. D. Ruhlen, Point Reyes Bird Observatory, Stinson Beach, CA.

[51] Sapphos Environmental, Inc. 21 September 2004. *Biological Resources Technical Report: Bartlett Point and Ash Point Air Quality Monitoring Stations*. Pasadena, CA.

[52] Great Basin Unified Air Pollution Control District. February 2004. *2003 Owens Valley PM_{10} Planning Area Demonstration of Attainment State Implementation Plan Integrated Environmental Impact Report*. State Clearinghouse House Number 2002111020. Prepared by: Sapphos Environmental, Inc., Pasadena, CA.

[53] U.S. Army Corps of Engineers. January 1987. *Corp of Engineers Wetlands Delineation Manual*. Final Technical Report Y-87-1. Vicksburg, MS. Prepared by: Environmental Laboratory, U.S. Army Engineer Research and Development Center, Waterways Experiment Station, Vicksburg, MS.

[54] U.S. Supreme Court. 9 January 2001. *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*. No. 99–1178, 531 U.S. 159.

[55] U.S. Supreme Court. 19 June 2006. *Rapanos v. United States and Carabell v. U.S. Army Corps of Engineers*. No. 126 S. Ct. 2208.

[56] U.S. Army Corps of Engineers, Engineer Research and Development Center. December 2006. *Wetlands Regulatory Assistance Program: Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*. Available at: http://www.usace.army.mil/cw/cecwo/reg/inte_aridwest_sup.pdf

reports for the Owens Lake bed,[57, 58,59,60] a review of the seven USGS 7.5-minute series topographic quadrangles for the proposed project area, [61,62,63,64,65,66,,67] and a review of the National Wetlands Inventory for the proposed project area.[68] As a result of the literature review, seven locations, within the proposed project area, were identified as being potentially subject to the jurisdiction of the USACOE or the CDFG and were then subject to a jurisdictional delineation (Figure 3.2.2-1, *Jurisdictional Wetlands and Waters Survey Areas*). Finally, the results of the determination of presence or absence of federally protected wetlands were documented in letters and transmitted to the USACOE.[69, 70]

All survey personnel were either experienced in or directly supervised by persons experienced in the undertaking of field surveys for listed, sensitive, and locally important plant and wildlife species. All survey personnel were knowledgeable of the identification and ecology of all resources (Appendix D). All survey personnel were familiar with both federal and state statutes related to listed, sensitive, and locally important plants and wildlife, in addition to being experienced with analyzing impacts of development on biological resources. In addition, the field teams were knowledgeable of the habitat requirements for each of the target species and of the locations of such habitats within the proposed project area.

Plant Communities

The evaluation of plant communities was undertaken in a two-phase effort consisting of a preliminary in-house mapping effort and verification and refinement of plant community mapping in the field. The final plant community map was based on the field identification of regional assemblages of vegetation

[57] Great Basin Unified Air Pollution Control District. April 1996. *Delineation of the Waters of the United States for the Owens Lake Playa*. Prepared for U.S. Army Corps of Engineers. Prepared by: Jones & Stokes Associates, Sacramento, CA.

[58]Great Basin Unified Air Pollution Control District.1996. "Delineation of Waters of the United States for the Owens Lake Playa." Unpublished Report. Prepared in conjunction with Jones & Stokes Associates, Inc., Bishop, CA.

[59]U.S. Army Corps of Engineers, 1987. *Routine and Atypical Wetland Determinations*. Vicksburg, MS: Corps of Engineers, Waterways Experiment Station.

[60] Reed, Jr., P.B. 1998. *National List of Plant Species that Occur in Wetlands: California (Region 10)*. National Ecology Research Center Biological Report 88 (26.10). Fort Collins, CO: U.S. Department of the Interior, USFWS.

[61] U.S. Geological Survey. 1994. 7.5-minute series Lone Pine, CA topographic quadrangle. Denver, CO.

[62] U.S. Geological Survey. 1987. 7.5-minute series Owens Lake, CA topographic quadrangle. Denver, CO.

[63] U.S. Geological Survey. 1987. 7.5-minute series Keeler, CA topographic quadrangle. Denver, CO.

[64] U.S. Geological Survey. 1987. 7.5-minute series Dolomite, CA topographic quadrangle. Denver, CO.

[65] U.S. Geological Survey. 1987. 7.5-minute series Bartlett, CA topographic quadrangle. Denver, CO.

[66] U.S. Geological Survey. 1987. 7.5-minute series Vermillion Canyon, CA topographic quadrangle. Denver, CO.

[67] U.S. Geological Survey. 1994. 7.5-minute series Olancha, CA topographic quadrangle. Denver, CO.

[68] U.S. Fish and Wildlife Service. Last updated 21 March 2006. *National Wetlands Inventory*. Portland, OR. Available at: http://www.fws.gov/nwi

[69] Mendez, Irena, Sapphos Environmental, Inc., Pasadena, CA. 8 August 2007. Letter to Mr. Bruce Henderson, U.S. Army Corps of Engineers, Ventura, CA. Subject: Determination of Jurisdictional Areas for the 2008 Supplemental Control Requirements for the Owens Valley PM10 Planning Area Demonstration of Attainment State Implementation Plan.

[70] Mendez, Irena, Sapphos Environmental, Inc., Pasadena, CA. 7 September 2007. Letter to Mr. Bruce Henderson, U.S. Army Corps of Engineers, Ventura, CA. Subject: Clarification to Determination of Jurisdictional Areas for the 2008 Supplemental Control Requirements for the Owens Valley PM10 Planning Area Demonstration of Attainment State Implementation Plan.

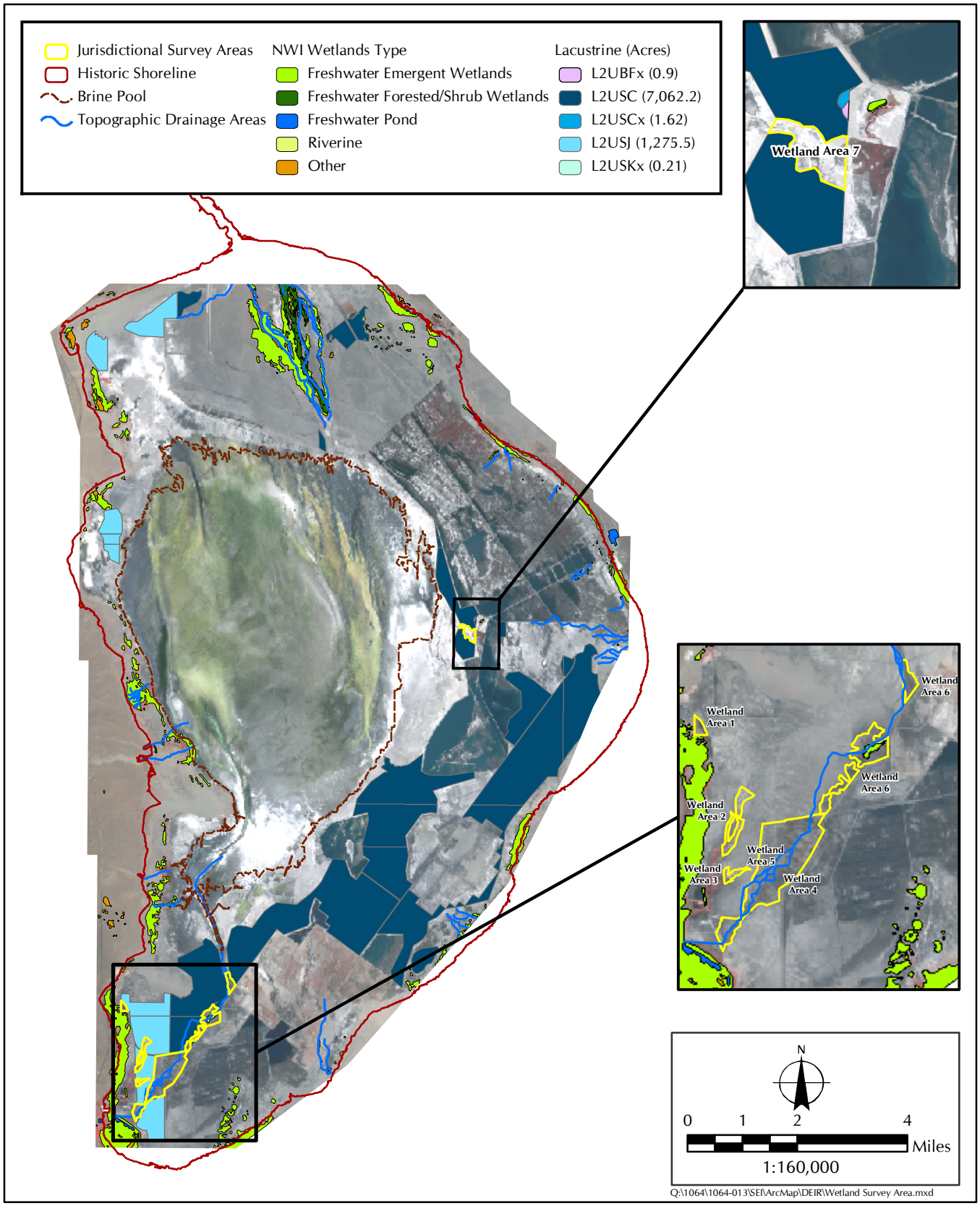


FIGURE 3.2.2-1

Jurisdictional Wetlands and Waters Survey Areas

characterized by the presence of dominant plant species.[71] Plant communities were delineated in the field using 1:24,000 (1 inch equals 2,000 feet) scale printed digital color satellite images from June 2007 with a spatial resolution of 1.0 meter (3 feet). The imagery product used was derived from the IKONOS satellite sensor and was not radiometrically corrected. The vegetation assemblages described in this report follow the system used by the CDFG, namely the Sawyer and Keeler-Wolf classification (Figure 3.2.2-2, *Plant Communities*).[72,73] The plant community mapping evaluated all but 0.5 square mile of Moat & Row test sites; these areas were covered by LADWP contractors.

Botanical names and common names are according to Hickman.[74] Common names not available from Hickman are taken from Munz,[75] Dale,[76] McAuley,[77] or Roberts.[78] Ornamental plant species not found in those sources are taken from the *Sunset Western Garden Book*.[79]

Although the majority of the proposed project area is dominated by barren playa with little or no vegetation, two plant communities are represented: Dry Alkali Meadow and Shadscale (Figure 3.2.2-2, and Table 3.2.2-1, *Plant Communities Present within the Proposed Project Area)*.

TABLE 3.2.2-1
PLANT COMMUNITES PRESENT WITHIN
THE PROPOSED PROJECT AREA

Plant Community	Element Code/Type	Current Status	Acres (Percent of total)
Barren	N/A	N/A	8,506 (91%)
Dry Alkali Meadow, a type of Transmontane Alkali Meadow (TAM)	41.200.00 (CNDDB) 45310 (Holland)*	G3, S2.1	413 (4%)
Shadscale	36.320.00 (CNDDB) 36140 (Holland)	G4, S3.2	425 (5%)
TOTAL			**9,344**

KEY:
Gx = Global ranks (CNDDB)
G1: Fewer than 6 viable occurrences worldwide and/or 2,000 acres
G2: 6 to 20 viable occurrences worldwide and/or 2,000–10,000 acres
G3: 21–100 viable occurrences worldwide and/or 10,000–50,000 acres

[71] Munz, Philip A., and D.D. Keck. 1949. "California Plant Communities." *El Aliso, 2*(1): 87–105. Berkeley: University of California Press.

[72] Sawyer, J.O., and T. Keeler-Wolf. 1995. *A Manual of California Vegetation*. Sacramento, CA: California Native Plant Society.

[73] Sawyer, J.O., and T. Keeler-Wolf. 1995. *A Manual of California Vegetation*. Sacramento, CA: California Native Plant Society.

[74] Hickman, J.C. 1993. *The Jepson Manual: Higher Plants of California*. Berkeley, CA: University of California Press.

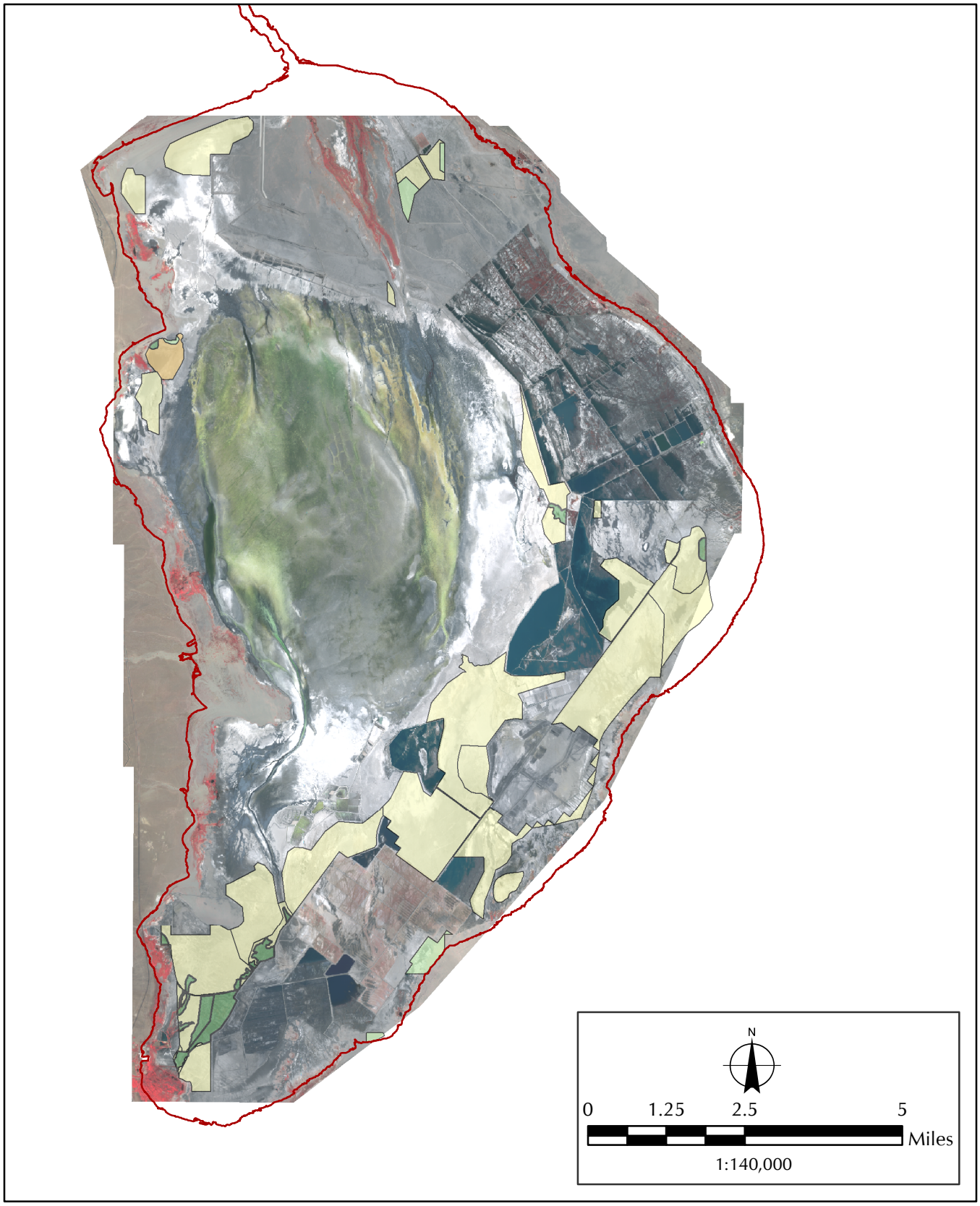
[75] Munz, Philip A. [1954] 2005. *A Flora of Southern California*. Berkeley, CA: University of California Press.

[76] Dale, Nancy. 1986. *Flowering Plants: The Santa Monica Mountains, Coastal & Chaparral Regions of Southern California* (Photographs by members of the California Native Plant Society). Santa Barbara, CA: Capra.

[77] McAuley, Milt. 1985. *Wildflowers of the Santa Monica Mountains*. Canoga Park, CA: Canyon.

[78] Roberts, Fred M., Jr. January 1989. *A Checklist of the Vascular Plants of Orange County, California*. Museum of Systematic Biology: Research Series No. 6. Irvine, CA: University of California Press.

[79] Brenzel, Kathleen Norris, ed. February 2001. *Sunset Western Garden Book*. Menlo Park, CA: Sunset.



Historic Shoreline

Plant Communities

Barren

Dry Alkaline Meadow

Shadscale

Scattered Shadscale - Low Density

FIGURE 3.2.2-2

Plant Communities

G4: Greater than 100 viable occurrences worldwide and/or greater than 50,000 acres
G5: Community demonstrably secure due to worldwide abundance

Sx = State ranks (CNDDB; the state rank is assigned much the same way as the global rank, except state ranks in California often also contain a threat designation. Threat designation does not constitute legal protective status.)
S1: Fewer than 6 viable occurrences statewide and/or fewer than 2,000 acres
S2: 6 to 20 viable occurrences statewide and/or 2,000–10,000 acres
S3: 21 to 100 viable occurrences statewide and/or 10,000–50,000 acres
S4: Greater than 100 viable occurrences statewide and/or greater than 50,000 acres
S5: Community demonstrably secure statewide
Threat ranks (CNDDB)
x.1: Very threatened x.2: Threatened x.3: No current threats known

* = Pursuant to Holland, merits special consideration

SOURCES:

California Department of Fish and Game. 2005. *Rarefind3: California Natural Diversity Database*. Sacramento, CA.
Sawyer, J.O., and T. Keeler-Wolf. 1995. *A Manual of California Vegetation*. Sacramento, CA: California Native Plant Society.

Barren Playa

Barren alkali playas dominate the proposed project area covering 8,506 acres or 91 percent of the proposed project area. No vascular plants grow in these areas.

Dry Alkali Meadow

Dry alkali meadow, a type of transmontane alkali meadow, covers approximately 413 acres of the proposed project area. Saltgrass (*Distichlis spicata*) dominates this habitat type. The most common co-occurring plant species occurring in Dry Alkali Meadow after saltgrass are alkali pink (*Nitrophila occidentalis*), shadscale (*Atriplex confertifolia*), and Parry's saltbush (*Atriplex parryi*), which all occur on slight rises within the saltgrass clumps. On the western edge, particularly in the southwestern corner, are a number of additional species in low numbers, including common three-square (*Schoenoplectus pungens*), baltic rush (*Juncus balticus*), and many upland species listed in the floral compendium (Appendix D). This plant community corresponds to Sawyer and Keeler-Wolf's Saltgrass series (CNDDB Code 41.200.00) and Holland's Alkali Meadow (Element Code: 45310).[80,81]

The dry alkali meadow within the proposed project area has been determined to be emissive. The emissivity of these areas has adversely affected plant cover and associated habitat values. Due to their emissivity, the District has determined that dust control is required to meet the National Ambient Air Quality Standards.

Shadscale

Shadscale-dominated habitat occurs on approximately 425 acres of the proposed project site. Parry's saltbush also occurs in this type, and is considered by other investigators to be a local dominant. This community type includes a few other species such as: saltgrass, greasewood (*Sarcobatus vermiculatus*), and bush seepweed (*Suaeda moquinii*). This community corresponds to Sawyer and Keeler-Wolf's Shadscale series (CNDDB Code 36.320.00) and Holland's Shadscale scrub (Element Code: 36140).[82,83]

[80] Sawyer, J.O., and T. Keeler-Wolf. 1995. *A Manual of California Vegetation*. Sacramento, CA: California Native Plant Society.

[81] Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Sacramento, CA: California Department of Fish and Game.

[82] Sawyer, J.O., and T. Keeler-Wolf. 1995. *A Manual of California Vegetation*. Sacramento, CA: California Native Plant Society.

State-Designated Sensitive Plant Communities

There are no riparian plant communities present within the proposed project area. The barren playa and shadscale scrub plant communities that are present within the proposed project area are not state-designated sensitive plant communities. The 413 acres of dry alkali meadow constitute a state-designated sensitive plant community (Figure 3.2.2-2).

Rare, Threatened, and Endangered Species

Listed species are those species provided special legal protection under the federal ESA, the California ESA, or both. A federally or state-listed endangered species is a species that is in danger of extinction throughout all or a significant portion of its range. A federally or state-listed threatened species is one that is likely to become endangered in the absence of special protection or management efforts provided by the listing. A candidate species is one that is proposed by the federal or state government for listing as endangered or threatened.

As a result of the literature review, one plant species and nine wildlife species federally or state listed as rare, threatened, or endangered were identified as having the potential to occur in the vicinity of the proposed project area, including:

- Owens Valley checkerbloom (*Sidalcea covillei*)
- Owens tui chub (*Gila bicolor snyderi*)
- Owens pupfish (*Cyprinodon radiosus*)
- Desert tortoise (*Gopherus agassizii*)
- Bald eagle (*Haleaeetus leucocephalus*)
- Swainson's hawk (*Buteo swainsoni*)
- American peregrine falcon (*Falco peregrinus anatum*)
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)
- Least Bell's vireo (*Vireo bellii pusillus*)
- Mohave ground squirrel (*Spermophilus mohavensis*)

Plants

There is one plant species listed as endangered, identified as a result of the literature review and habitat assessment as having the potential to occur within the region of the proposed project: Owens Valley checkerbloom.

Owens Valley Checkerbloom

The Owens Valley checkerbloom was determined to be absent in the proposed project area as a result of directed surveys. Directed surveys were guided by information on the distribution, description, habitat requirements, and reproduction of listed plant species gathered from the following sources: CNDDB,[84] flora reference texts,[85,86,87] and a review of previously completed environmental

[83] Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Sacramento, CA: California Department of Fish and Game.

[84] California Department of Fish and Game. 2007. *Rarefind 3.0.1: A Database Application for the Use of the California Department of Fish and Game Natural Diversity Database*. Sacramento, CA.

[85] Munz, Philip A. and David D. Keck, 1959. A California Flora. Berkeley, CA: University of California Press.

documentation.[88,89] Surveys for Owens Valley checkerbloom were conducted by Sapphos Environmental, Inc. (Dr. Frank Landis, Mr. Douglas McNair, Ms. Kara Donohue, and Mr. Jack Goldfarb). Surveys were conducted on June 20, 21, and 22, 2007, during the known flowering period for this species, and included all areas supporting Dry Alkali Meadow. Suitable habitat was present for the Owens Valley checkerbloom in the transmontane alkali meadow communities, but the plant was not observed during focused surveys (Table 3.2.2-2, *Listed Species with the Potential to Occur within the Proposed Project Area)*.

TABLE 3.2.2-2
LISTED SPECIES WITH THE POTENTIAL TO OCCUR WITHIN THE PROPOSED PROJECT AREA

Species	Status	Habitat	Occurrence
Plants			
Owens Valley checkerbloom (*Sidalcea covillei*)	SE	Associated with alkaline meadows in Owens Valley at elevation range of 1,075–1,425 meters.	Surveyed for in 1995–1996, 1999–2001, and 2003 Dust Control Project sites, but not found; not found at two air quality monitoring sites during 2004 surveys on west side of Owens Lake; determined absent as a result of 2007 directed surveys.
Wildlife			
American peregrine falcon (*Falco peregrinus anatum*)	SE	Scarce migrants may occur at sites in the desert where suitable avian prey is concentrated, such as shorebird populations at flooded areas on Owens Lake.	One seen near Cartago Creek during 1995–1996 surveys; none observed during spring 2003 surveys within the proposed project site. A single bird observed during 2007 western snowy plover surveys.

KEY:
FE = Listed as endangered under the federal ESA
FC = Listed as candidate under the federal ESA
FT = Listed as threatened under the federal ESA
PE = Proposed to be listed as endangered under the federal ESA
SE = Listed as endangered by the State of California
SR = Listed as rare by the State of California
ST = Listed as threatened under the State of California

Wildlife

There are nine wildlife species listed as endangered or threatened identified as having the potential to occur within the region of the proposed project. Of these nine species, it was determined that eight of these species (Owens tui chub, Owens pupfish, desert tortoise, bald eagle, Swainson's hawk, western

[86] Hickman, J.C. 1993. *The Jepson Manual Higher Plants of California*. Berkeley, CA: University of California Press.

[87] Tibor, David P. 2001. *Inventory of Rare and Endangered Plants of California*. Sacramento, CA: California Native Plant Society.

[88] City of Los Angeles Department of Water and Power. 2001. *Mitigated Negative Declaration Southern Zones Dust Control Project, Owens Lake Dust Mitigation Program, Owens Lake, California. Prepared by CH2M HILL,* Santa Ana, CA.

[89] City of Los Angeles Department of Water and Power. 2002. *Rare Plant Survey Report Owens Dry Lake Dust Control Project Sites*. Los Angeles, CA.

yellow-billed cuckoo, least Bell's vireo, and Mohave ground squirrel) do not have the potential to occur within the proposed project area due to a lack of suitable habitat.

American Peregrine Falcon

The remaining endangered wildlife species, American peregrine falcon, was determined to have the potential to occur within the proposed project site, and hence was targeted for directed surveys (Table 3.2.2-2*)*. One American peregrine falcon adult was observed as a result of directed surveys. No suitable nesting habitat exists within the proposed project site; however, suitable foraging habitat exists throughout the proposed project site. Surveys for American peregrine falcon were conducted during snowy plover surveys in May 2007 and on June 20, 21, and 22, 2007 within the proposed project area.

Sensitive Species

Sensitive species are those that are not listed by the federal or state government as endangered, threatened, or candidate species, but which are categorized by the federal government as a federal species of concern or by the state government as a species of special concern or fully protected species. Federal species of concern is a term-of-art that describes a taxon whose conservation status may be of concern to the USFWS, but does not have official status. In addition, the sensitive species include those designated as such by the BLM and the U.S. Forest Services.

As a result of the literature review, no sensitive plant species and 36 sensitive wildlife species were identified as having the potential to occur in the vicinity of the proposed project area, including:

- Owens speckled dace (*Rhinicthys osculus* ssp.)
- Owens sucker (*Catostomus fumeiventris*)
- Northern sagebrush lizard (*Sceloporus graciosus graciosus*)
- Double-crested cormorant (*Phalacrocorax auritus*)
- Western least bittern (*Ixobrychus exilis hesperis*)
- White-faced ibis (*Plegadis chihi*)
- Osprey (*Pandion haliaetus*)
- Northern harrier (*Circus cyaneus*)
- Sharp-shinned hawk (*Accipiter striatus*)
- Cooper's hawk (*Accipiter cooperi*)
- Ferruginous hawk (*Buteo regalis*)
- Golden eagle (*Aquila chrysaetos*)
- Merlin (*Falco columbarius*)
- Prairie falcon (*Falco mexicanus*)
- Western snowy plover (*Charadrius alexandrinus nivosus*)
- Mountain plover (*Charadrius montanus*)
- Long-billed curlew (*Numenius americanus*)
- California gull (*Larus californicus*)
- Burrowing owl (*Athene cunicularia*)
- Vaux's swift (*Chaetura vauxi*)
- Loggerhead shrike (*Lanius ludovicianus*)
- Le Conte's thrasher (*Toxostoma lecontei*)
- Virginia's warbler (*Vermivora luciae*)

- Yellow warbler (*Dendroica petechia brewsteri*)
- Yellow-breasted chat (*Icteria virens*)
- Tricolored blackbird (*Agelaius tricolor*)
- Pallid bat (*Antrozous pallidus*)
- Townsend's big-eared bat (*Corynorhinus townsendii*)
- Spotted bat (*Euderma maculatum*)
- Western small-footed myotis (*Myotis ciliolabrum*)
- Long-eared myotis (*Myotis evotis*)
- Long-legged (hairy-winged) myotis (*Myotis volans*)
- Yuma myotis (*Myotis yumanensis*)
- Owens Valley vole (*Microtus californicus vallicola*)
- Southern grasshopper mouse (*Onychomys torridus ramona*)
- American badger (*Taxidea taxus*)

Plants

There are no sensitive plant species designated as California Species of Special Concern by the CDFG identified as having the potential to occur within the region of the proposed project.

Wildlife

There are 36 sensitive wildlife species designated as California Species of Special Concern by the CDFG identified as having the potential to occur within the region of the proposed project. Of these 36 species, it was determined that 28 of these species, Owens speckled dace, Owens sucker, northern sagebrush lizard, double-crested cormorant, western least bittern, white-faced ibis, osprey, sharp-shinned hawk, Cooper's hawk, ferruginous hawk, golden eagle, mountain plover, long-billed curlew, California gull, burrowing owl, Vaux's swift, loggerhead shrike, Le Conte's thrasher, Virginia's warbler, yellow warbler, yellow-breasted chat, tricolored blackbird, western small-footed myotis, long-eared myotis, long-legged myotis, Yuma myotis, southern grasshopper mouse, and American badger, do not have the potential to occur with the proposed project area due to a lack of suitable habitat (Appendix D).

The remaining eight sensitive wildlife species (northern harrier, merlin, prairie falcon, western snowy plover, pallid bat, Townsend's big-eared bat, spotted bat, and Owens Valley vole) were determined to have the potential to occur within the proposed project site, and hence were targeted for directed surveys and habitat assessments (Table 3.2.2-3, *Sensitive Wildlife Species with the Potential to Occur within the Proposed Project Area)*.

TABLE 3.2.2-3
SENSITIVE WILDLFE SPECIES WITH THE POTENTIAL TO OCCUR WITHIN THE PROPOSED PROJECT AREA

Species	Status	Habitat	Occurrence
northern harrier (*Circus cyaneus*) (Nesting)	CSC	Nests in riparian habitats and forages over open grasslands, marshes, and wetland areas	Found in marsh areas (nesting) during 1995–1996 and 2002 surveys at Owens River delta, Keeler ponds, and Swedes Pasture; not found during spring 2003 surveys within the proposed project area; not found at two air quality monitoring sites during surveys on west side of Owens Lake on August 4, 2004; observed foraging within the proposed project area as a result of 2007 directed surveys.
merlin (*Falco columbarius*) (wintering)	CSC	Migrant and winter residents found in areas in the desert where suitable avian prey is concentrated, such as shorebirds	Found wintering in the Owens River delta in January 1996; not found during spring 2003 surveys within the proposed project area; determined absent in the proposed project area as a result of 2007 directed surveys. However, the proposed project area is within the winter range of this species.
Prairie falcon (*Falco mexicanus*)	CSC	Nests on cliff faces	Found at Cottonwood Spring, Cartago Creek, northeast of Dirty Socks, Swedes Pasture, and Owens River delta during 1995–1996 surveys; not found during 2002–2003 surveys within the proposed project area; not found at two air quality monitoring sites during surveys on west side of Owens Lake on August 4, 2004; a single bird was observed foraging over the proposed project area as a result of directed surveys in 2007.

TABLE 3.2.2-3
SENSITIVE WILDLFE SPECIES WITH THE POTENTIAL TO OCCUR WITHIN THE PROPOSED PROJECT AREA, Continued

Species	Status	Habitat	Occurrence
western snowy plover (*Charadrius alexandrinus nivosus*)	CSC	Prefers sandy beaches, salt pond levees and shores of large alkali lakes	Observed in barren playa and selected upland areas of the Owens Lake bed, in proximity to surface water and seeps areas as a result of surveys undertaken in 1989, 1993, 1996 and annually between 2001 and 2006, surveys; nested on playa during 1989, 1993, 1996, and 2003 surveys; not found at two air quality monitoring sites during surveys on west side of Owens Lake in August 2004; observed in historic nesting areas and within the proposed project area as a result of directed surveys undertaken in 2007.
pallid bat (*Antrozous pallidus*)	CSC, BLM	Resides in deserts, grasslands, shrublands; most common in open, dry habitats with rock areas	Not found during 1995–1996 at dust control project sites; not found at two air quality monitoring sites during surveys on west side of Owens Lake on August 4, 2004; found foraging over meadows at Owens River delta, Keeler Ponds, and Dirty Socks in 1995–1996; determined absent within the proposed project area as a result of 2007 directed surveys.
Townsend's big-eared bat (*Corynorhinus townsendii*)	CSC, BLM	Lives in a variety of habitats throughout the desert regions of California; forages over mesic and riparian corridors	Surveyed for in 1995–1996 at dust control project sites, but not found; found east of State Highway 136 outside of project area; determined absent within the proposed project area as a result of 2007 directed surveys.
spotted bat (*Euderma maculatum*)	CSC, BLM	Lives in a variety of habitats throughout California	Found foraging over Owens Lake during 1995–1996 and 2003 surveys; determined absent within the proposed project area as a result of 2007 directed surveys.

TABLE 3.2.2-3
SENSITIVE WILDLFE SPECIES WITH THE POTENTIAL TO OCCUR WITHIN THE PROPOSED PROJECT AREA, Continued

Species	Status	Habitat	Occurrence
Owens Valley vole (*Microtus californicus vallicola*)	CSC	Found in friable soils of wetlands and lush grassy ground in the Owens Valley	Surveyed for during May 1990 survey in support of Lake Minerals project (OLSAC Draft EIR/EIS, 1994); several found during 1996 surveys at the north Flood irrigation plot site; found during focused surveys in Swedes Pasture and Dirty Socks spring; sign found at Sulfate Well and Sulfate Road in 2003; not found at two air quality monitoring sites during surveys on west side of Owens Lake on August 4, 2004; determined absent within the proposed project area as a result of 2007 directed surveys.

KEY:
CSC = California Species of Special Concern
BLM = BLM Sensitive species

Western Snowy Plover

The presence of western snowy plover at Owens Lake is well documented. Western snowy plover breeds on barren to sparsely vegetated ground at alkaline or saline lakes, reservoirs, and ponds.[90] At Owens Lake, snowy plovers nest in relatively flat areas of barren playa with sandy and gravelly substrate and other gravel-covered surfaces including berms and roadways. In 1997, prior to the installation of dust control measures (DCMs), there were 16,161 acres of snowy plover habitat (Figure 3.2.2-3, *Pre-1997 Estimated Snowy Plover Habitat at Owens Lake*). The construction and operation of Shallow Flooding DCMs required as a result of the 1998 SIP and 2003 SIP has substantially increased the western snowy plover habitat at Owens Lake to an estimated 34,359 acres of snowy plover habitat (Figure 3.2.2-4, *Current Estimated Snowy Plover Habitat at Owens Lake*). Implementation of the 2008 SIP would result in an increase to approximately 46,932 acres of snowy plover habitat (Figure 3.2.2-5, *Post-2008 Estimated Western Snowy Plover Habitat at Owens Lake*).

As a result of the research undertaken in preparation of the 2003 SIP, a population of 272 western snowy plovers was defined as the baseline population for Owens Lake. The lake-wide survey for the 2003 SIP observed a total of 401 snowy plovers and the years following implementation of the 2003 SIP observed 658 in 2004, 505 in 2005, and 602 in 2006. The lake-wide survey for western snowy plover conducted in 2007 recorded 421 snowy plovers, which appears to correlate a range-wide decline recorded for the western snowy plovers in 2007.[91] A total of 81 individual adult plovers, 22 nests, and 5 broods were observed during 2007 snowy plover surveys at the proposed project site.

[90] Page, G.W., J. S. Warriner, J.C. Warriner, and P.W.C. Paton. 1995. "Snowy Plover (*Charadrius alexandrinus*)." In *The Birds of North America,* No. 154. A. Poole and F. Gill, eds. Philadelphia, PA: The Academy of Natural Sciences; and Washington, DC: The American Ornithologists' Union.

[91] Page, Gary, Point Reyes Bird Observatory, Petaluma, CA. 5 June 2007. E-mail correspondence with Mr. Edward Belden, Sapphos Environmental, Inc., Pasadena, CA.

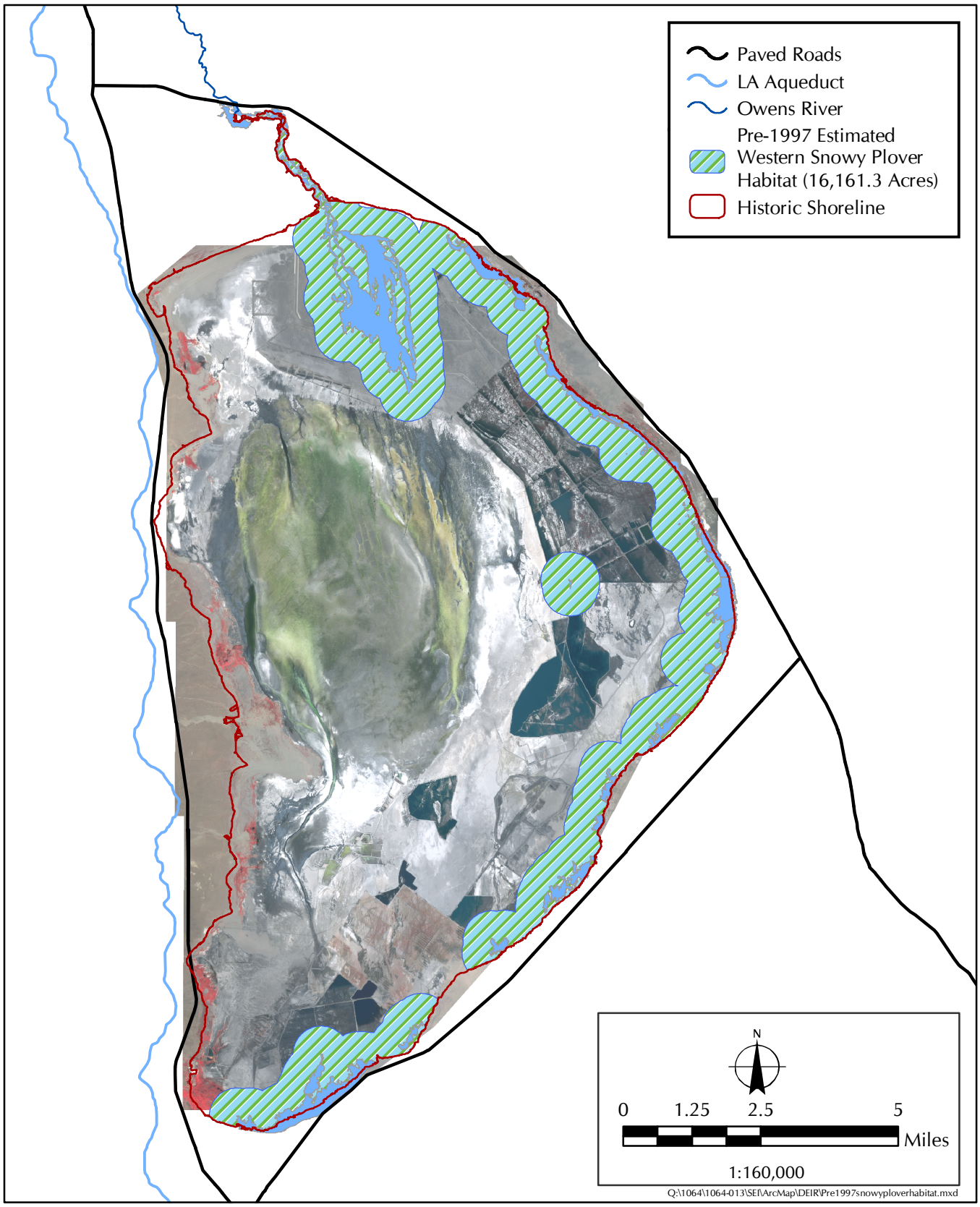


FIGURE 3.2.2-3

Pre-1997 Estimated Western Snowy Plover Habitat at Owens Lake

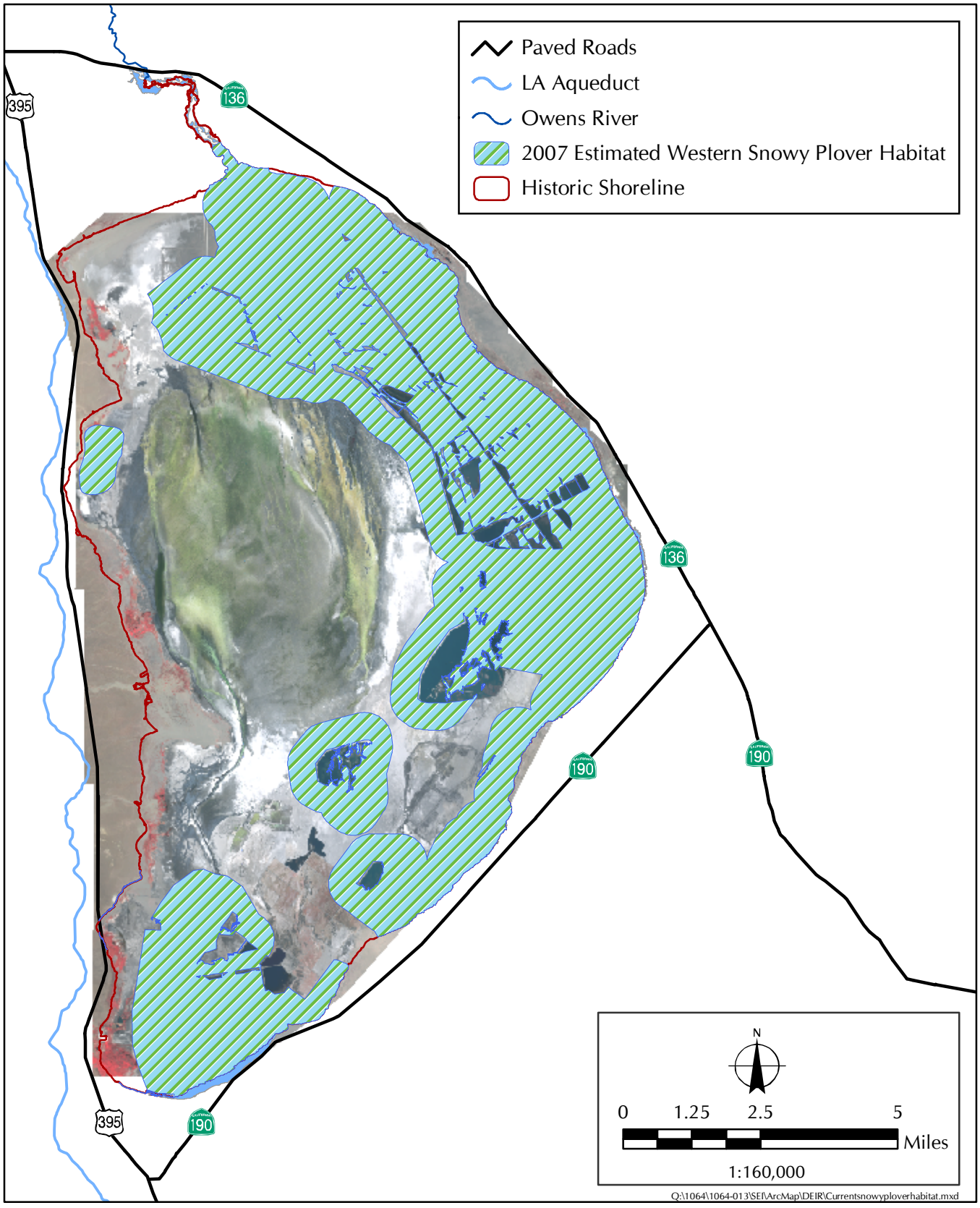


FIGURE 3.2.2-4

Current Estimated Western Snowy Plover Habitat at Owens Lake

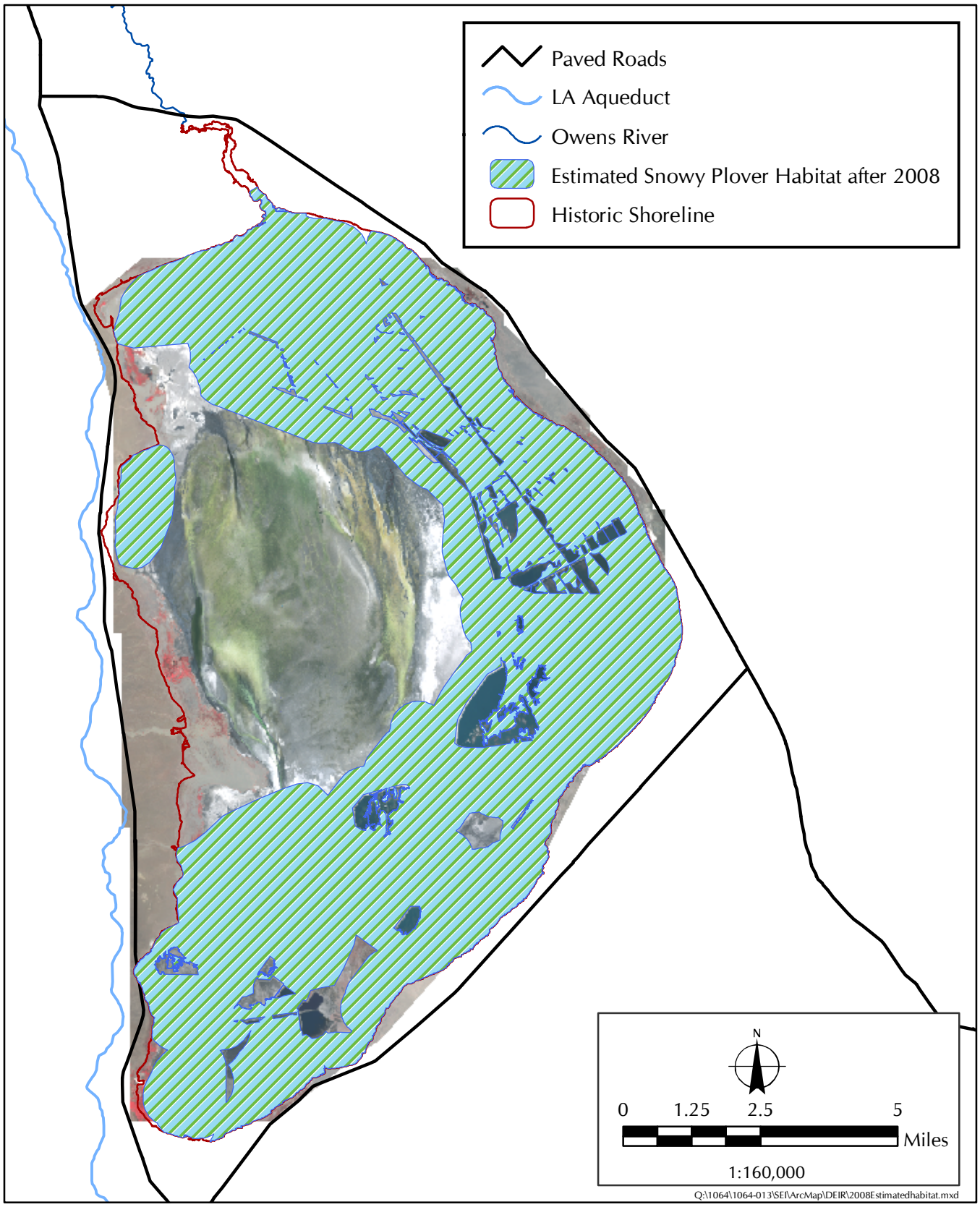


FIGURE 3.2.2-5

Post-2008 Estimated Western Snowy Plover Habitat at Owens Lake

Adult plovers, nests, and broods were found in both Channel Areas. Adult plovers and nests were found in two of the four Study Areas (Figure 3.2.2-6, *Proposed Project Area: 2007 Adult Western Snowy Plover Observations* and Figure 3.2.2-7, *Proposed Project Area: 2007 Western Snowy Plover Nests and Broods*). During a lake-wide survey of snowy plovers in 1978, 499 individual birds were observed. In 1999, plover numbers reached a low of 22 individuals in a lake-wide survey.

Locally Important Species

Species that are not monitored by the resource agencies but are monitored by private organizations or local municipal governments are considered to be locally important species. For the purposes of this report, locally important species include plants recognized by the CNPS, a private organization dedicated to the conservation of native plants; and wildlife recognized by the Inyo County, Audubon Society and the 2003 SIP.[92]

As a result of the literature review, 12 plant species and 11 wildlife species designated as locally important were identified as having the potential to occur in Owens Lake basin, including:

- Sanicle cymopterus (*Cymopterus ripleyi* var. *saniculoides*)
- Parish's popcorn-flower (*Plagiobothrys parishii*)
- Darwin rock cress (*Arabis pulchra* var. *munciensis*)
- Naked milk-vetch (*Astragalus serenoi* var. *shockleyi*)
- Inyo phacelia (*Phacelia inyoensis*)
- Creamy blazing star (*Mentzelia tridentata*)
- Booth's evening primrose (*Camissonia boothii* ssp. *boothii*)
- Sagebrush loeflingia (*Loeflingia squarrosa* var. *artemisiarum*)
- Narrow-leaved cottonwood (*Populus angustifolia*)
- Nevada oryctes (*Oryctes nevadensis*)
- Inyo County star-tulip (*Calochortus excavatus*)
- Alkali cord grass (*Spartina gracilis*), moth (no common name) (*Tescalsia giulianiata*)
- Monarch butterfly (*Danaus plexippus*)
- Alkali skipper (*Pseudocopaeodes eunus*)
- Owens valley tiger beetle (*Cicindela tranquebarica inyo*)
- Alkali flats tiger beetle (*Cicindela willistoni pseudosenilis*)
- Slender-girdled tiger beetle (*Cicindla tenuicincta*)
- Owens dune weevil (*Trigonoscuta owensii*)
- Willet (*Catoptrophorus semipalmatus*)
- Franklin's gull (*Larus pipixcan*)
- Nuttall's woodpecker (*Picoides nuttallii*)
- Sage sparrow (*Amphispiza belli*)

[92] Great Basin Unified Air Pollution Control District. 23 October 1996. *2003 Owens Valley PM_{10} Demonstration of Attainment State Implementation Plan.* Bishop, CA.

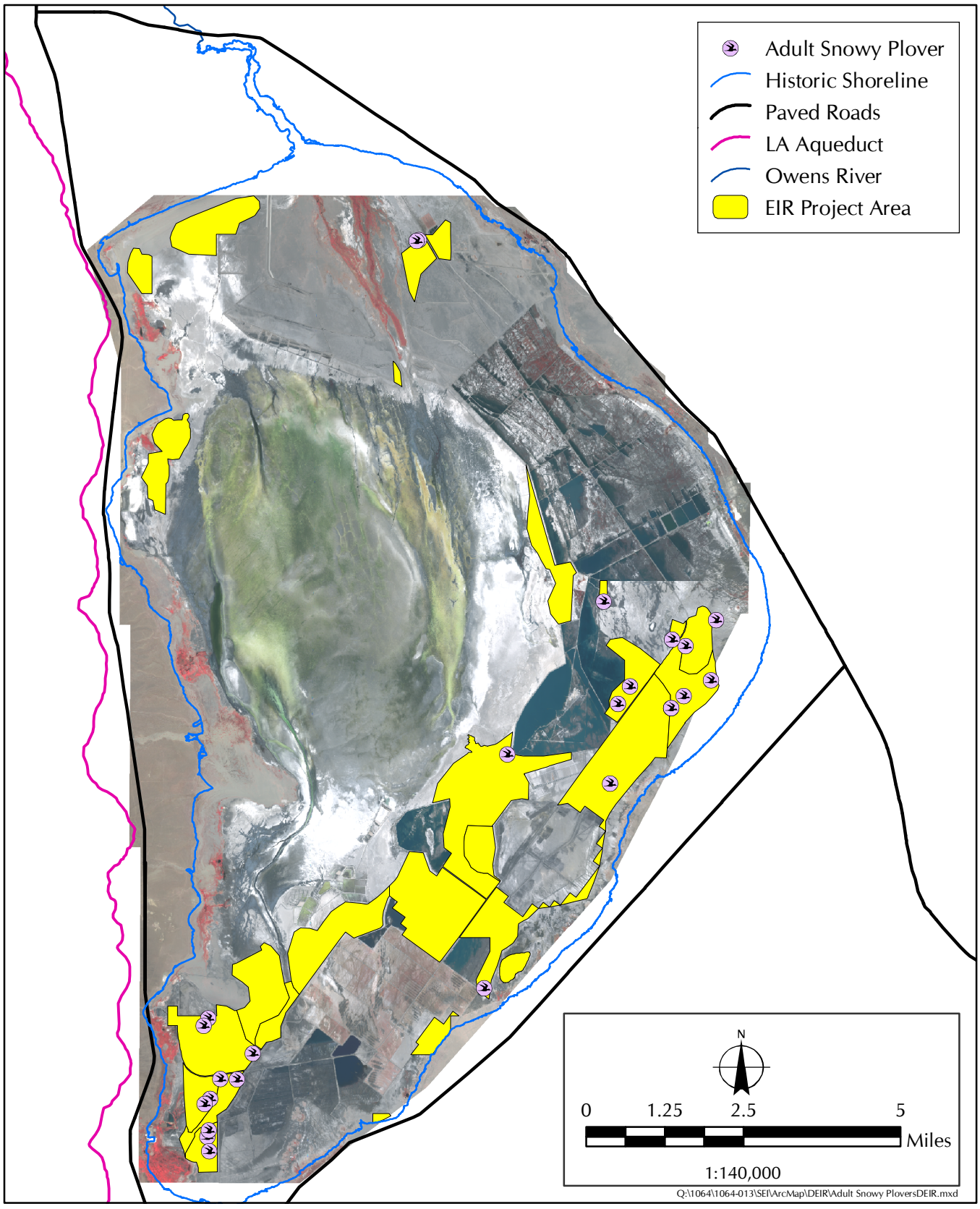


FIGURE 3.2.2-6

Proposed Project Area: 2007 Adult Western Snowy Plover Observations

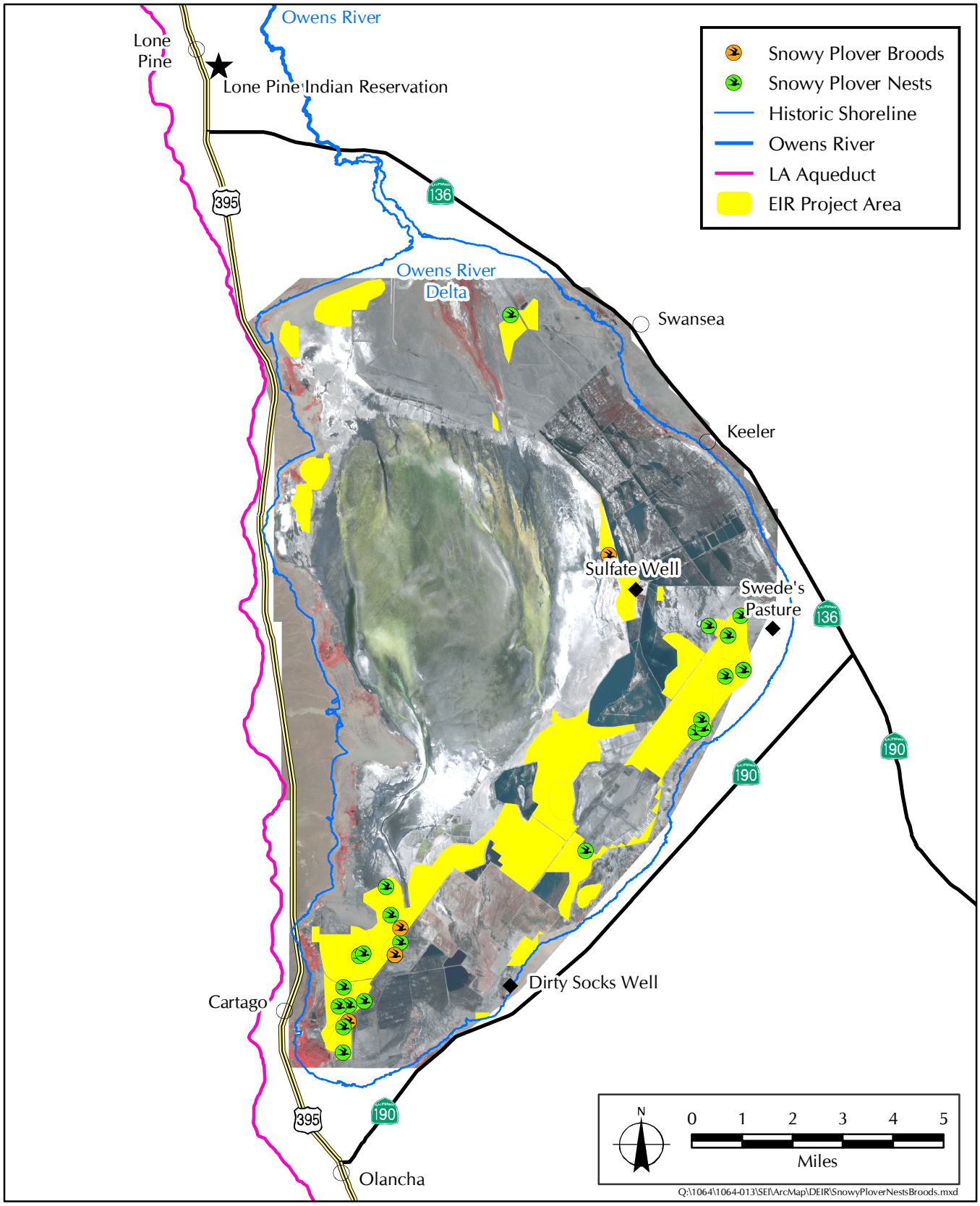


FIGURE 3.2.2-7

Proposed Project Area: 2007 Western Snowy Plover Nests and Broods

Plants

There are 12 plant species designated as locally important pursuant to the CNPS identified as having the potential to occur within the region of the proposed project. Of these 12 species, it was determined that 9 of these species, sanicle cymopterus, Parish's popcorn-flower, Darwin rock cress, naked milk-vetch, creamy blazing star, Booth's evening primrose, sagebrush loeflingia, narrow-leaved cottonwood, and Nevada oryctes, do not have the potential to occur with the proposed project area due to a lack of suitable habitat (Appendix D). The remaining 3 locally important plant species, Inyo phacelia, Inyo County star-tulip, and alkali cord grass, were determined to have the potential to occur within the proposed project area, and hence were targeted for directed surveys (Table 3.2.2-4, *Locally Important Species with the Potential to Occur within the Proposed Project Area)*.

TABLE 3.2.2-4
LOCALLY IMPORTANT SPECIES WITH THE POTENTIAL TO OCCUR WITHIN THE PROPOSED PROJECT AREA

Species	Status	Habitat	Occurrence
Plants			
Inyo phacelia (*Phacelia inyoensis*)	CNPS 1B	Found in alkaline meadows and seeps of Inyo County in elevations of 900–3,200 meters	Surveyed for in 1999–2001 at Dust Control Project sites, but not found; not found during 2003–2004 focused surveys within the proposed project area; determined absent within the proposed project area as a result of 2007 directed surveys.
Inyo County star-tulip (*Calochortus excavatus*)	CNPS 1B	Found among alkaline meadows in shadscale scrub in elevations of 1,150–2,000 meters	Surveyed for in 1995–1996, 1999, 2000, and 2001 at Dust Control Project sites but not found; not found during 2003–2004 focused surveys within the proposed project area; determined absent within the proposed project area as a result of 2007 directed surveys.
alkali cord grass (*Spartina gracilis*)	CNPS 4	Found in alkali meadows and seeps of Inyo County; observed at Owens Lake basin in elevations of 1,000–2,100 meters; blooms June to August	Surveyed for in 1995–1996 and 1999–2001 at Dust Control Project sites, but not found; not found during 2003–2004 focused surveys within the proposed project area; determined absent within the proposed project area as a result of 2007 directed surveys.
Wildlife			
moth (no common name) (*Tescalsia giulianiata*)	Locally rare	Dune and alkali meadow habitats	Found at Olancha Dunes and Southwest Seeps during 1995–1996 surveys; not found during 2003 surveys within the proposed project area; suitable habitat was found in dunes and sand hummocks during 2003 surveys within the proposed project area; determined absent within the proposed project area as a result of 2007 directed surveys.

TABLE 3.2.2-4
LOCALLY IMPORTANT SPECIES WITH THE POTENTIAL TO OCCUR WITHIN THE PROPOSED PROJECT AREA, Continued

Species	Status	Habitat	Occurrence
alkali skipper (*Pseudocopaeodes eunus*)	Locally rare	Dune and alkali meadow habitats	Observed at Dirty Socks during 1995–1996 surveys; not found during 2003 surveys within the proposed project area; suitable habitat was found in saltgrass dominated transmontane alkali meadow during 2003 surveys within the proposed project area; determined absent within the proposed project area as a result of 2007 directed surveys.
Owens valley tiger beetle (*Cicindela tranquebarica inyo*)	Locally rare	Dune and alkali meadow habitats	Found at Olancha Pond, Dirty Socks, and Swedes Pasture during 1995–1996 surveys; found in saltgrass dominated transmontane alkali meadow during 2003 surveys within the proposed project area; determined absent within the proposed project area as a result of 2007 directed surveys.
alkali flats tiger beetle (*Cicindela willistoni pseudosenilis*)	Locally rare	Dune and alkali meadow habitats	Found at Dirty Socks, southwest seep, and northwest of Dirty Socks during 1995–1996 surveys; determined absent within the proposed project area as a result of 2007 directed surveys.
slender-girdled tiger beetle (*Cicindla tenuicincta*)	Locally rare	Dune and alkali meadow habitats	Observed at southwest seep, and northeast of Dirty Socks during 1995–1996 surveys; not found during 2003 surveys within the proposed project area; suitable habitat was found in saltgrass dominated transmontane alkali meadow during 2003 surveys within the proposed project area; determined absent within the proposed project area as a result of 2007 directed surveys.

TABLE 3.2.2-4
LOCALLY IMPORTANT SPECIES WITH THE POTENTIAL TO OCCUR WITHIN THE PROPOSED PROJECT AREA, Continued

Species	Status	Habitat	Occurrence
Owens dune weevil (*Trigonoscuta owensii*)	Locally rare	Dune and alkali meadow habitats	Found at Olancha dunes and west of Keeler dunes during 1995–1996 surveys; found during 2003 surveys within the proposed project area; suitable habitat was found in dunes and sand hummocks during 2003 surveys within the proposed project area; determined absent within the proposed project area as a result of 2007 directed surveys.

KEY:
CNPS ranking systerm =
List 1B: Rare, threatened or endangered in California and elsewhere.
List 2: Plants is rare, threatened or endangered in California but more common elsewhere.
List 3: Plants about which we need more information.
List 4: Plants of limited distribution.
Threat ranks:
0.1: Seriously threatened in California.
0.2: Fairly threatened in California.
0.3: Not very threatened in California.
Locally rare = Designated as locally important by Inyo County, the Audubon Society, CDFG, and/or the 1997 EIR

Wildlife

There are 11 wildlife species designated as locally important, identified as having the potential to occur within the region of the proposed project. Of these 11 species, it was determined that 5 of these species, monarch butterfly, willet, Franklin's gull, Nuttall's woodpecker, and sage sparrow, do not have the potential to occur with the proposed project area due to a lack of suitable habitat (Appendix D). The remaining 6 locally important wildlife species, moth, alkali skipper, Owens valley tiger beetle, alkali flats tiger beetle, slender-girdled tiger beetle, and Owens dune weevil, were determined to have the potential to occur within the proposed project site and hence were targeted for directed surveys (Table 3.2.2-4).

Wetlands and Other Federal and State Waters

Of the seven potential wetland areas, four areas constituting 393.2 total acres are subject to USACOE jurisdiction pursuant to Section 404 and Section 401 of the Clean Water Act (Figure 3.2.2-8, *Jurisdictional Waters of the United States Analysis*), and six areas constituting 411.8 total acres are subject to CDFG jurisdiction pursuant to Section 1600 of the State Fish and Game Code (Figure 3.2.2-9, *Jurisdictional Waters Analysis*) (Table 3.2.2-5, *Jurisdictional Areas)*. The determination of areas subject to USACOE jurisdiction pursuant to Section 404 of the Clean Water Act is a conservative interpretation based on recent guidance released by the USACOE and the U.S. Environmental Protection Agency (EPA) regarding Clean Water Act jurisdiction, following the U.S. Supreme Court's

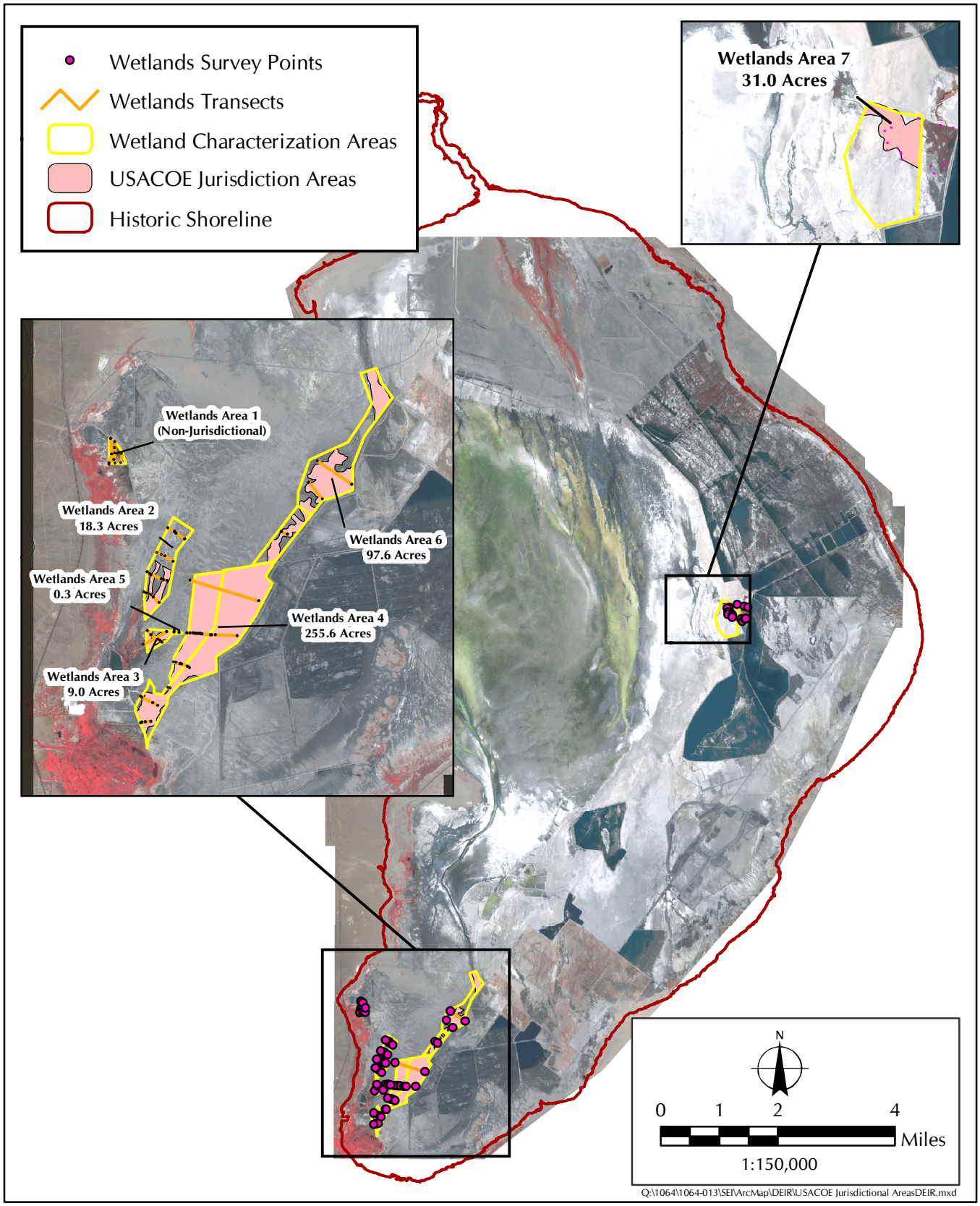


FIGURE 3.2.2-8

Jurisdictional Waters of the United States Analysis

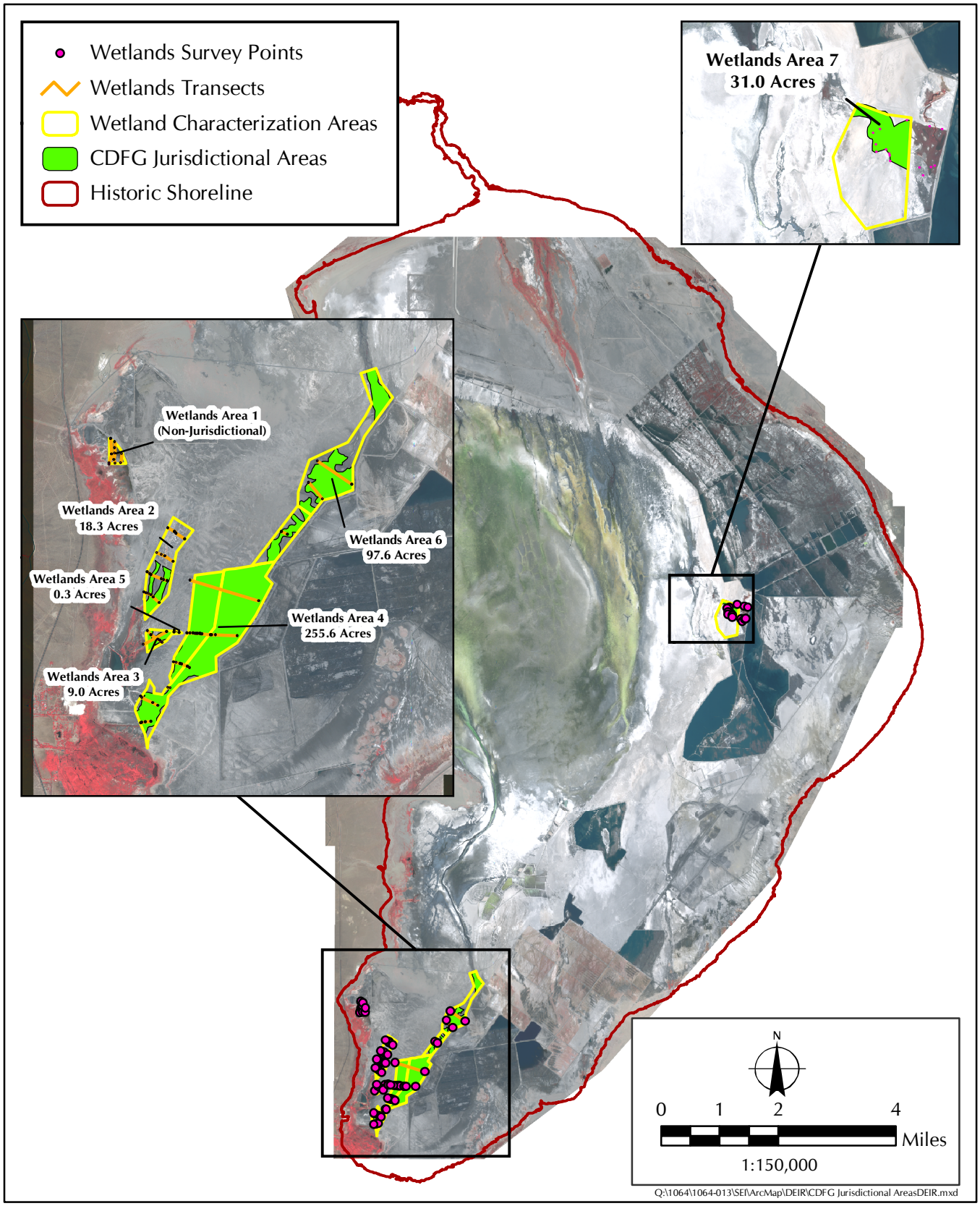


FIGURE 3.2.2-9

CDFG Jurisdictional Waters Analysis

decision in Rapanos v. United States & Carabell v. United States;[93] and is subject to interpretation by the USACOE and the EPA.

TABLE 3.2.2-5
JURISDICTIONAL WETLANDS

Potential Wetland Area	Presence of Defined Bed and Bank	Presence of Riparian Vegetation	Presence of Hydrophytic Vegetation[1]	Presence of Hydric Soil[2]	Presence of Wetland Hydrology[3]	USACOE Jurisdiction (Acres)	CDFG Jurisdiction (Acres)
1	No	Yes	Yes	No	No	N/A	N/A
2	Yes	Yes	Yes	Yes	Yes	N/A	18.3
3	Yes	Yes	Yes	Yes	Yes	9.0	9.0
4	Yes	Yes	Yes	Yes	Yes	255.6	255.6
5	Yes	Yes	Yes	No	No	N/A	0.3
6	Yes	Yes	Yes	Yes	Yes	97.6	97.6
7	Yes	Yes	Yes	Yes	Yes	31	31
					Total	**393.2**	**411.8**

KEY:

[1] Hydrophytic vegetation is defined as more than half of the dominant plant species within a habitat are hydrophytic species (i.e., plants classified as facultative, facultative wetland, and obligate species as defined by the National Wetland Inventory of Plants).

[2] Hydric soil is soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic (oxygen-depleted) conditions in its upper part (i.e., within the shallow rooting zone of the herbaceous plants).

[3] Wetland hydrology is permanent or periodic inundation or prolonged soil saturation sufficient to create anaerobic conditions in the soil.

The proposed project area also contains 8,340.43 acres of emissive barren lake bed areas mapped as lacustrine wetlands by the National Wetlands Inventory that are likely CDFG jurisdictional areas subject to a final determination by the CDFG (Figure 3.2.2-1). Because these emissive wetlands are located in active emissive areas, they require DCMs to bring them into compliance with the PM_{10} air quality standard.

Wildlife Corridors and Nursery Areas

The proposed project area supports breeding areas for the western snowy plover and other shorebirds protected under the Migratory Bird Treaty Act, and is located in close proximity to a calving area for tule elk (*Cervus elaphus nannodes*) (Figure 3.2.2-10, *Nursery Locations)*. The Owens Valley is part of the Pacific Flyway for migrating shorebirds, waterfowl, and other species. The National Audubon Society and Bird Life International have designated Owens Lake as a Nationally Important Bird Area. Owens Lake is specifically mentioned in the U.S. Shorebird Conservation Plan as an important shorebird breeding area, especially for western snowy plover. No other clearly defined wildlife movement or locations of known wildlife nursery areas were discovered. In addition, the Owens River delta is a calving area for the Owens Valley population of tule elk. Tule elk occur in wooded, shrubby,

[93] U.S. Supreme Court. 19 June 2006. *Rapanos v. United States and Carabell v. U.S. Army Corps of Engineers*. No. 126 S. Ct. 2208.

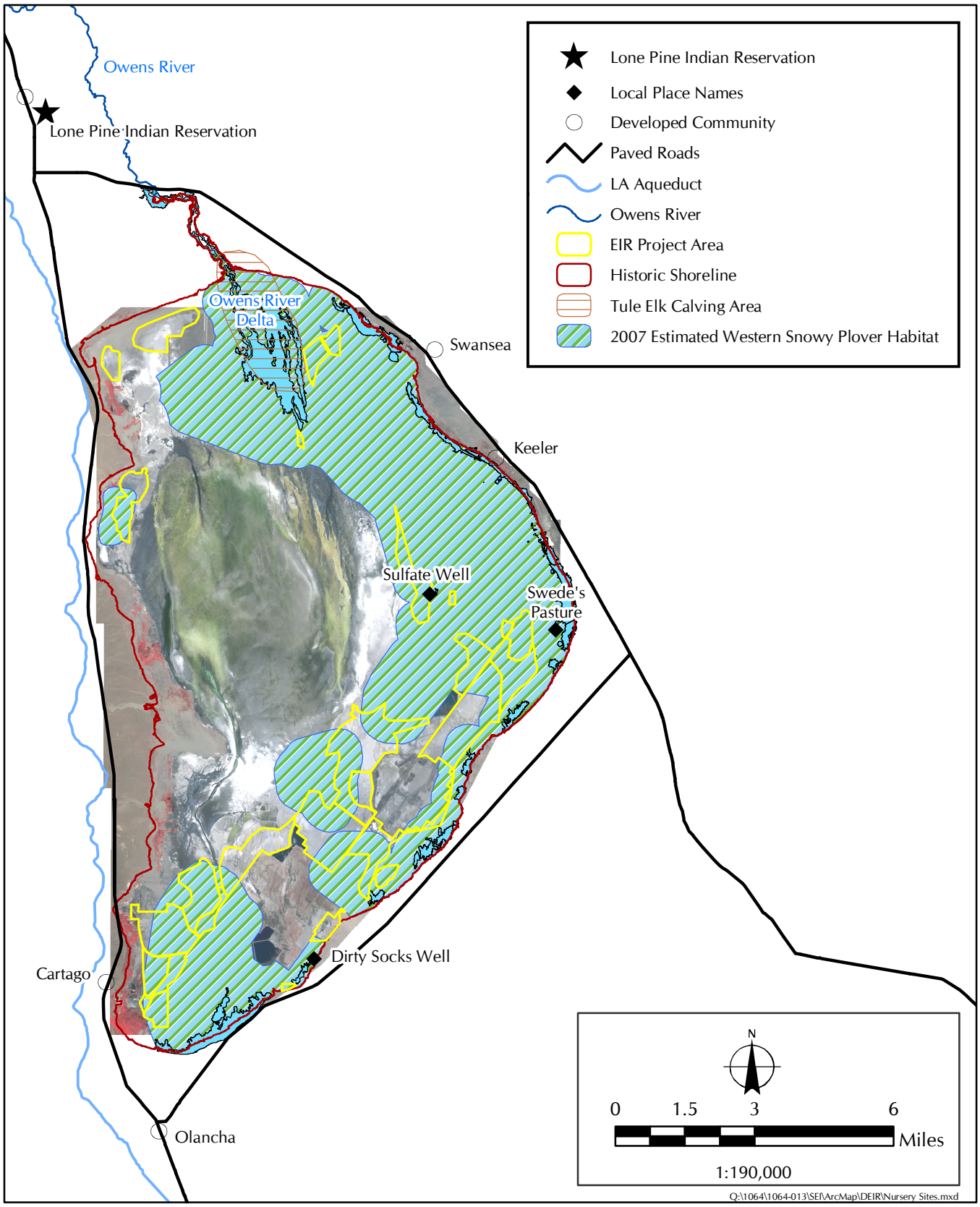


FIGURE 3.2.2-10
Nursery Locations

grassland, and riparian habitats. One of nine Owens Valley Tule elk calving areas exists on the north end of Owens Lake. The calving period for Tule elk occurs from May to June. This is the period Tule elk would be expected to be found on the lake bed. The Owens Valley Tule elk herd is managed at a population size of 300 individuals through hunting.

3.2.3 Significance Thresholds

The potential for the proposed project to result in impacts related to biological resources was analyzed in relation to the questions contained in Appendix G of the State CEQA Guidelines, and the goals and policies related to biological resources contained in the Inyo County General Plan.

The proposed project would result in significant impacts to biological resources if one or more of the following thresholds are met:

- Have a substantial adverse effect, through either direct or indirect modification of potentially suitable or occupied habitat, or direct take, to any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.

- Have an adverse effect on existing riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS.

- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

- Interfere significantly with the movement of any native resident or migratory fish or wildlife species such that migratory patterns are eliminated from within the proposed project area or reduce the use of native wildlife nursery sites.

- Conflict with the policies established by the Inyo County General Plan to provide protection for threatened and endangered species.

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

3.2.4 Impact Analysis

Based on monitoring of wildlife usage of Shallow Flooding DCMs, installed between 1998 and 2006, construction, operation, and maintenance of the Shallow Flooding elements, installed in areas of barren playa, would be expected to result in a net benefit to wildlife resources. Dry alkali meadow and shadscale scrub areas that are converted to Shallow Flooding would likely reduce existing poor quality habitat for terrestrial upland species while providing high quality habitat for shorebirds and migratory waterfowl.

The habitat values associated with conversion of barren playa, dry alkali meadow, and shadscale scrub to Moat & Row, which is currently in the study phase of development, have not been studied. For the purposes of this analysis, Moat & Row has been evaluated as having reduced habitat values from

barren playa due to the potential need for annual recontouring. The conversion of vegetated habitats, dry alkali meadow, and shadscale scrub, to Moat & Row, is expected to have a net reduction in habitat value due to loss of native vegetation and the need for ongoing maintenance.

State-Designated Sensitive Habitats

The proposed project would be expected to result in conversion of up to 413 acres of dry alkali meadow, a state-designated sensitive habitat, to DCMs, which constitutes a significant impact requiring the consideration of mitigation measures (Figure 3.2.2-2). The 50-foot-wide construction zone buffer (including barren playa and vegetated areas) is an additional 0.3 square mile, and will require the consideration of mitigation measures for vegetated areas.

Direct Impacts

The proposed project would result in direct impacts to up to 413 acres of dry alkali meadow through the conversion to Shallow Flooding and/or to Moat & Row.

Indirect Impacts

In addition to the direct effects from construction, operation, and maintenance of Shallow Flooding and Moat & Row DCMs, adjacent conserved area of dry, moist, and saturated phases of transmontane alkali meadow would have the potential for indirect impacts from invasive-weed species being introduced into transmontane alkali meadow areas as a result of construction and maintenance activities. Transmontane alkali meadow areas are susceptible to invasive species such as saltcedar (*Tamarix* spp.) that increase water stresses of adjacent native plant species and reduce the suitability of the habitat for native wildlife species.

Rare, Threatened, and Endangered Species

The proposed project would not be expected to result in impacts to biological resources in relation to species listed as rare, threatened, or endangered pursuant to the federal and state ESAs. One potentially state-listed wildlife species, American peregrine falcon, was observed foraging within the proposed project area. The proposed project would be expected to convert approximately 9.2 square miles (5,288 acres) or approximately 63 percent of the proposed project area to Shallow Flooding. Based on the completed Shallow Flooding DCM, these areas provide high quality foraging habitat. Therefore, American peregrine falcon would not be expected to be adversely effected by construction, operation, or maintenance of the Shallow Flooding DCM. Construction, operation, and maintenance of the Moat & Row DCM would not be expected to affect the American peregrine falcon, as significant amounts of suitable foraging habitat would be retained within the Owens Valley, including the Owens Lake bed.

Sensitive Species

The proposed project would be expected to result in significant short-term impacts to the western snowy plover, designated as Species of Special Concern by the CDFG, during the construction and maintenance phases of the proposed project.

Direct Impacts to Western Snowy Plover

Construction of DCMs within barren playa, during the breeding season, would have the potential to result in significant adverse impacts to western snowy plover. A total of 81 individual adult plovers, 22

nests, and 5 broods were observed within the proposed project area as a result of directed surveys in 2007. Western snowy plover nests are afforded protection pursuant to the Migratory Bird Treaty Act during the nesting season. The potential loss of occupied western snowy plover nest sites is a significant impact requiring the consideration of mitigation measures.

Upon completion, the Shallow Flooding element of the proposed project would be expected to result in a net increase in suitable habitat for the western snowy plover, due to an increase in the amount of suitable foraging habitat created within the Shallow Flooding areas (Figure 3.2.2-5).

Indirect Impacts to Western Snowy Plover

The creation of avian perches from project infrastructure and increased availability of water sources within the dry lake bed for potential predators of western snowy plover may increase predation rates on western snowy plover adults and nestlings. Sand fencing constructed on tops of rows in Moat & Row areas would provide perches for predators. Rows and sand fences are both proposed to be five feet in height, putting the potential perch height for a predator at ten feet above the existing grade. The potential increased predation rate may constitute a significant indirect impact, thereby requiring the consideration of mitigation measures.

The proposed project may have additional indirect impacts to western snowy plover resulting from bioaccumulation of naturally occurring toxic substances in the food chain. The proposed project would encourage feeding of western snowy plover and other native wildlife species on dust control areas. The water quality within these dust control areas and the natural composition of the soil may be such that bioaccumulation of heavy metals and other naturally occurring toxins in the Owens Lake sediments may create a significant indirect impact to western snowy plover and other shorebirds. Reduction of reproductive fitness of adults or reduction of the survivability of nestlings and viability of eggs may result from bioaccumulation of heavy metals and other toxins in native shorebird species and other wildlife in the area.

The proposed project may also result in indirect impacts to western snowy plover active nests and nestlings by turning off the water source in the Shallow Flooding areas after the end of the dust control season on July 1. Snowy plover eggs or nestlings may be impacted by the sudden drying of the Shallow Flooding areas and the subsequent inability of adults to travel to water to cool eggs or nestlings during extreme daytime temperatures, resulting in failure of nests or loss of young nestlings.

Bat Species

A total of three special-status bat species were determined to be likely to forage over the proposed supplemental dust control areas: pallid bat, Townsend's big-eared bat, and spotted bat. There is no roosting habitat on Owens Lake for bat species; therefore, bats utilize the lake bed for foraging only. Implementation of the proposed project would not be expected to impact foraging activity for bat species. Therefore, no further analysis of impacts to bat species is warranted.

Locally Important Species

No locally important plant species were found or are expected to occur within the proposed project area. Therefore, no impacts would be expected and no further analysis is warranted.

No locally important invertebrate species were found within the proposed project area. Therefore, no further analysis of impacts to locally important invertebrates is warranted.

No locally important bird species were found or are expected to occur within the proposed project area. Therefore, no impacts would be expected and no further analysis is warranted.

Impacts to Federal and State Protected Jurisdictional Areas

Direct Impacts

The proposed project would have the potential to result in dredge and fill within 393.2 acres that is subject to the jurisdiction of the USACOE. The proposed project would have the potential to result in dredge and fill within 411.8 acres of vegetated wetlands, springs/seeps, or stream channels, and 8,340.43 acres of unvegetated lake bed comprised of lacustrine wetlands pursuant to the National Wetland Inventory that is subject to the jurisdiction of the CDFG. The loss of habitat functions and values within federally and state-designated wetlands and waters constitutes a significant impact requiring the consideration of mitigation measures.

The USACOE requires the stepwise consideration of mitigation measures. The project applicant must first demonstrate that the impact cannot be avoided. In this case, the District has compiled the data to demonstrate that 393.2 acres is emissive and therefore requires treatment to reduce emissions. Impacts to 393.2 acres of USACOE jurisdictional areas will require the project applicant to apply for an individual permit pursuant to Section 404 of the Clean Water Act. The intent of the project applicant is to utilize a modified best available control measure (BACM) DCM that provides reliable dust control while enhancing habitat values such as manual revegetation and passive irrigation. Pursuant to coordination with the USACOE conducted on August 30, 2007, with an increase in habitat values, no additional mitigation is anticipated in support of the individual permit process.

Construction, operation, and maintenance of the proposed project on approximately 411.8 acres of vegetated wetlands, springs/seeps, or stream channels, and 8,340.43 acres of unvegetated lake bed comprised of lacustrine wetlands pursuant to the National Wetland Inventory under the jurisdiction of the CDFG will require notification to the CDFG of activities to be undertaken on the lake bed. Upon completion of the notification package, the CDFG shall determine whether the activity may substantially adversely affect an existing fish or wildlife resource, including the western snowy plover or its nursery locations. If the CDFG determines that the activity may adversely affect an existing fish or wildlife resource, including the western snowy plover or its nursery locations, the CDFG shall provide a draft lake or streambed alteration agreement describing reasonable measures necessary to protect the resource. It is anticipated that these measures will not substantially differ from the ones provided in Section 3.2.5, *Mitigation Measures*.

Indirect Impacts

No indirect impacts to federal or state protected wetlands would be expected. Therefore, no further analysis is warranted.

Migratory Corridors and/or Nursery Sites

Direct Impacts

The proposed project would be expected to result in significant impacts to migratory routes or nursery sites, directly or indirectly, through the removal of habitat areas or potential disturbance to adjacent areas, therefore requiring the consideration of mitigation measures. The proposed project area contains

known nesting sites for western snowy plover. Construction, operation, and maintenance of the proposed DCMs have the potential to impact nesting habitat for the western snowy plover through construction operations disturbing the birds during the nesting season or by removing suitable nesting habitats through implementation of DCMs. Despite these impacts, it is expected that the overall impact of the proposed project would be beneficial for western snowy plover and other shorebirds by increasing the amount of available foraging habitat and providing a reliable water source for foraging and support of nestlings.

The Owens River Delta provides calving habitat for the Owens Valley population of tule elk. Calving areas are primarily restricted to the marsh areas immediately adjacent to the Owens River. Adults and calves may occasionally cross the proposed project area to calve or to obtain access to water sources. However, the proposed project would not be expected to significantly impact movement of tule elk across the dry lake bed. Therefore, further analysis of potential impacts to tule elk calving areas or movement is not warranted.

For purposes of this analysis, moats in Moat & Rows were assumed to have sloped sides and not pose a barrier to wildlife movements. If moats were formed with vertical sides, additional environmental analysis and mitigation would be required.

Sand fencing constructed on tops of rows in Moat & Row areas would potentially obstruct the movement of wildlife through the area. Therefore, further analysis of potential impacts to terrestrial wildlife is warranted.

Indirect Impacts

No indirect impacts to local nursery sites or wildlife migration corridors would be expected.

Conflict with the Policies Established by the Inyo County General Plan to Provide Protection for Threatened and Endangered Species

The proposed project would not be expected to conflict with policies established by the Inyo County General Plan to provide protection for threatened and endangered species because no federal or state threatened or endangered species are known to occupy or utilize areas within the proposed project area. Therefore, there would be no expected impacts with local policies related to threatened or endangered species..

Conflict with the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other Approved Local, Regional, or State Habitat Conservation Plan

The proposed project would not be expected to conflict with an adopted habitat conservation plan (HCP), natural community conservation plan (NCCP), or other approved local, regional, or state habitat conservation plan. There is no adopted HCP or NCCP or other regional plan in place within the region of the proposed project area. The Final EIR for the Lower Owens River Project (LORP) discusses the potential to create an HCP for federal listed species with the potential to occur within the area of the Lower Owens River covered by the Final EIR. However, the goals and objectives of the Final EIR and any potential HCP that may result would not be in conflict with the proposed dust control project analyzed in this EIR. Therefore, there would be no expected impacts and no further analysis is warranted.

Cumulative Impacts

The incremental impact of the proposed project, when evaluated in relation to the closely related past, present, or reasonably foreseeable, probable future projects, would not be expected to cause significant impacts to biological resources. Therefore, implementation of the proposed project would not cause an incremental impact when considered with the related past, present, reasonably foreseeable, probable future projects.

A total of three related projects were identified in the vicinity of the proposed project in Section 2.9, *Related Project*. The potential impacts of the proposed project can be evaluated within the context of the cumulative impacts of all ongoing and proposed development.

The effects of the proposed project when considered with the effects of the 2003 SIP would not create substantial impacts to biological resources because both projects call for dust control primarily on playa areas that do not have significant biological value. Where there would be potentially significant cumulative impacts to biological resources as a result of the implementation of the 2003 SIP, appropriate mitigation measures were incorporated to reduce cumulative impacts to biological resources to below the level of significance.

The effects of the proposed project when considered with the effects of the LORP would not be considerable. The purpose of the LORP project is to improve habitat quality for native wildlife species in the vicinity of the Lower Owens River. Where there would be potentially significant cumulative impacts to biological resources as a result of implementation of the two projects, appropriate mitigation measures were incorporated to reduce cumulative impacts to biological resources to below the level of significance.

The effects of the proposed project when considered with the effects of the U.S. Borax, Owens Lake Expansion Project/Conditional Use Permit #02-13/Reclamation Plant #02-1 would not be considerable because the projects would occur on playa areas that do not have significant biological value. Where there would be potentially significant cumulative impacts to biological resources as a result of the implementation of both projects, appropriate mitigation measures would reduce cumulative impacts to biological resources to below the level of significance.

The LORP project, 2003 SIP, and the 2008 SIP should improve local conditions for biological resources. Therefore, the biological resources impact of the proposed project would not be considerable when viewed in connection with the related biological resources effects of the past projects, other current projects, and reasonably foreseeable future projects listed in Section 2.9.

3.2.5 Mitigation Measures

Construction Measures

Measure Biology-1, Lake Bed Worker Education Program

To minimize potential direct impacts to western snowy plover from construction activities to below the level of significance, the City of Los Angeles Department of Water and Power shall continue the lake bed worker education program consistent with the previous approach and per California Department of Fish and Game recommendations. The program shall mirror the program instituted for workers for the 1997 EIR and shall focus on western snowy plover identification, basic biology and natural history, alarm behavior of the snowy plover, and applicable mitigation procedures required of the City of Los

Angeles Department of Water and Power and construction personnel. The program shall be conducted by a biologist familiar with the biology of the western snowy plover at Owens Lake and familiar with special status plant and wildlife species of the Owens Lake basin. The biologist shall be approved by the Great Basin Unified Air Pollution Control District prior to implementation of the education program. The qualifications of the biologist shall be submitted to the California Department of Fish and Game for review. The education program shall be based on the 1997 program EIR and shall include relevant updates by the biologist. The education program shall explain the need for the speed limit in the snowy plover buffer areas and the identification and meaning of buffer markers. All construction, operation, and maintenance personnel working within the project area shall complete the program prior to their working on the lake bed. A list of existing personnel who have completed the program shall be submitted to the Great Basin Unified Air Pollution Control District prior to the start of any work on the lake bed. A list of new personnel who have participated and completed the education program shall be submitted monthly to the Great Basin Unified Air Pollution Control District. A copy of the worker education program shall be provided to the California Department of Fish and Game.

Measure Biology-2, Preconstruction Surveys for Western Snowy Plover

To minimize potential direct impacts to western snowy plover within the project area due to construction activities, the City of Los Angeles Department of Water and Power shall conduct a preconstruction survey for western snowy plover in all potential snowy plover habitat prior to any construction activity that is performed during the snowy plover breeding season (March 15 to August 15). Preconstruction surveys will be performed no more than seven days prior to the start of ground-disturbing activities. The City of Los Angeles Department of Water and Power shall place a 200-foot buffer around all active snowy plover nests that are discovered within the construction area. This buffer shall protect the plover nest from both destruction and construction noise. Green-colored stakes of less than 60 inches in height with yellow flagging will be used to mark buffer edges, with stakes spaced at eight approximately equidistant locations. The location of the nest (global positioning system coordinates) and current status of the nest shall be reported within 24 hours of discovery to the Great Basin Unified Air Pollution Control District. Maps of snowy plover nest locations shall be posted at the construction office and made available to all site personnel and Great Basin Unified Air Pollution Control District staff. The activity of the nest shall be monitored by a biological monitor approved by the Great Basin Unified Air Pollution Control District, as per existing guidelines for the North Sand Sheet and Southern Zones dust control projects and any revisions to the monitoring protocol that have been approved by the California Department of Fish and Game. Active snowy plover nests shall be monitored at least weekly. The qualifications of the biological monitor will be submitted to the California Department of Fish and Game for review. The nest buffer shall remain in place until such time as the biological monitor determines that the nest is no longer active and that fledglings are no longer in danger from proposed construction or maintenance activities in the area. Buffers shall be more densely marked where they intersect project-maintained roads. Vehicles shall be allowed to pass through nest buffers on maintained roads at speeds less than 15 miles per hour, but shall not be allowed to stop or park within active nest buffers. Permitted activity within the nest buffer shall be limited to foot crews working with hand tools and shall be limited to 15-minute intervals, at least one hour apart, within a nest buffer at any one time. Compliance with this mitigation measure shall be confirmed by the Great Basin Unified Air Pollution Control District through issuance of a weekly written report by the City of Los Angeles Department of Water and Power to the Great Basin Unified Air Pollution Control District.

Measure Biology-3, Snowy Plover Nest Speed Limit

To minimize potential direct and cumulative impacts to western snowy plover and other sensitive biological resources from vehicles construction activities, the City of Los Angeles Department of Water and Power shall implement a speed limit of 30 miles per hour within all active construction areas on Owens Lake during construction of dust control measures. Speed limits shall be 15 miles per hour within active snowy plover nest buffers. Designated speed limits for other construction areas outside of active nest buffers shall be maintained at 30 miles per hour where it is determined to be safe according to vehicle capabilities, weather conditions, and road conditions. Site personnel and Great Basin Unified Air Pollution Control District staff shall be informed daily of locations where active nest buffers overlap with roads in the construction area. Signs shall be posted that clearly state required speed limits. The number of speed limit signs shall be kept at a minimum by posting at all entry points to the lake and by active snowy plover nest areas to reduce potential perches for raptors and other snowy plover predators and shall be outfitted with Nixalite or the functional equivalent if greater than 60 inches in height. Compliance with this mitigation measure shall be confirmed by the Great Basin Unified Air Pollution Control District through issuance of a summary written report by the City of Los Angeles Department of Water and Power to the Great Basin Unified Air Pollution Control District after completion of the education seminar and posting of speed limits. A copy of the summary report shall be provided to the California Department of Fish and Game.

Measure Biology-4, Lighting Best Management Practices

To minimize indirect impacts to nesting bird species associated with project lighting during construction activities, the City of Los Angeles Department of Water and Power shall institute all best management practices to minimize lighting impacts on nocturnal wildlife consistent with previous requirements and California Department of Fish and Game recommendations. Best management practices include those listed below, and are included in the Project Description of the 2008 State Implementation Plan Environmental Impact Report. Previous construction has occurred during nighttime hours to complete construction schedules and to prevent personnel from working during times of high temperatures. If night work is deemed necessary, then construction crews shall make every effort to shield lighting on equipment downward and away from natural vegetation communities or playa areas, and especially away from known nesting areas for snowy plovers during the nesting season (March to August). All lighting, in particular any permanent lighting, on existing and newly built facilities shall be minimized to the greatest extent possible, while still being in compliance with all applicable safety requirements. Required lighting shall be shielded so that light is directed downward and away from vegetation or playa areas. Proof of compliance with this mitigation measure shall be confirmed by the Great Basin Unified Air Pollution Control District, and a copy of the compliance record shall be provided to the California Department of Fish and Game.

Measure Biology-5, Marking of Nonemissive Wetland and Upland Scrub Areas

To minimize the potential direct impacts to nonemissive wetland and upland scrub vegetation communities from construction activities to below the level of significance, the City of Los Angeles Department of Water and Power shall clearly mark the boundary of construction zones (including the 50-foot buffer) within 50 feet of the boundary of nonemissive wetland areas and upland scrub communities to prevent construction activity from impacting these vegetation communities. No construction zone buffer is allowed for areas approaching wetland or sensitive areas. Construction zone boundaries near nonemissive areas shall be marked using stakes less than 60 inches high, spaced 10 feet apart, along the edges of spring mounds, and spaced 100 feet apart along other vegetated edges. Marking shall occur prior to the initiation of construction activities. Geographic information

system mapping of nonemissive vegetation limits shall be provided to the contractor during the bidding process. Construction buffer areas outside of the dust control boundaries shall not exceed 50 feet in width, and shall be reduced as required to prevent construction activities from impacting adjacent vegetated areas. No temporary or permanent access routes through vegetated areas will be established, except those specified in the Project Description. Incursions into established vegetated areas, including vegetated areas within the temporary impact area of the 50-foot construction zone buffer, that cause measurable loss of plant cover will require revegetation with suitable local, native plant species. Proof of compliance with this mitigation measure shall be verified by submitting a written report to the Great Basin Unified Air Pollution Control District and California Department of Fish and Game detailing the type and locations of delineated wetland and upland areas. This report shall be submitted prior to the start of construction activities. The mitigation plan must contain a schedule and protocol for achieving revegetation within two years of any impacts to vegetation caused by access routes or construction activities outside the areas specified in the Project Description.

Operations and Maintenance Measures

Measure Biology-6, Wetland Mitigation Program

To minimize direct impacts to emissive transmontane alkali meadow wetland communities caused by installation of dust control measures on emissive transmontane alkali meadow to below the level of significance, the City of Los Angeles Department of Water and Power shall institute a wetland mitigation program prior to the initiation of construction activities as recommended by the California Department of Fish and Game. The program shall be designed to emphasize restoration of equivalent functions and values of wetlands within the project area as compared to pre-project impacts.

The wetlands mitigation program will include mitigation goals, target success criteria, an implementation plan, plant species and spacing, irrigation design, monitoring activities, and maintenance requirements. Managed Vegetation is deemed to have equivalent functions and values to dry transmontane alkali meadow that would be impacted by the project at a ratio of 2 acres of Managed Vegetation created for every 1 acre of dry transmontane alkali meadow impacted. Up to 413 acres of dry transmontane alkali meadow may be converted to dust control measures as a result of the project. The creation-to-impact ratio for the proposed project would be approximately 2:1. A Managed Vegetation area of up to 826 acres shall be designated as the wetland mitigation area within the prescribed Managed Vegetation areas as proposed in the project description. The City of Los Angeles Department of Water and Power shall designate the wetland mitigation area in a Managed Vegetation area that is either directly adjacent to, or in near proximity to, existing natural transmontane alkali meadow areas. Potential mitigation areas may include Sulfate Well outflow area and Swansea outflow area. Potential mitigation areas may not include state-owned lands currently used for cattle grazing.

A design for the designated wetland mitigation area shall be provided to the Great Basin Unified Air Pollution Control District and California State Lands Commission for approval prior to construction of any Managed Vegetation. Included in the plan will be the location, plant species, schematics, schedule, irrigation requirements, performance criteria, and contingency measures. A copy of the map shall be provided to the California Department of Fish and Game, U.S. Army Corps of Engineers, and the State Lands Commission. A transmontane alkali meadow management plan shall be created by the City of Los Angeles Department of Water and Power to monitor the designated wetland mitigation areas for appropriate coverage of native species and for change in extent of transmontane alkali meadow over a five-year period postconstruction, and to conduct weed abatement in wetland areas in and within 500 feet of the project area. The management plan shall monitor wetland mitigation areas for five years postconstruction with specific goals for native plant species coverage and management of

invasive, nonnative plant species. The transmontane alkali meadow management plan shall be approved by the Great Basin Unified Air Pollution Control District prior to the initiation of construction activities. A copy of the management plan and subsequent monitoring reports shall be provided to the California Department of Fish and Game, U.S. Army Corps of Engineers, and to the State Lands Commission.

Calculations of dry transmontane alkali meadow impacts from implementation of the project are estimates based on the mapped extent of transmontane alkali meadow areas within the project area and a determination of whether an area is emissive or nonemissive based on dust monitoring data. The total acreage of wetland mitigation for dry transmontane alkali meadow shall be two times the actual direct and indirect impact area caused to dry transmontane alkali meadow by both construction and postconstruction activities. If any unanticipated direct or indirect postconstruction impacts to moist or saturated transmontane alkali meadow communities occur as a result of project construction or operation, City of Los Angeles Department of Water and Power would be required to designate additional wetland mitigation areas and incorporate design parameters that would result in the replacement of equivalent functions and values to the impacted moist or saturated transmontane alkali meadow wetlands within two years of the initiation of the replacement effort. Significant impacts would include loss of vegetative cover due to ground disturbance or change in species composition attributable to drying of springs or ponds, which does not self-repair within two years of detection. Managed Vegetation would not be suitable mitigation for impacts to moist or saturated transmontane alkali meadow communities. The City of Los Angeles Department of Water and Power shall compensate for all loss of transmontane alkali meadow that occurs. Mitigation for impacts to all transmontane alkali meadow associated with construction and operation of dust control measures constructed between 1998 and 2008 (prior to the project) will be replaced at a ratio of 1 acre of wetland replacement for every acre of wetland impact (1:1 replacement ratio). Replacement wetlands will consist of similar habitat function and values as the wetland that is lost. All wetland replacement described in this mitigation measure shall be approved by the Great Basin Unified Air Pollution Control District, the California Department of Fish and Game, U.S. Army Corps of Engineers, and the State Lands Commission, and will be constructed and fully functional no later than April 1, 2010.

Measure Biology-7, Toxicity Monitoring Program

To avoid direct and cumulative impacts to native wildlife communities that may potentially result from bioaccumulation of toxic substances resulting from construction from naturally occurring heavy metals and other potential toxins in lake bed deposits to below the level of significance, the City of Los Angeles Department of Water and Power shall implement a toxicity monitoring program to investigate the potential of bioaccumulation of heavy metals and other potential toxins in wildlife from feeding in dust control areas throughout the Owens Lake bed. A copy of the long-term monitoring program shall be submitted to the Great Basin Unified Air Pollution Control District prior to the start of any construction. Monitoring shall take place in all dust control areas within the Owens Lake as well as at all spring and outflow areas within 500 feet of the construction boundaries. The purpose of the monitoring program shall be to determine if bioaccumulation of toxins is occurring within native wildlife populations. Procedures for bioaccumulation monitoring shall follow existing permits issued by the Lahontan Water Quality Control Board (Lahontan Water Quality Control Board) and any subsequent water quality monitoring requirements deemed necessary by the Lahontan Water Quality Control Board. All monitoring shall be conducted by individuals familiar with the native wildlife species of the Owens Lake bed. Monitoring personnel shall be approved by the Great Basin Unified Air Pollution Control District prior to implementation of the long-term monitoring. The monitoring plan shall include adaptive management procedures and mitigation procedures to follow in the instance that signs of toxicity do develop in native wildlife populations that are attributable to the Dust

Control Mitigation Program. Management procedures would be implemented depending on the type and extent of impact that was observed and could potentially, but not necessarily, include covering of dust control areas to prevent wildlife utilization, hazing of wildlife to prevent utilization of dust control areas, or any other appropriate measures. Any adaptive management measures that would potentially be implemented shall be approved by the Great Basin Unified Air Pollution Control District, the California Department of Fish and Game, and the State Lands Commission prior to implementation.

The monitoring shall be conducted as described in Table 3.2.5-1, *Biology-7, Postconstruction Bioaccumulation Monitoring Schedule*. In order to have the 2003 State Implementation Plan and 2008 State Implementation Plan monitoring schedules coincide, the final year for monitoring in 2003 State Implementation Plan areas has been moved from 2020 to 2023. Monitoring shall be conducted on a semiannual basis (two times per year) during each year that monitoring is conducted. If, after the completion of the 14-year monitoring schedule as described in mitigation measure Biology-7, it is determined that there is no evidence of toxicity issues in native wildlife populations, then the monitoring program may be discontinued. If monitoring determines that impacts to native wildlife species are occurring, then the monitoring shall continue on a semiannual basis (summer and winter) in every year until significant impacts are not detected, and the monitoring sequence shall resume at the Year 3 monitoring event and shall continue at the intervals shown in Table 3.2.5-1. Written monitoring reports shall be provided to the Great Basin Unified Air Pollution Control District, the California Department of Fish and Game, Lahontan Water Quality Control Board, and the State Lands Commission by the approved biological monitor within four months following the end of the monitoring year. Any changes in the existing monitoring requirements by the Regional Water Quality Control Board shall be included into this mitigation measure.

TABLE 3.2.5-1
BIOLOGY-7, POSTCONSTRUCTION BIOACCUMULATION MONITORING SCHEDULE

2003 SIP areas only	**2003 SIP areas only**	**Year 1 monitoring event***	**Year 2 monitoring event***	**Year 3 monitoring event†**
2008	2009	2010	2011	2012
Year 4 monitoring event*	**Year 5 monitoring event†**	**Year 6 monitoring event***	**Year 9 monitoring event†**	**Year 14 monitoring event***
2013	2014	2015	2018	2023

* 2003 and 2008 SIP areas monitored
† 2008 SIP areas only

Measure Biology-8, Exotic Pest Plant Control Program

To minimize indirect impacts to native vegetation communities that may result from the project construction and operations and to prevent creating an environment for weedy plant species to become established in native plant communities, the City of Los Angeles Department of Water and Power shall continue the exotic pest plant control program initiated in 2007 per the 2003 State Implementation Plan within the designated dust control areas after full build-out of the project (April 1, 2010). The spread of exotic, invasive plant species, such as salt cedar (*Tamarix* spp.), has detrimental effects on habitat quality for native plant and wildlife species and, in the case of species like salt cedar, can reduce the availability and quality of water within native vegetation areas for plant and wildlife species. The goals of the program shall be consistent with the goals specified in the Inyo County General Plan and the U.S. Fish and Wildlife Service Owens Basin Wetland and Aquatic Species Recovery Plan for the portion of the Recovery Plan included within the project area. The program shall

be written by a pest management specialist or other person familiar with exotic plant species management and shall be submitted to the Great Basin Unified Air Pollution Control District no later than April 1, 2010. Measures for control shall include all best management practices, which include prudent and safe use of control measures such as herbicides, brushing, direct weed removal, tire washing, or comparable measures such that no increase in invasive plant cover occurs. The program shall include yearly monitoring to ensure that exotic plant species are being sufficiently controlled. The draft exotic plant species control program shall be submitted to and approved by the Great Basin Unified Air Pollution Control District and the State Lands Commission prior to the initiation of exotic plant control activities. Annual written monitoring reports documenting exotic plant location, type, pretreatment abundance, control type used, and control efficacy shall be delivered to the Great Basin Unified Air Pollution Control District within four months following the end of each calendar year. A copy of the control program and resulting monitoring reports shall be provided to the State Lands Commission and to the California Department of Fish and Game.

Measure Biology-9, Plover Identification Training

To minimize potential direct, indirect, and cumulative impacts to western snowy plover resulting from required maintenance within Shallow Flooding dust control areas during the western snowy plover breeding season (March to August), foot crews and all-terrain vehicle (ATV) operators that must enter Shallow Flooding panels within the entire Owens Lake bed during the snowy plover breeding season shall be briefed in plover identification, nest identification, and adult alarm behavior, and the identification and meaning of buffer markers. Crews shall receive this training from a biologist knowledgeable in western snowy plover biology at Owens Lake as part of the contractor education program as described in mitigation measure Biology-1. The qualifications of the biological monitor shall be submitted to the California Department of Fish and Game for review. Maintenance crews shall utilize hand tools and ATVs only to conduct maintenance activities during this time period in Shallow Flooding panels where snowy plovers may be present. Crews shall minimize time within the Shallow Flooding and playa areas to the greatest extent possible. If crews are working within an active nest buffer, they shall be limited to 15 minutes out of every hour within the buffer. If an unanticipated take to western snowy plovers or an active snowy plover nest occurs during any maintenance activities, a project biologist shall document the impact and report the incident to the Great Basin Unified Air Pollution Control District and the California Department of Fish and Game within 48 hours of the event. A take in this case would be defined as mortality to adults, chicks, or fledglings, or a modification in adults' behavior due to human pressure that results in a loss of a nest and its contents. Proof of compliance with this mitigation measure shall be verified by submitting copies of any incident reports to the Great Basin Unified Air Pollution Control District, the State Lands Commission, and the California Department of Fish and Game.

Emergency repair activities are exempt from the requirements of this provision. An emergency is defined in the State of California Environmental Quality Act Guidelines, Section 15269, as "a sudden, unexpected occurrence that presents a clear and imminent danger, demanding action to prevent or mitigate loss of or damage to life, health, property, or essential public services." Emergency repairs as defined under the 2003 State Implementation Plan revision and the 1998 State Implementation Plan are further defined as those repairs that must be completed immediately to protect human health and safety, ensure the project is in compliance with required air quality standards, or protect project infrastructure from significant and immediate damage that could result in the failure of a dust control measure to maintain compliance with required air quality standards. In the event that an emergency repair must be performed on a Shallow Flooding panel during the snowy plover breeding season, a qualified biological monitor shall be present on site during the duration of the repair activity to document any impacts to western snowy plover adults, juveniles, or active nests. The Great Basin

Unified Air Pollution Control District and the California Department of Fish and Game shall be notified within 24 hours of the start of all emergency repair activities. A copy of the biological monitor's written report shall be provided to the Great Basin Unified Air Pollution Control District and the California Department of Fish and Game within 48 hours of completion of the emergency repair activity. Any appropriate mitigation that may be required from impacts to western snowy plovers shall be negotiated between City of Los Angeles Department of Water and Power and the California Department of Fish and Game based on the report provided by the biological monitor. A copy of the negotiated agreement between City of Los Angeles Department of Water and Power and the California Department of Fish and Game shall be provided to the Great Basin Unified Air Pollution Control District.

Measure Biology-10, Long-Term Monitoring Program for Western Snowy Plover

To minimize potential direct, indirect, and cumulative impacts resulting from operation and maintenance of dust control measures to western snowy plover, the City of Los Angeles Department of Water and Power shall implement a long-term snowy plover population monitoring program for the entire Owens Lake bed. Long-term monitoring is recommended due to long-term implementation of the proposed project. Long-term population monitoring allows for the distinction between natural population fluctuations and human-induced population changes. Postconstruction surveys implemented under the 2003 State Implementation Plan shall be continued under the 2008 State Implementation Plan 1, 2, 3, 4, 5, 7, 9, and 14 years after project implementation. The final western snowy plover monitoring schedule for all dust control measures on Owens Lake bed shall be coordinated so that long-term monitoring for all dust control measures covered within this document, as well as for preceding environmental documents, are conducted simultaneously. The long-term monitoring shall begin in 2010 or at such time that full build-out is completed. The goals of the monitoring are to confirm that overall numbers of snowy plovers within the dust control areas do not decrease due to implementation of the 2008 State Implementation Plan relative to baseline plover population numbers prior to implementation of the 2003 State Implementation Plan as shown by the 2002 plover report for Owens Lake, which found the population to be 272 plovers.[94] Monitoring shall be conducted during the months of May and June by a qualified biologist familiar with the natural history and habitat requirements of western snowy plovers within the Owens Lake basin. The qualifications of the biological monitor shall be submitted to the California Department of Fish and Game for review. The monitoring methodology shall be consistent with the methodology used for the Owens Lake 2002 plover surveys.

Annual summary reports for the monitoring efforts shall be filed with the Great Basin Unified Air Pollution Control District, the State Lands Commission, and the California Department of Fish and Game by December 31 of each monitoring year. The Great Basin Unified Air Pollution Control District shall require adaptive management changes to operation and maintenance of dust control measures if it determines that a decline in snowy plover numbers is occurring that is directly attributable to operation or maintenance procedures of the Owens Lake Dust Mitigation Program. The Great Basin Unified Air Pollution Control District shall consult with the City of Los Angeles Department of Water and Power, State Lands Commission, and the California Department of Fish and Game prior to implementing adaptive management changes. At the time that adaptive management changes are implemented, monitoring shall continue for a minimum of five years after implementation of adaptive management procedures to ensure that the procedures are having the desired effect on the lake-wide snowy plover population. If after the Year 5 monitoring event it is determined that no adverse impacts

[94] CH2MHill. 2002. *Summary of Surveys for Snowy Plovers at Owens Lake, March 1 through April 30, 2002*. Prepared by: Point Reyes Bird Observatory (Ruhlen and Page), Stinson Beach, CA.

to the western snowy plover population at Owens Lake are occurring as a result of the project, then the long-term monitoring program and subsequent reporting shall be discontinued.

Specified calendar years for conducting lake-wide plover population surveys are provided in Table 3.2.5-2, *Biology 10, Postconstruction Lake-wide Plover Population Monitoring Schedule*. Lake-wide surveys in 2008 and 2009 will be conducted per the 2003 State Implementation Plan with lake-wide surveys conforming to the 2008 State Implementation Plan schedule beginning in 2010. Proof of compliance with this mitigation measure shall be through issuance of a written monitoring summary report for each monitoring year specified in Table 3.2.5-2. Reports shall be submitted to the Great Basin Unified Air Pollution Control District by December 31 of each monitoring year. The report will document survey locations and dates, the number of plovers observed, and an estimate of the total plover population. A copy of the yearly summary reports shall be provided to the California Department of Fish and Game.

TABLE 3.2.5-2
BIOLOGY-10, POSTCONSTRUCTION LAKE-WIDE PLOVER POPULATION MONITORING SCHEDULE

Year 1 monitoring event	**Year 2 monitoring event**	**Year 3 monitoring event**	**Year 4 monitoring event**
2010	2011	2012	2013
Year 5 monitoring event	**Year 7 monitoring event**	**Year 9 monitoring event**	**Year 14 monitoring event**
2014	2016	2018	2023

Measure Biology-11, Corvid Management Plan

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 State Implementation Plan with an extension of one year within the project area. This 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 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. Due to the use of sand fencing on the tops of rows in Moat & Row areas, the sand fences are considered to be at a height of 10 feet (5 feet in height of row and 5 feet in height of fence). The use of sand fencing in Moat & Row areas will be considered under this mitigation measure as exceeding the height of 72 inches, thereby requiring the utilization of Nixalite or the functional equivalent on top of sand fencing. 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 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. 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 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. However, the corvid management practices shall be continuously implemented.

Measure Biology-12, Habitat Management Program for Nesting Snowy Plovers

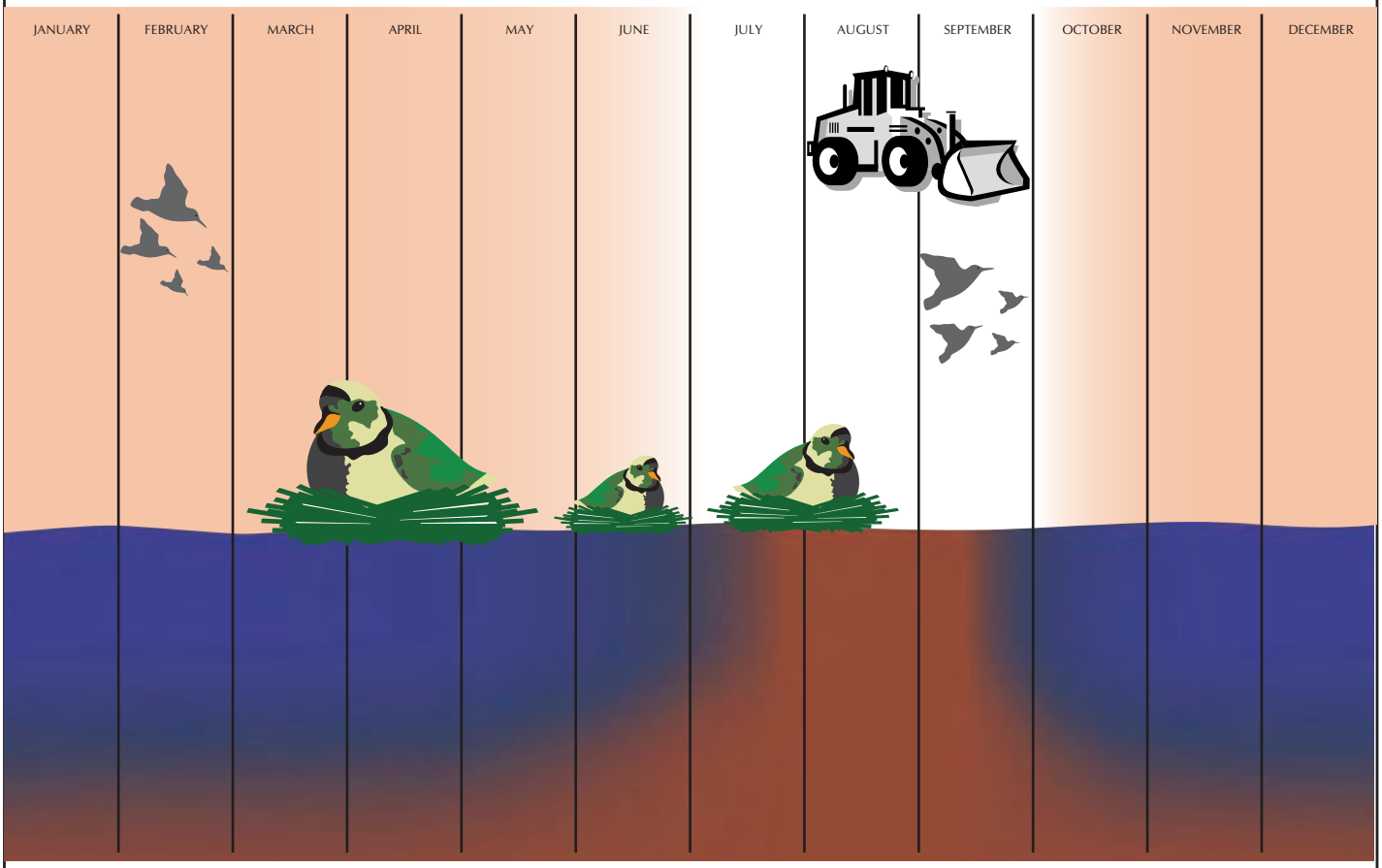
To minimize potential direct and cumulative impacts to nesting western snowy plover from shutdown of all Shallow Flooding panels on June 30, a habitat management program shall be implemented by the City of Los Angeles Department of Water and Power on all Owens Lake bed Shallow Flooding areas to mimic the natural summer drying of seeps and springs in the area. Each year Shallow Flooding shall be slowly turned off from July 1 to July 21 to allow snowy plover broods to complete their nesting cycle. Consult Figure 3.2.5-1, *Conceptual Owens Lake Operational Calendar*, and Figure 3.2.5-2, *Shallow Flooding Management for the Month of July*, for a conceptual picture of Shallow Flooding panel operation. The schedule for decreasing the percentage of wetness in Shallow Flooding areas will follow Table 3.2.5-3, *Biology-12, Schedule for Percent Reduction of Water Applied to Achieve Level of Control Efficiency on June 30*. The City of Los Angeles Department of Water and Power has the option of surveying within 0.5 mile of Shallow Flooding areas for snowy plovers, and if active snowy plover nests or young are not present on or within a 0.5-mile radius of Shallow Flooding areas, then the habitat flows described above would not be needed in those areas and those Shallow Flooding panels may be shut down as the City of Los Angeles Department of Water and Power determines necessary. A final operations plan detailing the drying operations shall be submitted to the Great Basin Unified Air Pollution Control District for approval, and a copy shall be provided to the California Department of Fish and Game prior to startup of new Shallow Flooding operations.

TABLE 3.2.5-3
BIOLOGY-12, SCHEDULE OF PERCENT SURFACE AREA WETTED REQUIRED TO ACHIEVE LEVEL OF CONTROL EFFICIENCY AFTER JUNE 30

July 1–7	July 8–14	July 15–21	July 22
~ 50% wetted area	~ 20% wetted area	~ 15% wetted area	Off

Measure Biology-13, Wildlife Movement Gaps

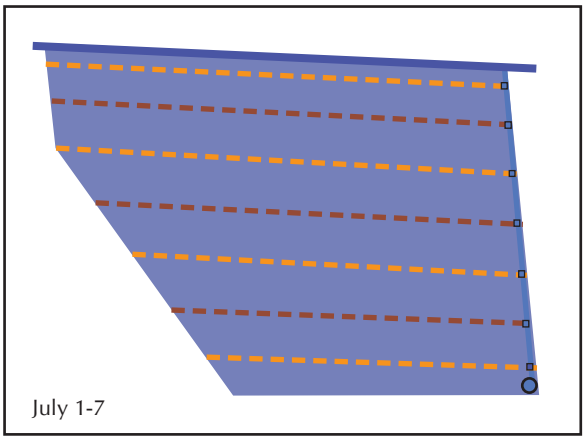
To minimize potential direct impacts to migratory corridors from the installation of sand fencing atop the rows of Moat & Row areas, the City of Los Angeles Department of Water and Power shall include gaps in sand fencing allowing wildlife movement on the lake bed. Any other barrier with vertical sides, such as a vertical moat, would also require gaps. Gaps in the fence shall be no more than 100 feet apart and may consist of either breaks in the fencing or openings within a fence. The size of gaps in the sand fencing will be submitted to and approved by the California Department of Fish and Game. Proof

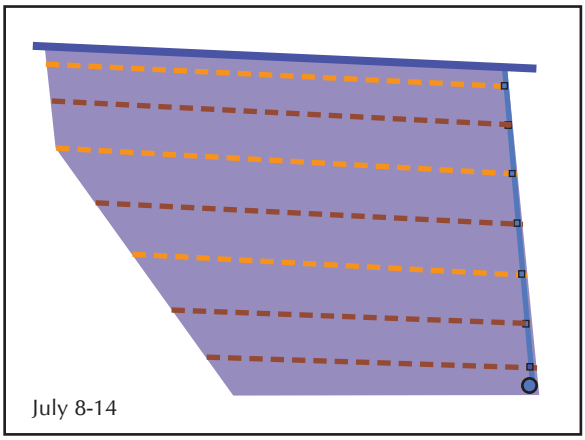


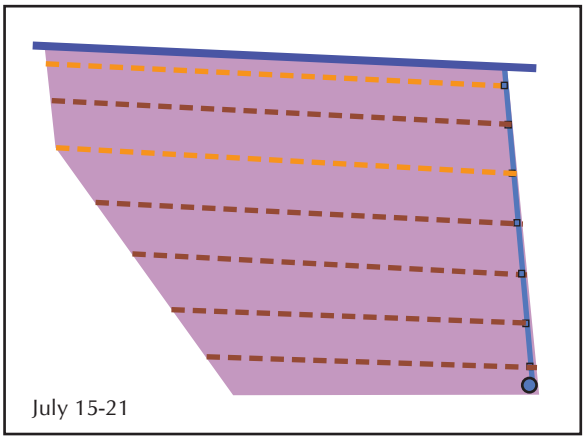
LEGEND

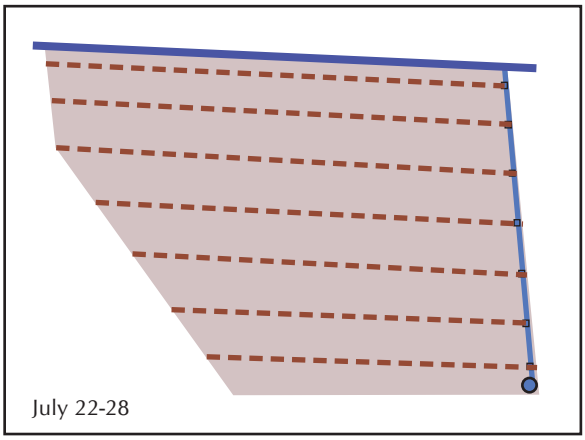
Dust Storm Wet Soil Dry Soil

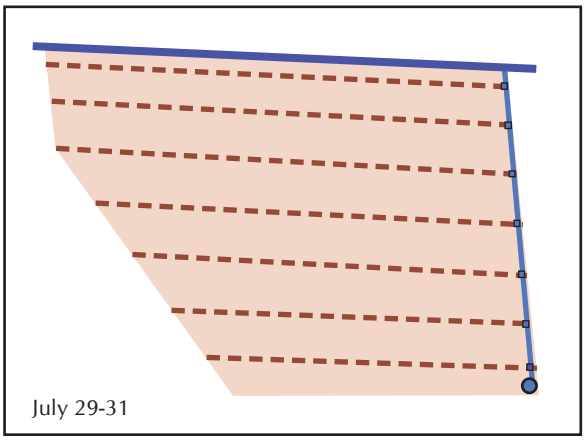
FIGURE 3.2.5-1
Conceptual Owens Lake Operational Calendar











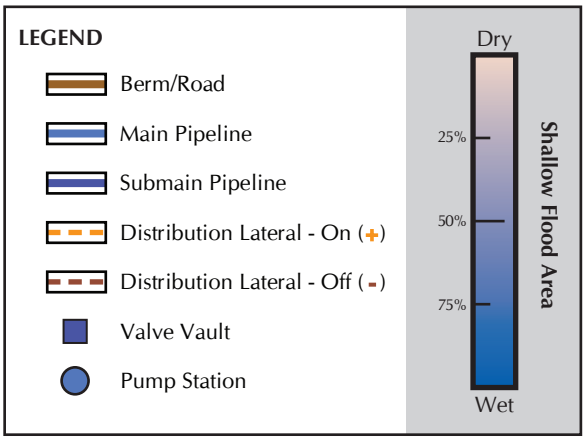


FIGURE 3.2.5-2
Shallow Flooding Management for the Month of July

of compliance with this mitigation measure shall be verified by submitting a written report to the Great Basin Unified Air Pollution District and California Department of Fish and Game detailing the locations, size, and spacing of gaps for wildlife movement in sand fencing.

Measure Biology–14, Wildlife Area Management Plan

To avoid direct and cumulative impacts to native wildlife communities that may result from the proposed project, a wildlife area management plan shall be prepared and implemented by the City of Los Angeles Department of Water and Power as requested by the California State Lands Commission.[95] Components of the plan shall include at a minimum the goals and objectives of the wildlife area management plan, a description of baseline conditions of plant and wildlife resources, effects on biological resources as a result of implementation of dust control measures, descriptions of biological elements targeted for management, long-term goals, and a description of the operations and maintenance tasks required to complete each goal. The wildlife area management plan shall be prepared and implemented by a biologist familiar with the habitats and species present on Owens Lake and familiar with wildlife management techniques. The qualifications of the biologist shall be submitted to the California Department of Fish and Game and the California State Lands Commission for review. The wildlife area management plan shall include yearly monitoring, including a written report documenting the results of the wildlife management techniques, recording the observed effectiveness of the techniques and suggesting improvements for wildlife area management within the lake bed. Copies of the yearly reports shall be submitted to the California State Lands Commission, Great Basin Unified Air Pollution Control District, and the California Department of Fish and Game no later than December 31 of each wildlife management year. The City of Los Angeles Department of Water and Power will be required to submit the wildlife area management plan to the State Lands Commission for approval by April 1, 2009. The approved wildlife area management plan shall be fully implemented by April 1, 2010. If after five years of reporting in 2015, the California State Lands Commission determines that the wildlife area management program is effective, then the reporting schedule shall phase out in the same time frame as shown in Table 3.2.5-1. However, the wildlife management practices shall be continuously implemented.

3.2.6 Level of Significance after Mitigation

Implementation of mitigation measures Biology-5, Biology-6, and Biology-8 would reduce significant impacts to biological resources related to sensitive habitats and federally protected wetlands to below the level of significance.

Implementation of mitigation measure Biology-1, Biology-2, Biology-3, Biology-4, Biology-7, Biology-9, Biology-10, Biology-11, Biology 12, Biology-13, and Biology-14 would reduce significant impacts to special status biological resources to below the level of significance.

[95] Thayer, Paul, California State Lands Commission, Sacramento, CA, 27 March 2007, letter to Mr. Graham Chisholm, Audubon California, Emeryville, CA.