Meeting Date: 08/23/22
Lease Number: 8079
Staff: D. Simpkin

Staff Report 26

APPLICANT:

City of Los Angeles Department of Water and Power

PROPOSED ACTION:

Amendment of Lease

AREA, LAND TYPE, AND LOCATION:
Sovereign land on the dry lakebed of Owens Lake, Inyo County.

AUTHORIZED USE:
Operation and maintenance of various dust mitigation measures.

TERM:
25 years, beginning June 14, 1999.

CONSIDERATION:
Public health and safety, with the State reserving the right at any time to set a monetary rent if the Commission finds such action to be in the State's best interests.

PROPOSED AMENDMENT:
- The Land Use or Purpose Section of the Lease would be amended to authorize:
  - The construction, operation, and maintenance of 146 acres of new dust control measures associated with the Great Basin Unified Air Pollution Control District's 2021 Contingency Order.
  - Modifications to Dust Control Areas (DCA) T16 and T2-2, associated with the Tillage with Best Available Control Measure Backup (TWBB) Remedial Action Plan.
- Section 2, Special Provision of the lease would be amended to include:
  - Lessee will notify culturally affiliated Native American Tribes of the Owens Valley no less than five days prior to construction activities.

- Section 3, Description of Lease Premises would be amended to include the lands described in the attached Exhibit A, Land Description.

All other terms and conditions of the lease to remain in effect without amendment.

BACKGROUND:

Owens Lake is located in southwest Inyo County, approximately 200 miles north of Los Angeles. The Lake was a natural and navigable waterway at the time of California's statehood and is thus sovereign land of the State. Wildlife, waterfowl, and the nearby communities including the area's original Native American residents depended on and benefited from the Lake, which covered approximately 110 square miles and was up to 50 feet deep in places. Tribes have occupied the area for thousands of years, moving as the historical shoreline fluctuated over time, using and stewarding the natural resources provided by the Lake, known to them as Patsiata. Early settlers diverted water from the Owens River to grow crops and irrigate pasture for livestock, and steamboats carried cargo across the Lake. In 1908, the City of Los Angeles (City) commenced construction of an aqueduct to divert water from the Owens River north of the Lake.

After completion of the Los Angeles Aqueduct in 1913, the Lake's water level rapidly declined. By 1930, the Lake was virtually dry with only a small brine pool remaining. The diversion of water led to dust storms carrying away as much as 4 million tons of dust from the lakebed each year, causing respiratory problems for residents in the Owens Valley. The U.S. Environmental Protection Agency designated the southern part of the Owens Valley as a Serious Non-Attainment Area for PM10. PM10 is an abbreviated reference for suspended particulate matter (dust) less than or equal to 10 microns in mean aerodynamic diameter (approximately 1/10 the diameter of a human hair). The Great Basin Unified Air Pollution Control District (District) subsequently designated the Non-Attainment area as the "Owens Valley PM10 Planning Area." The District determined that dust emissions from the dry lakebed of the Lake are responsible for causing the air in the Owens Valley PM10 Planning Area to exceed the PM10 national ambient air quality standards and that water diversions by the City caused the Lake to become dry and the lakebed to be in a condition that produces dust. The District has the authority to issue regulatory orders to the City to control dust emissions.

The Commission's lease with the City has authorized the City to conduct dust control measures on the Lake over the years to comply with regulatory orders by the District. These dust control activities have occurred over multiple phases.

STAFF ANALYSIS AND RECOMMENDATION:

AUTHORITY:

Public Resources Code sections 6005, 6216, 6301, 6501.1, and 6503; California Code of Regulations, title 2, sections 2000 and 2003.

CALIFORNIA ENVIRONMENTAL QUALITY ACT:

On August 19, 2015, the Commission authorized the City's Owens Lake Dust Control Program Phase 9/10 (Phase 9/10) of the Owens Lake Dust Mitigation Program which allowed the City to construct 3.6 square miles of dust control in 17 Dust Control Areas (DCAs), including Shallow Flooding, Managed Vegetation, and Gravel Cover (Item C61, August 19, 2015). As part of the Commission's August 19, 2015, authorization for activities associated with Phase 9/10, the Commission also adopted the Phase 9/10 Mitigation Monitoring Program (MMP). The Phase 9/10 MMP contains measures to avoid or substantially reduce the significant environmental impacts identified in the Phase 9/10 Environmental Impact Report (EIR), including impacts related to air quality, biological resources, cultural resources, and transit. One of the mitigation measures for cultural resources, CR-3, requires that California Register of Historical Resources (CRHR) eligible artifacts are to be curated at the repository at the University of California, Riverside. Cultural Mitigation Measure CR-3 provided, in part:

> *The coordinates of artifacts, features, and sites will be obtained by the archaeologist, and artifacts from ineligible sites and isolated artifacts discovered during construction will be collected, cataloged, and placed in a dry and secure temporary storage area until the end of the Project, when they will be given to the CSLC for dissemination to the Lone Pine Paiute-Shoshone Reservation. Any artifacts that may be collected from CRHR-eligible sites will be curated at the repository at University of California, Riverside.*

On December 19, 2018, while Commission staff was processing the application for the 23rd amendment to the City's lease, the Lone Pine Paiute-Shoshone Reservation (LPPSR), Big Pine Paiute Tribe, Timbisha Shoshone Tribe, and Bishop Paiute Tribe (collectively, the "Tribes") requested joint government-to-government Consultation with the Commission regarding disposition and curation of artifacts collected from the Lake. Specifically, the Tribes objected to the removal of eligible artifacts from the Owens Valley and from Tribal control. Although it has been a common practice of many state and federal agencies over decades to curate, in university repositories, Native American artifacts collected from eligible sites, such practice is rapidly changing in favor of local, tribal control of collected materials. As stated

earlier, the mitigation measure in the City's approved EIR required artifacts from eligible sites to be curated in a distant University. However, through the Consultation process, which included Commission staff inspection of a facility located in Lone Pine under the control of the LPPSR, Commission staff and the Tribes developed a mutually agreeable curation practice that would allow the artifacts to remain under local tribal control while still providing reasonable access to researchers and archaeologists who may have an interest in studying the artifacts.

At the conclusion of Consultation and upon the next lease amendment consideration on April 5, 2019, the Commission authorized a revision of Mitigation Measure CR-3 to facilitate the change agreed to during Consultation. The full revised Mitigation Measure can be viewed in Exhibit D (Item C50, April 5, 2019), and the relevant language is excerpted below as follows:

In the third bullet of MM CR-3:

> *The qualified archaeologist or LADWP shall be required to secure a written agreement with the Lone Pine Paiute-Shoshone Reservation repository ~~a recognized museum repository, such as the University of California, Riverside~~, regarding the final disposition and permanent storage and maintenance of any ~~unique~~ archaeological resources or historical resources recovered as a result of the archaeological monitoring, as well as corresponding geographic site data that might be recovered as a result of the specified treatment (i.e., preparation, identification, curation, cataloging, etc.) required before the collection would be accepted for storage.*

In the eighth bullet of MM CR-3:

> *The coordinates of artifacts, features, and sites will be obtained by the archaeologist, and any artifacts ~~from ineligible sites and isolated artifacts~~ discovered during construction will be collected, cataloged, and placed in a dry and secure temporary storage area until the end of the Project, when they will be given to the CSLC for dissemination to the Lone Pine Paiute-Shoshone Reservation. ~~Any artifacts that may be collected from CRHR-eligible sites will be curated at the Lone Pine Paiute Shoshone Reservation repository.~~*

Approval of this Mitigation Measure meant that, going forward, any artifacts found during authorized lease activities would now be transferred to the LPPSR for curation. The proposed amendment would apply the revised Mitigation Measure CR-3 to the new activities being authorized under the amendment.

PUBLIC TRUST AND STATE'S BEST INTERESTS:

2021 CONTINGENCY ORDER

On July 7, 2021, the District issued Owens Lake Contingency PM10 Control Order on 34-acres located immediately north of existing DCA T1A-4. Pursuant to the 2014 Stipulated Judgment; District Rule 433 - Control of Particulate Emissions at Owens Lake; and District Governing Board Order Number 160413-01, the City is required to implement Best Available Control Measures (BACM) to mitigate dust emissions on the 34-acre area no later than July 6, 2024.

The City believes that areas adjacent to the 34-acre ordered area may contribute to sand deposition within newly constructed DCAs, impacting their effectiveness, and is therefore proposing additional BACM around the ordered areas. The City proposes implementing BACM within an additional 86-acres adjacent to DCA T1A-4 and an additional 26-acres adjacent to DCA T10-3a. The City will implement BACM within a total of 146-acres. The new DCAs (T1A-4 Addition and T10-3a Addition) will use brine shallow flood BACM and will be divided into three terrace shallow flood ponds: an upper, middle, and lower pond. New perimeter berm/roads will be constructed to provide a complete, drivable loop around each DCA. A new drain corridor will be constructed along DCA T11 to facilitate operation of the new DCAs.

The proposed DCAs are surrounded by Lake Minerals Road, leased to U.S. Borax (Lease No. 3511) for their mining operations on Owens Lake. The City has worked closely with U.S. Borax to ensure the proposed project does not impact current and future mining operations. In addition, a portion of U.S. Borax's Mineral Extraction Lease (Lease No. 5464) located within the proposed new DCAs will be quitclaimed.

TILLAGE WITH BACM BACK-UP (TWBB) REMEDIATION

On September 2, 2014, the Commission authorized the 15th amendment to the lease to authorize the conversion of 11 shallow-flood areas already under lease totaling approximately 4.12 square miles (approximately 2,636.8 acres) into a variation of Shallow Flooding, called Tillage with Best Available Control Measure Backup (TWBB) (Item 2, September 2, 2014). TWBB included DCA T2-2 and T16. The DCAs were tilled to create rows of ridges which roughen or clod the soil surface. In T2-2, approximately 100 acres were converted to shallow flood ponds with islands. In T16, 685 acres were converted to tillage and the remaining 375 acres to shallow flood ponds with islands and other features designed to maintain habitat value, including precise water depths and salinity management infrastructure.

As part of the lease amendment and Lake and Streambed Alteration Agreement, issued by the California Department of Fish and Wildlife, the City is required to maintain baseline habitat values for the TWBB project areas using a Habitat

Suitability Model (HSM). Monitoring of T2-2 and T16 have found that HSM modeled habitat values are below target levels due to operational difficulties with salinity management and water distribution. The proposed TWBB Remediation project aims to remediate those issues in T16 and T2-2.

DCA T2-2

The T2-2 Shallow Flood Habitat Pond is below target Habitat Value Acres due to water distribution challenges, which result in difficulties maintaining target habitat water depth with some habitat islands becoming submerged. The City proposes to grade high spots concentrated in the southside of the DCA to improve water distribution in hopes of hitting the target water depth modeled in the HSM throughout the DCA. Three new gravel bar islands on the southside of the pond will also be constructed to increase habitat diversity.

DCA T16

DCA T16 Shallow Flood Habitat Ponds are also below targets due to high salinity. The City believes operational improvements will improve the ability to manage salinity in the T16 ponds and lower salinity levels. Improvements will include:

- Controlled outlet structures (COS) and sumps to replace/improve existing COS.
- Drainage channels to connect to pond low spots that are accumulating salts.
- Additional freshwater inlets to improve freshwater distribution/mixing in ponds.
- Implement new continuous low-flow salinity management concept:
  - Installation of new low-flow bypass to existing turnout piping (inflow system).
  - New COS with down-weir (outflow system).
- Pump pads (T16-1 thru T16-4) to allow for back-up water flushing.
- Salinity sampling stations & Supervisory Control and Data Acquisition (SCADA) instrumentation to collect real-time salinity pond data. Two salinity sampling stations each (T16-2, T16-3, and T16-4).

In addition, twelve inches of road base will also be added to three segments of existing roads to enable construction equipment access.

Commission staff will continue to monitor and review annual monitoring reports on the effectiveness of the proposed modifications and impacts on bird habitat.

CLIMATE CHANGE:

As stated in *Safeguarding California Plan: 2018 Update* (California Natural Resources Agency 2018), climate change is projected to increase the frequency and severity of natural disasters related to flooding, drought, and storms. The lease area is open land with low vegetation fuels, and is vulnerable to the above events, including dust storms, flooding during above average snowmelt and precipitation, and flash flooding from thunderstorms. The leased land and surrounding land may

be vulnerable to these weather events; however, implementing BACM within a total of 146 new acres to control dust emissions, and modifying DCAs T16 and T2-2, associated with TWBB Remedial Action Plan, will not increase these vulnerabilities.

TRIBAL COORDINATION AND CONSULTATION:

Because the City was the lead agency for the Phase 9/10 project and is the project sponsor for the currently proposed activities, it is the public entity with primary responsibility for conducting tribal outreach and consultation. Commission staff did, however, review the City's efforts, which are summarized here:

- The City provided cultural studies and a PowerPoint slide presentation with details of the project to the Tribal Historic Preservation Officers (THPOs) of the 5 interested Tribes on November 30, 2021.
- An online meeting was provided the following day, December 1, 2021, with the same presentation for discussion and questions.
- On June 14, 2022, the THPOs attended another online meeting to discuss various projects on Owens Lake including the subject Projects.

On June 28, 2022, the Commission's Tribal Liaison emailed the THPOs to inform them of Staff's intent to take this to the Commission for consideration at the August 23, 2022 meeting. One THPO replied, thanking Commission staff for the information, and no responses or concerns have been raised by the other THPOs to date.

CONCLUSION:

Staff believes the proposed amendment will not significantly impair Public Trust resources and values, including wildlife habitat, public access, recreation, and aesthetic enjoyment on this portion of the Lake at this time. The proposed new DCAs will reduce dust emissions and improve air quality for residents in the Owens Valley. Improvements to T16 and T2-2 are anticipated to increase bird habitat.

OTHER PERTINENT INFORMATION:

1. Approval or denial of the lease amendment is a discretionary action by the Commission. Each time the Commission approves or rejects a use of sovereign land, it exercises legislatively delegated authority and responsibility as trustee of the State's Public Trust lands as authorized by law. If the Commission denies the application, the Lessee may not proceed with the proposed projects. Upon expiration or prior termination of the lease, the lessee also has no right to a new lease or to renewal of any previous lease.

2. This action is consistent with the "Leading Climate Activism", "Meeting Evolving Public Trust Needs" and "Partnering with Sovereign Tribal Governments and Communities" Strategic Focus Areas of the Commission's 2021- 2025 Strategic Plan.

3. **2021 Contingency Order:** An EIR, State Clearinghouse No. 2014071057, was prepared for the project by the City of Los Angeles Department of Water and Power and certified on June 2, 2015, and adopted a Mitigation Monitoring Program. Staff has reviewed this document prepared pursuant to the provisions of California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21081.6). In May 2022, the City of Los Angeles Department of Water and Power staff prepared an Addendum to the EIR (Exhibit D).

4. **Substitution of Mitigation Measure CR-3:** Staff recommends that the Commission find that the revised Mitigation Measure CR-3 is equivalent or more effective in mitigating or avoiding potential significant effects and that it in itself will not cause any potentially significant effect on the environment.

5. **Tillage with BACM Back-Up (TWBB) Remediation:** Staff recommends that the Commission find that this activity is exempt from the requirements of CEQA as a categorically exempt project. The project is exempt under Class 4, Minor Alterations to Land; California Code of Regulations, title 14, section 15304.

   Authority: Public Resources Code section 21084 and California Code of Regulations, title 14, section 15300.

6. This activity involves lands which have NOT been identified as possessing significant environmental values pursuant to Public Resources Code section 6370 et seq.; however, the Commission has declared that all lands are "significant" by nature of their public ownership (as opposed to "environmentally significant"). Since such declaration of significance is not based upon the requirements and criteria of Public Resources Code section 6370 et seq., use classifications for such lands have not been designated. Therefore, the finding of the project's consistency with the use classification as required by California Code of Regulations, title 2, section 2954 is not applicable.

APPROVAL REQUIRED:

California Department of Fish and Wildlife

EXHIBITS:

A. Land Description of new additions to Lease Area
B. Site and Location Map
C. Summary of Lease Amendments
D. City Addendum to EIR, SCH No. 2014071057
E. Substituted Mitigation Measure CR-3

RECOMMENDED ACTION:

It is recommended that the Commission:

CEQA FINDING:

2021 Contingency Order: Find that an EIR, State Clearinghouse No. 2014071057, and a Mitigation Monitoring Program were prepared by the City of Los Angeles Department of Water and Power and adopted on June 2, 2015, for this project and that staff has reviewed and considered the information contained therein and in the Addendum as contained in Exhibit D prepared by the City of Los Angeles Department of Water and Power.

Find that in its independent judgment, none of the events specified in Public Resources Code section 21166 or State CEQA Guidelines section 15162 resulting in any new or substantially more severe significant impacts has occurred, and therefore, no additional CEQA analysis is required.

Substitution of Mitigation Measure CR-3: Find that the revised Mitigation Measure CR-3 is equivalent or more effective in mitigating or avoiding potential significant effects and that it in itself will not cause any potentially significant effect on the environment.

Tillage with BACM Back-Up (TWBB) Remediation: Find that the activity is exempt from the requirements of CEQA pursuant to California Code of Regulations, title 14, section 15061 as a categorically exempt project, Class 4, Minor Alterations to Land; California Code of Regulations, title 14, section 15304.

PUBLIC TRUST AND STATE'S BEST INTERESTS:

Find that the proposed amendment will not substantially interfere with the Public Trust needs and values at this location, at this time, and for the foreseeable term of the lease; and is in the best interests of the State.

AUTHORIZATION:

Authorize the amendment of Lease 8079.9, a General Lease – Public Agency Use, effective August 23, 2022, for the construction, operation, and maintenance of 146 acres of new dust control measures associated with the 2021 Contingency Order, allow modifications to Dust Control Areas T16 and T2-2, associated with the Tillage with Best Available Control Measure Backup Remedial Action Plan, amend Section 2, Special Provisions, and amend Section 3, Description of the Lease Premises to include the lands described in the attached Exhibit A, attached and by this reference made a part hereof; all other terms and conditions of the lease will remain in effect without amendment.

EXHIBIT A

PRC 8079.9

LAND DESCRIPTION

Three (3) parcels of State-owned sovereign land in the bed of Owens Lake in the County of Inyo, State of California, being more particularly described as follows:

PARCEL 1: T1A-4 LADWP LEASE BOUNDARY

BEGINNING at a point from whence Mineral Monument No. 58, a white marble stone monument with a metal plate cross stamped “MM #58”, as said monument is shown on that map filed in Book 11, of Record of Surveys at page 7, Official Records of the County of Inyo, State of California, bears North 31° 22’ 30” East, a distance of 49,022.03 feet; thence along the following described courses:

South 65° 08' 14” East, 863.80 feet to a point from whence said mineral monument bears North 30° 22’ 11” East 48,931.58 feet;
South 00° 24' 56” West, 372.26 feet;
South 34° 57' 03” East, 477.59 feet;
South 78° 25' 31” East, 179.72 feet;
South 54° 08' 23“ West, 749.79 feet;
South 54° 09' 02“ West, 668.44 feet;
South 35° 36' 08” West, 1039.38 feet;
South 35° 14' 51” West, 970.36 feet;
North 74° 30' 19” West, 653.33 feet;
North 86° 07' 04” West, 745.79 feet;
North 59° 29' 23” East, 266.51 feet;
North 27° 29' 01” East, 208.08 feet;
North 89° 27' 06” East, 358.95 feet;
North 08° 26' 46” West, 569.27 feet;
North 36° 21' 48” East, 708.83 feet;
North 26° 30' 07” East, 787.80 feet;
North 08° 51' 45” East, 579.24 feet;
North 55° 59' 41” East, 1200.89 feet to the point of BEGINNING

Containing 124.21 acres, more or less.

PARCEL 2: T10-3A LADWP LEASE BOUNDARY

BEGINNING at a point from whence Mineral Monument No. 58, a white marble stone monument with a metal plate cross stamped “MM #58”, as said monument is shown on that map filed in Book 11, of Record of Surveys at page 7, Official Records of the County of Inyo, State of California, bears North

30° 28’ 27” East, a distance of 41,027.71 feet; thence along the following described courses:

South 55° 36' 56” East, 1028.55 feet to a point from whence said mineral monument bears North 29°02’38” East 41,110.66 feet;
South 38° 00' 42” West, 714.62 feet;
South 79° 44' 58” West, 45.68 feet;
North 87° 32' 53” West, 39.28 feet;
North 56° 26' 06” West, 172.24 feet;
North 68° 56' 32” West, 100.90 feet;
North 75° 02' 33” West, 158.04 feet;
South 64° 24' 33” West, 42.24 feet;
South 64° 26' 51” West, 142.74 feet;
South 54° 28' 42” West, 59.10 feet;
South 62° 24' 28” West, 65.54 feet;
South 62° 24' 24” West, 1.04 feet;
South 46° 37' 53” West, 98.96 feet;
South 47° 54' 21” West, 174.04 feet;
South 36° 14' 45” West, 58.67 feet;
South 24° 55' 37” West, 56.32 feet;
South 23° 57' 27” West, 44.77 feet;
South 31° 06' 45” West, 11.36 feet;
South 18° 45' 55” West, 12.46 feet;
South 17° 33' 51” West, 13.18 feet;
South 16° 22' 42” West, 14.40 feet;
South 15° 38' 17” West, 14.69 feet;
South 13° 46' 51” West, 14.76 feet;
South 11° 12' 48” West, 7.93 feet;
South 15° 15' 33” West, 17.77 feet;
South 10° 09' 49” West, 11.77 feet;
South 16° 53' 21” West, 8.39 feet;
South 21° 43' 07” West, 15.27 feet;
South 33° 51' 26” West, 13.65 feet;
South 45° 06' 34” West, 31.78 feet;
South 56° 29' 08” West, 35.21 feet;
South 82° 01' 28” West, 93.40 feet;
South 69° 27' 34” West, 26.24 feet;
South 47° 34' 41” West, 23.80 feet;
South 32° 22' 29” West, 38.12 feet;
South 32° 22' 29” West, 109.73 feet;
North 55° 04' 03” West, 265.23 feet;
North 34° 55' 53” East, 2008.37 feet to the point of BEGINNING

Containing 28.02 acres, more or less.

Parcel 3: T11 DRAIN LINE CORRIDOR

BEGINNING at a point from whence Mineral Monument No. 58, a white marble stone monument with a metal plate cross stamped “MM #58”, as said monument is shown on that map filed in Book 11, of Record of Surveys at page 7, Official Records of the County of Inyo, State of California, bears North 26° 24’ 16” East, a distance of 38,481.83 feet; thence along the following described courses:

South 16° 00' 50” East, 76.08 feet to a point from whence said mineral monument bears North 26° 19’ 41” East 38,538.03 feet;
South 74° 01' 34” West, 588.34 feet;
South 73° 57' 49” West, 589.62 feet;
South 73° 57' 45” West, 589.62 feet;
South 73° 59' 00” West, 617.31 feet;
South 38° 10' 12“ West, 888.84 feet;
North 55° 36' 56“ West, 67.62 feet;
North 38° 00' 40” East, 926.41 feet;
North 73° 59' 10” East, 2399.03 feet to the point of BEGINNING

Containing 5.60 acres, more or less.

The Bearings used in this description are on the California Coordinate System, NAD83, (CCS83/92), Zone 4. The Coordinate values, in U.S. Survey feet, of said Mineral Monument No. 58, also known as Triangulation Station “Keeler“ are: Northing 2,064,076.37, Easting 6,890,187.91. All distances shown herein are grid distances in U.S. Survey feet. To obtain ground surface distances, multiply the distances shown by 1.0002206574

END OF DESCRIPTION

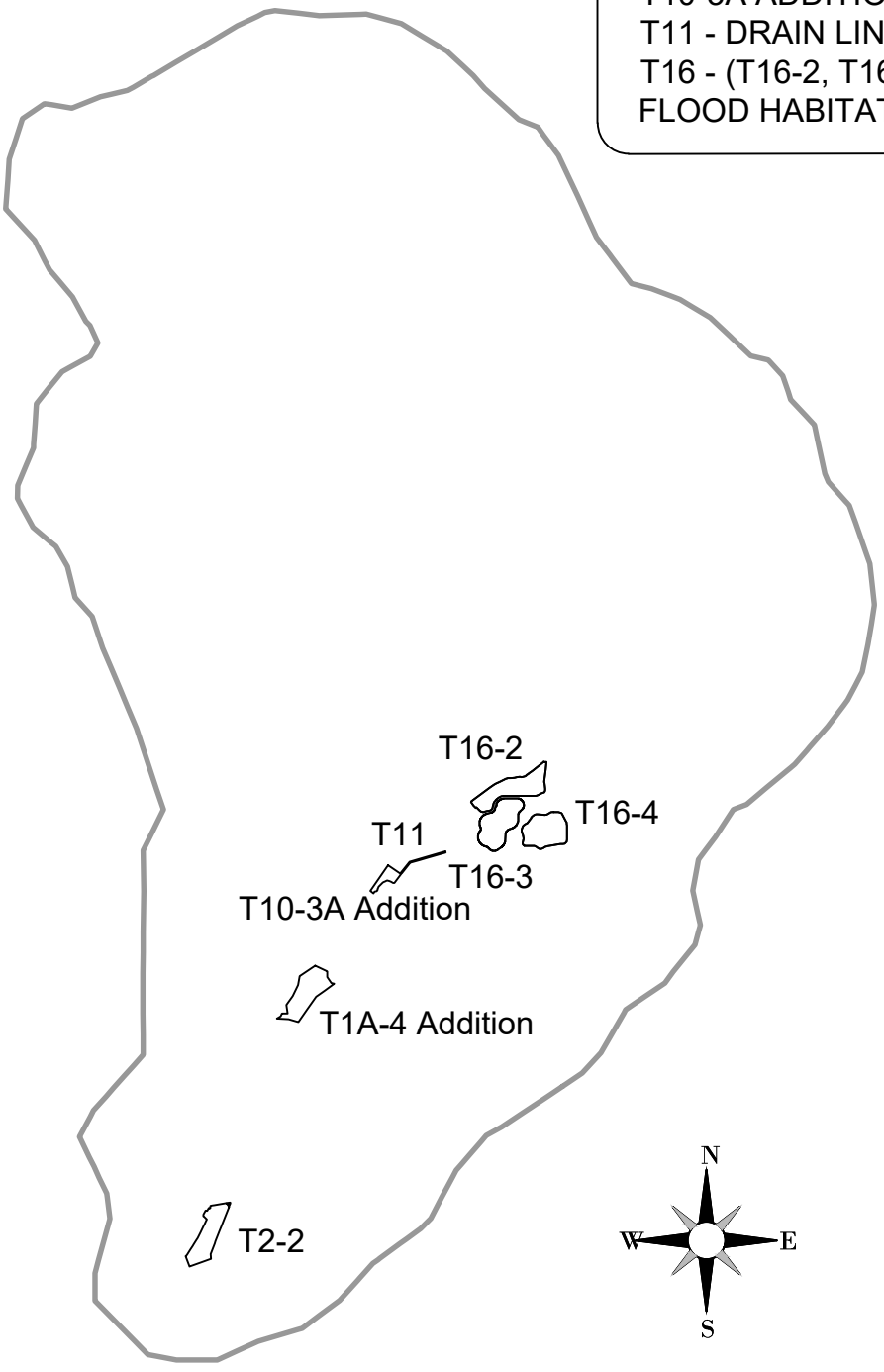
Prepared June 17, 2022 by the
Los Angeles Department of Water and Power
Northern Aqueduct Survey

John R. Williams

NO SCALE

SITE

T1A-4 ADDITION - DUST CONTROL AREA
T2-2 - SHALLOW FLOOD HABITAT POND
T10-3A ADDITION - DUST CONTROL AREA
T11 - DRAIN LINE CORRIDOR
T16 - (T16-2, T16-3, T16-4) - SHALLOW FLOOD HABITAT PONDS



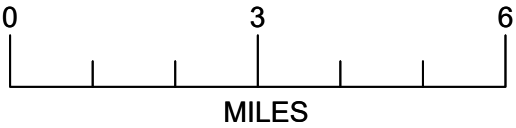


Exhibit B

PRC 8079.9
LADWP
GENERAL LEASE-
PUBLIC AGENCY USE
INYO COUNTY

THIS EXHIBIT IS SOLELY FOR PURPOSES OF GENERALLY DEFINING THE LEASE PREMISES, IS BASED ON UNVERIFIED INFORMATION PROVIDED BY THE LESSEE OR OTHER PARTIES AND IS NOT INTENDED TO BE, NOR SHALL IT BE CONSTRUED AS, A WAIVER OR LIMITATION OF ANY STATE INTEREST IN THE SUBJECT OR ANY OTHER PROPERTY.

TS 06/16/2022

Exhibit C: Summary of Lease Amendments

Below is a summary of the amendments to Lease No. PRC 8079.9 which the Commission has approved to date.

Original Lease. Allowed the City to comply with dust mitigation requirements by installing a South Sand Sheet Air Quality and Sand Fence Effectiveness Monitoring System on the leased premises ("Premises"). (Approved: 6/14/1999; Available at: http://archives.slc.ca.gov/Meeting_Summaries/1999_Documents/06-14-99/Items/061499C06.pdf)

First Amendment. Allowed the City to construct and operate a Shallow Flooding project on 13.5 square miles in the North Sand Sheet area of the Premises. (Approved: 6/27/2000; Available at: http://archives.slc.ca.gov/Meeting_Summaries/2000_Documents/06-27-00/Items/062700C15.pdf)

Second Amendment. Permitted the implementation of the South Zone Dust Control Project on the Premises through the following dust mitigation measures ("DCMs"): (1) 6.4 square miles Managed Vegetation; (2) 1.7 square miles Shallow Flooding; and (3) approximately 40 acres Gravel Cover. (Approved: 11/26/ 2001; Available at: http://archives.slc.ca.gov/Meeting_Summaries/2001_Documents/11-26-01/Items/112601C18.pdf)

Third Amendment. Authorized 154 acres of additional Shallow Flooding for the South Zone Dust Control Project. (Approved: 6/18/2002; Available at: http://archives.slc.ca.gov/Meeting_Summaries/2002_Documents/06-18-02/Items/060802C05.pdf)

Fourth Amendment. Allowed additional Shallow Flooding on the Premises for Phases IV and V of the Owens Lake Dust Control Project. (Approved: 6/26/2006; Available at: http://archives.slc.ca.gov/Meeting_Summaries/2006_Documents/06-26-06/Items/062606C24.pdf)

Fifth Amendment. Allowed additional Shallow Flooding for Phase VII of the Owens Lake Dust Control Project. This included the construction of earthen roads and berms, several miles of pipeline, and other equipment installations. (Approved 8/22/2008; Available at: http://archives.slc.ca.gov/Meeting_Summaries/2008_Documents/08-22-08/ITEMS_AND_EXHIBITS/C05.pdf)

Sixth Amendment. Allowed two earthen berms, two access roads, and two barrier gates on the Premises for Phase VII of the Owens Lake Dust Mitigation Project. (Approved 6/1/2009; Available at:

http://archives.slc.ca.gov/Meeting_Summaries/2009_Documents/06-01-09/ITEMS_AND_EXHIBITS/C23.pdf

Seventh Amendment. Authorized drip irrigation components for Phase VII of the Owens Lake Dust Control Project. (Approved 10/22/2009; Available at: http://archives.slc.ca.gov/Meeting_Summaries/2009_Documents/10-22-09/ITEMS_AND_EXHIBITS/C17.pdf)

Eighth Amendment. Authorized sand fencing and irrigation facilities on area T1A-01 of the Premises. (Approved 12/17/2009; Available at: http://archives.slc.ca.gov/Meeting_Summaries/2009_Documents/12-17-09/ITEMS_AND_EXHIBITS/41.pdf; Note: Recommendation modified; for actual approval, see: http://archives.slc.ca.gov/Meeting_Summaries/2009_Documents/12-17-09/Minutes.pdf)

Ninth Amendment. Allowed: (1) the two new access roads; and (2) soil tillage of 3.12 square miles of land: (Approved: 6/28/2010; Available at: http://archives.slc.ca.gov/Meeting_Summaries/2010_Documents/06-28-10/ITEMS_AND_EXHIBITS/C33.pdf)

Tenth Amendment. Allowed 2.03 square miles of Gravel Cover on 2.03 square miles and roadway expansion. (Approved: 12/10/2010; Available at: http://archives.slc.ca.gov/Meeting_Summaries/2010_Documents/12-10-10/Items_and_Exhibits/50.pdf)

Eleventh Amendment. Allowed the placement of above-grade sprinklers in the Channel Area and area T1A-1. (Approved: 1/26/2012; Available at: http://archives.slc.ca.gov/Meeting_Summaries/2012_Documents/01-26-12/Items_and_Exhibits/C43.pdf)

Twelfth Amendment. Extended the deadline for performing the soil tillage permitted under the Ninth Amendment. (Approved: 6/21/2013; Available at: http://archives.slc.ca.gov/Meeting_Summaries/2013_Documents/06-21-13/Items_and_Exhibits/C61.pdf)

Thirteenth Amendment. Permitted DCMs on 3.1 square miles of the Premises and transitioned DCMs on 3.4 square miles of the Premises. (Approved: 9/20/2013; Available at:http://archives.slc.ca.gov/Meeting_Summaries/2013_Documents/09-20-13/Items_and_Exhibits/C82.pdf)

Fourteenth Amendment. Allowed the City to create a stockpile area on the Premises to store aggregate road base material. (Approved: 4/23/2014; Available at: http://archives.slc.ca.gov/Meeting_Summaries/2014_Documents/04-23-14/Items_and_exhibits/C55.pdf)

Fifteenth Amendment. Allowed the City conserve water by converting 4.12 square miles from Shallow Flooding to tillage with best available control measure backup. (Approved: 9/2/2014; Available at: http://archives.slc.ca.gov/Meeting_Summaries/2014_Documents/09-02-14/Items_and_exhibits/02.pdf)

Sixteenth Amendment. Approved Phase 9/10 project, excluding T18S, allowing 3.6 square miles of new dust control in 17 Dust Control Areas. (Approved 8/19/2015; Available at: http://archives.slc.ca.gov/Meeting_Summaries/2015_Documents/08-19-15/Items_and_exhibits/C61.pdf)

Seventeenth Amendment. Approved the transition of T18S from 1.82 square miles of shallow flooding to approximately 1.02 square miles of shallow flooding and 0.81 square miles of gravel cover. (Approved 6/28/2016; Available at: http://archives.slc.ca.gov/Meeting_Summaries/2016_Documents/06-28-16/Items_and_Exhibits/95.pdf)

Eighteenth Amendment. Approved the implementation of the 2016 Owens Lake Dynamic Water Management Plan (Approved 6/9/2016; Available at: http://archives.slc.ca.gov/Meeting_Summaries/2016_Documents/08-09-16/Items_and_Exhibits/C42.pdf)

Nineteenth Amendment. Approved placement of gravel cover for dust control for the 0.41-acre parcel west of Mainline, between existing DCAs T21 and T21-L3. (Approved 6/22/17; Available at: http://archives.slc.ca.gov/Meeting_Summaries/2017_Documents/06-22-17/Items_and_exhibits/C58.pdf)

Twentieth Amendment. Approved staff's emergency authorization of emergency measures taken between April 2017 and June 2017 and authorized the Executive Officer to amend the lease to allow for the placement of 0.45 acre of gravel cover in Dust Control Area (DCA) T37-2-L-1/T37-2a. (Approved 11/29/17); Available at: https://www.slc.ca.gov/Meeting_Summaries/2017_Documents/11-29-17/Items_and_Exhibits/C54.pdf)

Twenty-first Amendment. Approved the deadline to develop a Tribal Consultation Policy, including adoption of the Policy and the appointment of an official Tribal Liaison, from June 22, 2018 to December 23, 2018. (Approved

6/21/18; Available at: http://archives.slc.ca.gov/Meeting_Summaries/2018_Documents/06-21-18/Items_and_Exhibits/C58.pdf)

Twenty-second Amendment. Approved use of barn owl boxes, extended use of sand fences, the redesignation of 353 acres of managed vegetation dust control measures to sprinkler shallow flooding, the continued use and maintenance of two previously unauthorized access roads, installation of flood control system in DCA T2-1b (C2-L1), and the continued use and maintenance of 0.81 acre of previously unauthorized gravel cover. (Approved 2/4/19; Available at: https://slcprdappazappwordpress.azurewebsites.net/wp-content/uploads/2019/02/02-04-19_C58.pdf

Twenty-third Amendment. Approved removal of gravel in T37-2d and installation of sprinkler shallow flooding, modifications to T13-1 and T17-2, and extended the term of the lease to April 30, 2024. (Approved April 5, 2019; Available at: http://www.slc.ca.gov/wp-content/uploads/2019/03/04-05-19_C50.pdf

Twenty-fourth Amendment. Approved of 2.5 miles of water diversion ditches adjacent to dust control area T36. (Approved February 29, 2020; Available at: https://slcprdwordpressstorage.blob.core.windows.net/wordpressdata/2020/02/02-28-2020_40.pdf

Exhibit D

Owens Lake Dust Mitigation Program – Phase 9/10 Project
Addendum to the
2015 Final Environmental Impact Report

Incorporation of Dust Control Areas T1A-4 Addition and T10-3a Addition

May 2022

1.0 INTRODUCTION

The City of Los Angeles Department of Water and Power (LADWP) is implementing the Owens Lake Dust Mitigation Program (OLDMP) on Owens Lake in order to reduce emissions of particulate matter less than 10 microns in diameter (PM_{10}). LADWP constructs and operates dust control measures on the lake in compliance with Agreements with the Great Basin Unified Air Pollution Control District (GBUAPCD) under the authority of California Health & Safety Code Sec. 42316, legal settlement agreements with GBUAPCD, lease agreements for use of state lands (administered by the California State Lands Commission (CSLC)), and other regulatory approvals.

Starting in 2016, LADWP expanded the OLDMP by construction and operation of the Phase 9/10 Project (Project) in compliance with a 2014 Stipulated Judgment with GBUAPCD (Superior Court of the State of California Case No. 34-2013-800001451-CU-WM-GDS). The 2014 Stipulated Judgment resolved disputes between the parties regarding the 2011 Supplemental Control Requirements Determination (SCRD), 2012 SCRD, 2013 SCRD and 2014 SCRD; the SCRDs were prepared by GBUAPCD in order to identify the areas of Owens Lake where dust control is required. The SCRD requirement and procedure are set forth in GBUAPCD Governing Board Order 080128-01 (January 28, 2008) contained in the 2008 Owens Valley PM_{10} Planning Area Demonstration of Attainment State Implementation Plan (SIP) (2008 SIP; GBUAPCD, 2008a).

1.1 PHASE 9/10 PROJECT AVOIDANCE ALTERNATIVE DESCRIPTION

The Phase 9/10 Project Avoidance Alternative encompassed approximately 3 square miles of dust control areas (DCAs) and 1.8 square miles of Transition Area for a total Project area of approximately 5 square miles. To comply with the 2011 and 2012 SCRDs, dust mitigation was constructed on several new DCAs. Best Available Control Measures (BACM) installed were: 2.2 square miles of Gravel Cover, 0.2 square miles of Managed Vegetation and 0.5 square miles of Shallow Flood. Additionally, approximately 0.2 square miles of berm roads were installed as part of the Phase 9/10 Project. To conserve water use for the OLDMP, the Project also included the transition of existing Shallow Flood DCA T18S (1.8 square miles) to approximately 0.8 square miles of Gravel Cover and

1.0 square miles of Shallow Flood. The new DCAs were installed, however, transition of T18S was not completed and is not proposed at this time.

1.2 CONTINGENCY PM10 CONTROL MEASURES

The 2014 Stipulated Judgment identifies future (on or any time after January 1, 2016) additional BACM contingency measures of up to 4.8 square miles (approximately 3,072 acres) of dust control, and clarifies that BACM Contingency Measures will be waterless or water-neutral with offset of new water use with water savings elsewhere on the lake. At lease once in every calendar year, the Air Pollution Control Officer (APCO) makes a determination, based on evidence, as to whether BACM Contingency Measures are to be ordered, and where. In 2021, GBUAPCD identified a 34-acre uncontrolled area of Owens Lake, located immediately north of T1A-4, as causing and contributing to PM_{10} National Ambient Air Quality Standard (NAAQS) exceedances at the shoreline. Consistent with the procedures of the 2014 Stipulated Judgment and the 2016 SIP, GBUAPCD has ordered BACM Contingency Measures for this area by July 7, 2024, or within 3 years of the order date (July 7, 2021). Per the Board Order, the BACM Contingency Measures will be controlled with waterless or water-neutral dust control measures, or by offsetting any new or increased water use with water savings elsewhere on the lakebed.

1.3 PROPOSED MODIFICATION TO THE PROJECT DESCRIPTION

The Final Environmental Impact Report (EIR) for the Phase 9/10 Project described the construction and operation of several new DCAs, including areas of Managed Vegetation, Shallow Flood and Gravel Cover. LADWP is proposing to amend the Project description to comply with the 2021 BACM Contingency Measures Order by adding two additional areas for installation of BACM – T1A-4 Addition and T10-3a Addition. Both DCAs are located close to the brine pool of Owens Lake, T1A-4 Addition is adjacent to T1A-4 (Shallow Flood DCA) and T10-3a Addition is adjacent to T10-3a (Gravel Cover DCA) and T11 (Shallow Flood DCA) (see figures included in Appendix A). The EIR Avoidance Alternative described BACM installation on approximately 3 square miles of Owens Lake. The modified Project description would add 0.24 square miles of BACM (124 acres for T1A-4 Addition and 28 acres for T10-3a Addition).

LADWP believes it is prudent to proactively design and implement dust control measures in an additional 90-acres adjacent to the 34-acre ordered area adjacent to existing dust control area (DCA) T1A-4, and an additional 28 acres in an area adjacent to existing DCA T10-3a. These additional areas may be contributing to sand deposition in existing DCAs resulting in increased maintenance.

As such, LADWP is proposing to implement dust control measures within a total of 152 acres, which includes 34 acres ordered by GBUAPCD, and an additional 118-acres of un-ordered area. The additional 118-acres of un-ordered area consists of 90-acres adjacent to the ordered area and existing DCA T1A-4, and 28-acres adjacent to existing DCA T10-3a (Table A-1). The two new dust control areas being proposed are T1A-4 Addition and T10-3a Addition.

Table A-1. Acreage of New DCAs T1A-4 Addition and T10-3a Addition

New DCA	Ordered Area	Un-Ordered Area	Total
T1A-4 Addition	34 acres	90 acres	124 acres
T10-3a Addition	0 acres	28 acres	28 acres
TOTAL	**34 acres**	**118 acres**	**152 acres**

In addition, LADWP is proposing to modify 0.5 acres outside the containment berm of T10-3a from Gravel Cover to Brine with Shallow Flood BACM (Brine). Three areas of T10-3a (totaling 0.5 acres) overlap with the proposed design of T10-3a Addition. Since the existing Gravel Cover in these three areas is inundated with sand, implementation of Brine is proposed.

2.0 PHASE 9/10 CEQA PROCESS

In July 2014, a California Environmental Quality Act (CEQA) Initial Study was prepared by LADWP based on State CEQA Guidelines Appendix G, to determine whether construction and operation of the Phase 9/10 Project would result in significant effects on the environment. Since potentially significant effects were identified, LADWP determined that an EIR was needed to analyze those effects. A Notice of Preparation (NOP) of the EIR, along with the Initial Study, was prepared and filed with the State Clearinghouse on July 17, 2014 (State Clearinghouse Number 2014071057). A public scoping meeting for the Phase 9/10 Project was held on July 29, 2014 at the LADWP office in Keeler, California. A Draft EIR for the Project was prepared and distributed for public review on February 11, 2015 (LADWP, 2015a). A public meeting on the Draft EIR was held on March 5, 2015 at the LADWP office in Keeler, California.

Analysis of the impacts of the Phase 9/10 Project as originally proposed is presented in the Draft EIR. Significant impacts of the original Project that could not be mitigated to less than significant levels were identified for cultural resources. All other impacts were found to be beneficial, less than significant or less than significant as mitigated. Several alternatives to the Project were defined with a focus on avoidance of significant impacts to cultural resources and on alternative methods and combinations of BACM. Based on the analysis presented in the Draft EIR, the Avoidance Alternative was identified as the environmentally superior alternative.

On June 2, 2015, the LADWP Board of Water and Power Commissioners adopted the Phase 9/10 Project Avoidance Alternative, certified the Final EIR

(LADWP, 2015b) and adopted the Mitigation Monitoring and Reporting Program (MMRP) for the project.

2.1 ADDENDUM

This Addendum to the 2015 Owens Lake Dust Mitigation Program – Phase 9/10 Project Final EIR serves as CEQA compliance for the modification of the Phase 9/10 Project to expand the Project area to include an additional 0.24 square miles of BACM, and redesignation of the BACM (from Gravel Cover to Brine) in approximately 0.5 square miles. This Addendum addresses changes in the Project since adoption of the Final EIR.

LADWP has determined that the Project area differs from the area evaluated in the 2015 Phase 9/10 Project Final EIR such that, in accordance with Section 15164 of the State CEQA Guidelines, minor modifications and clarifications to the EIR warrant preparation of an Addendum to the 2015 Phase 9/10 Project Final EIR. Environmental analysis presented in this Addendum demonstrates that the impacts and mitigation requirements identified in the 2015 Phase 9/10 Project Final EIR remain substantively unchanged by the modification of the Project description to expand the area of new BACM by approximately 0.24 square miles. This supports the finding that the proposed modification does not raise any new issues and does not exceed the level of impacts identified in the Final EIR.

2.2 PROJECT OBJECTIVE

The objective of the modified Project description described in this Addendum is to expand the area of BACM by adding two additional DCAs where dust will be controlled by Brine. The overall objective of the Project to implement dust control on Owens Lake to reduce emissions in accordance with applicable laws without increasing water commitments while, to the extent feasible, maintaining existing habitat values, maintaining aesthetic values, providing safe public access, preserving cultural resources, and utilizing existing infrastructure, remains unchanged.

3.0 BRINE WITH SHALLOW FLOOD BACM BACKUP DUST CONTROL MEASURE

3.1 BRINE BACM DESCRIPTION

As described in the Phase 9/10 EIR, Shallow Flood dust control consists of releasing fresh and/or recycled water into a DCA and allowing it to spread, wet the surface, and thereby suppress windborne dust during the dust season (October 1st to June 30th). As part of the 2016 SIP and associated District Board Order #160413-01 and Rule 433 (Control of Particulate Emissions at Owens

Lake), GBUAPCD defined Brine with Shallow Flood BACM Backup as a modification to the Shallow Flood BACM where the wetness surface cover requirement is replaced with thick stable surface salt crusts. Modeled after the naturally occurring stable areas present on Owens Lake, compliance of Brine BACM areas is evaluated based on extent and types of surface coverage and whether the area is in a potentially emissive state.

Stable surfaces for Brine BACM are defined as:

- Water: Standing water or hydrologically saturated surface as defined by Shallow Flooding BACM. Water may have any salinity.

- Evaporite Salt Deposit: A crystalline deposit of salt minerals precipitated on the surface of the lakebed from evaporation of Owens Lake brine. The evaporite salt deposit does not include the development of salt crust by upward capillary movement of saline fluids through the soil column. The evaporite salt deposit must have a thickness of 1.5 centimeters or greater and may be either wet or dry.

- Capillary Brine Salt Crust: A crust enriched in salt minerals formed at the soil surface by upward capillary movement of water through the soil. The capillary brine crust typically consists of a mix of salt minerals and soil particles in various proportions. The capillary brine salt crust within a Brine BACM area must have an average thickness of 10 centimeters or greater and may be either wet or dry.

Performance requirements for Brine BACM areas are detailed in Attachment E of District Board Order #160413-01 and include:

- The combined areal surface cover of the qualifying component stable surfaces within a Brine area must be at least the percentage required for fully compliant Shallow Flooding BACM.

- Currently, Shallow Flooding areas requiring 99% emissions control efficiency must have 72% to 75% wetness cover, depending on their location. Similarly, Brine BACM areas requiring 99% control must have 72% to 75% total surface cover (depending on location) of a mix of three stable qualifying surfaces.

- The three stable surfaces for Brine BACM compliance consist of: standing water, evaporite salt deposits greater or equal to 1.5 centimeters in thickness, and capillary brine salt crust greater or equal to 10 centimeters in thickness.

Where compliance criteria are not met, the APCO may either:

- Issue an order for maintenance activities in a Brine BACM area that does not meet the aggregate cover of qualifying surface provided the total compliant surface cover exceeds 60% or the proportion of capillary brine crust exceeds the allowed one-third of the total required cover, provided the area does not require re-flooding based on Induced Particulate Erosion Test (IPET) results or sand flux conditions, or

- Issue a re-flood order if the total compliant surface cover for areas requiring 99% control falls below 60%.

3.2 CONSTRUCTION

T1A-4 Addition and T10-3a Addition Brine Shallow Flood DCAs will be divided into two to three terraced shallow flood ponds. Each pond will have a constant finished grade elevation (i.e., flat ground surface) operated with a maximum water level of 4 inches above the finished grade. The terraced ponds will follow the existing grade to balance cut and fill requirements and minimize the import and export of material to the site. In both DCAs, an average cut depth of 4-inches in the upgradient portion of the basins and an average fill depth of 4-inches in the downgradient portion of basins are expected. It is anticipated that the mass grading activities will be conducted as was done for the other Phase 9/10 DCAs, using low ground pressure (LGP) tracked equipment (e.g., CAT Challenger) hauling pull type scrapers (e.g., Miskin Scrapers) ranging in capacity from 9 to 26 cubic yards (CY). The equipment will cut down the existing grade in the upgradient halves of the basins, hauling material to augment the downgradient halves of the basins.

DCAs will have new berm/roads constructed to follow existing ground surface contours to minimize grading requirements and material import. Portions of T1A-4 Addition and T10-3a Addition are surrounded by the existing Lake Minerals Road constructed by U.S. Borax for their mineral extraction operations, and existing perimeter berm roads around DCA T10-3a and T1A-4. New perimeter berm/roads with a roadway width of 12 ft – 20 ft, a height of 3 ft, and a 3:1 side slope will be constructed to provide a complete, drivable loop around each DCA. The existing Lake Minerals Roads will be improved to impound water and achieve a minimum height of 3-ft, a minimum roadway width of 12 ft, and a 3:1 side slope. Internal berm/roads would be constructed to impound the Shallow Flood ponds.

The soil used for installation of BACM in T1A-4 Addition and T10-3a Addition will primarily be obtained from within the DCA boundaries. However, if soils within the two new DCAs are not suitable for berm/road construction, a portion (approximately 37.2 acres) of T2-2 (existing Shallow Flood DCA) with sandy soil suitable for construction would serve as a borrow site for fill material. Soil would

be extracted from T2-2 to better achieve habitat target water depths; existing islands are not included in the borrow area and would not be disturbed. To maintain dust control compliance in T2-2, soils would be obtained outside of the dust control season.

Gravel. Gravel will be used for berm/road side slope armoring, and potentially berm/road base for subgrade stabilization where soft soils are identified for the T1A-4 Addition and T10-3a Addition Brine Shallow Flood DCAs. Berm/roads utilize both 2-inch and 6-inch gravel of varying thickness for slope armoring and subgrade base. Estimated gravel volumes are summarized in Table A-2.

Table A-2. Estimated Gravel Volumes for T1A-4 Addition and T10-3a Addition

DCA	Gravel Volume for Berm/Roads (cubic yards)
T1A-4 Addition	6,647
T10-3a Addition	5,967
Total	**12,614**

The existing gravel located at the LADWP Sulfate Yard would be used for construction of the new DCAs. If required, additional gravel would be obtained from the local sources described in the Phase 9/10 EIR (LADWP Shale Borrow Pit, F.W. Aggregate Dolomite mine, or Panamint Valley Limestone Quarry).

As was done for the original Phase 9/10 DCAs, tracked dozers will be used to construct berm/roads for T1A-4 Addition and T10-3a Addition, to track and level out the areas for finish grading. Both the perimeter and internal berms/roads will have gravel-surfaced 12-ft wide roadways (i.e., berm/road top width) for combined access by a ½-ton pickup truck for Shallow Flood operations and U.S. Borax operations as needed. Berm/road side slopes will be 3:1 with a 4-inch thick gravel surface. Traffic turnouts will be located where there are appurtenances (e.g., valves, pond staff gauges, culverts) and where there are straight sections more than 1,000 feet.

Work Area Limits. As was done for the original Phase 9/10 DCAs, the Work Area Limits boundary would be 50 feet outside of the DCA boundaries to account for access by construction equipment for perimeter roads, drains, and other infrastructure.

Construction Staging Areas. As described in the Phase 9/10 EIR, the existing Dirty Socks construction staging area would be used for T1A-4 Addition and T10-3a Addition. Limited temporary on-site staging of materials may be necessary during construction.

Construction Start and End Times. The construction work hours and delivery hours would be the same as for the original Phase 9/10 DCAs:

- The working hours are from sunrise to sunset except as follows: From December 21 to March 20, from 1 hour before sunrise to 1 hour after sunset. The 1 hour after sunset shall be limited to maintenance activities, and any use of lighting used during this hour shall be directed downward and approved by the Engineer. (Phase 9/10 Specifications: F01560 Section 3.02-A.)
- The hours for delivery and export of construction vehicles, materials, and equipment are limited to 6:00 a.m. to 6:00 p.m., Monday through Friday, 7:00 a.m. to 5:00 p.m. on Saturday, or as approved by the Engineer. [Phase 9/10 Specifications: F01560 Section 3.03-F]

Ingress and Egress Routes. All construction and commuter vehicles will be limited to the existing berm/roads, access roads, haul routes, and field office staging area. In addition to DCA berm/roads, ingress and egress routes for construction will include the routes noted on Figure 3-18 of the EIR along SR 190, Sulfate Road, Mainline Road and Dirty Socks Access Road. To access Highway 395 on the west side of the lake, Lake Minerals Access Road would also be used for the construction of T1A-4 Addition and T10-3a Addition.

Demolition. Minimal demolition waste is anticipated from construction of the two new DCAs. The existing T10-3a brine submain piping at the connection to the new T1A-4 Addition and T10-3a and the T1A-4 subdrain piping at the connection to the new T1A-4 Addition subdrain pipe would be removed and disposed offsite. The existing T10-3a submain and outfall would be abandoned in place. None of the utilities that will be demolished and hauled offsite for disposal are anticipated to be classified as hazardous. The destination for construction demolition waste will be determined by the selected contractor. However, the Lone Pine Landfill operated by the Inyo County Recycling Waste Management Department is the closest landfill that accepts solid waste.

Dewatering Activities During Construction. Earthwork for new Brine Shallow Flood BACM will include mass grading which requires the DCAs to be dried out sufficiently to allow excavation equipment to travel across the entirety of the DCA. Additionally, trench dewatering will be necessary within trenches dug for new buried pipeline and utility installations. As was done for the original Phase 9/10 DCAs, a dewatering plan for surface and groundwater control will be developed prior to conducting site dewatering activities. To accommodate the installation of buried pipelines and utilities, site dewatering where relevant would follow a multi-step process including:

- For soil borrow site DCA T2-2, cessation of Shallow Flood water deliveries through the Shallow Flood laterals along the existing mainline road to stop the introduction of irrigation water into the work area.
- Installation of a new subsurface drain lines within the pipe corridor adjacent and parallel to the pipe corridor berm/road. These drain lines will be tied into existing subsurface drain lines that route to existing subdrain or drainage management unit (DMU) pump stations. It is expected that

groundwater levels will be drawn down 2 to 5 ft below the ground surface at the drain line. All water collected in the new drain lines will be routed into the existing drainage system which pumps water back into the irrigation system for dust control.

- Construction of dewatering pits along the mainline pipe excavation to allow gravity drainage of groundwater encountered during pipeline trench excavation. These pits will have dedicated points for dewatering collection and pumping. Temporary diesel-powered pumps will be installed at dewatering pit locations and water will be discharged into adjacent T1A-4 Shallow Flood and T11 Shallow Flood DCAs.
- Construction of temporary drainage ditches within the DCAs to allow surface water and shallow groundwater to drain out of the grading areas.

Stormwater Diversion and Facility Protection. Stormwater inflow into T1A-4 Addition will accommodate the existing culvert from T1A-4 Shallow Flood DCA and stormwater runoff directly entering the area. Stormwater inflow into T10-3a Addition will accommodate the existing culvert from T10-3a Gravel Cover DCA and stormwater runoff directly entering the area.

Construction Dust Control Plan. The Dust Control Plan (Submittal No. 01-R2) developed and implemented for construction of the original Phase 9/10 DCAs is currently being updated. The revised Dust Control Plan will be submitted to GBUAPCD and implemented during construction of the two additional DCAs.

3.3 OPERATIONS

For Brine with Shallow Flood Backup DCAs, a target water level is set and water is introduced to the basin to maintain a constant water level, which provides a constant wetted surface area. In large Shallow Flood ponds, ponds are filled by control valves, operated through irrigation schedules that are deployed through the lake-wide supervisory control and data acquisition (SCADA) system. In small Shallow Flood ponds within larger lateral Shallow Flood areas, uncontrolled inflows are delivered through tailwater from upgradient Shallow Flood areas and controlled outflows are established by culverts installed in berms/roads impounding the area. As the wetted surface evaporates, a stable (non-emissive) salt crust forms. Generally, several cycles of wetting and drying are required to achieve a non-emissive surface. If the salt crust is disturbed or insufficient to control dust emissions, the area is re-flooded.

Water will be delivered to T1A-4 Addition and T10-3a Addition via a new submain with isolation valves constructed with a connection to the existing T10-3a Brine Submain. The existing T10-3a pond outfall at the end of the existing T10-3a Brine Submain will be capped-off and abandoned in place.

The T1A-4 Addition and T10-3a Addition DCAs are each designed with one pond outfall. Down-gradient ponds within each DCA will be filled by manually opening a gated culvert between each terraced pond. This will allow the water to be conveyed from the upper pond to the middle pond, from the middle pond to the lower pond, or from the upper pond to the lower pond. The culvert outlet structures will have stoplogs to allow manual adjustment to control water levels in the ponds, and allow for overflow in an emergency.

3.4 MAINTENANCE

As described in the Phase 9/10 EIR, DCAs are monitored and maintenance activities conducted as necessary to ensure compliance and allow for even distribution of water. Brine Shallow Flood contour basin maintenance will be required over time to maintain water delivery and surface drainage infrastructure and to maintain the surface grades within the ponds. Periodic grading of the berm/road side slopes and surfaces and the pond bottoms will be required to restore surface grades for water distribution. The gated culverts between ponds will be maintained by periodic excavation to remove sand/silt that fills in around the inlets over time. Additional gravel surfacing may be periodically required for berm/road surfacing repairs and erosion protection.

Maintenance within the Brine Shallow Flood DCAs may include:

- Adjustment to grading of internal pond bottoms and berms/partitions
- Adjustment to water levels within each pond through the adjustment of water control structures between ponds

As stable brine crusts are developed, brine basins will need progressively less new brine water deliveries to maintain dust control compliance. Once sufficient stable brine crust cover is achieved, new water deliveries will cease. However, the DCA will need to return to Shallow Flood conditions to meet wetness cover requirements any time the surface condition degrades to an emissive state.

4.0 LEGAL STANDARDS

An initial study is generally prepared by a lead agency to determine whether a project may have a significant effect on the environment. An EIR must be prepared if there is substantial evidence that a project may have a significant effect on the environment. Once an EIR for a particular project has been certified, that EIR is conclusively presumed valid unless a lawsuit to challenge the EIR is timely filed. (Pub. Res. Code, § 21167.2.) This presumption precludes reopening the prior CEQA process even if the EIR is later discovered to have been inaccurate or misleading in the description of a significant effect or the severity of its consequences. (*Laurel Heights Improvement Ass'n v. Regents of Univ. of California* ("*Laurel Heights II*") (1993) 6 Cal.4th 1112, 1130.)

Once an EIR has been certified for a project, no subsequent EIR is required unless, "on the basis of substantial evidence in the light of the whole record," the agency determines one or more of the following:

> (1) Substantial changes are proposed in the project which will require major
> revisions of the previous EIR . . . due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
>
> (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR . . .
> due to the involvement of new significant environmental effects or a substantial
> increase in the severity of previously identified significant effects; or
>
> (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete shows any of the following:
>
> > (A) The project will have one or more significant effects not discussed in the previous EIR;
> >
> > (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
> >
> > (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative;
> >
> > or
> >
> > (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

(CEQA Guidelines, §§ 15162(a)(1)-(3); see also Pub. Res. Code, § 21166.)

If a subsequent EIR is not required, the lead agency may document its decision and supporting evidence in an addendum to the EIR. (CEQA Guidelines, §§ 15164(a), (e); *Santa Teresa Citizens Action Group v. City of San Jose* (2003)

114 Cal.App.4th 689, 702-803.) The addendum and lead agency's findings should include a "brief explanation of the decision not to prepare a subsequent EIR," and the explanation "must be supported by substantial evidence." (CEQA Guidelines, § 15164(e).) "An addendum need not be circulated for public review," but must be considered by the lead agency prior to making a decision on the project. (*Id.*, § 15164(c)-(d).)

5.0 ENVIRONMENTAL IMPACT ANALYSIS

As described in the July 2014 Initial Study for the Project, impacts to agricultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, mineral resources, noise, population and housing, public services, and recreation were found to be less than significant. Impacts to transportation and traffic were found to be less than significant with the incorporation of mitigation measures. Aesthetics, air quality and greenhouse gases, biological resources, cultural resources, and land use and planning were carried forward for more detailed analysis in the Draft EIR. Impacts to aesthetics and land use and planning were found to be less than significant with adoption of the Avoidance Alternative. Impacts of the Avoidance Alternative to air quality and greenhouse gases, biological resources, and cultural resources were found to be less than significant with the incorporation of mitigation measures.

The following summarizes the impact assessment presented in the 2015 Final EIR for the Phase 9/10 Project and presents an evaluation of the impacts related to modification of the Project description to add two additional DCAs to be operated as Brine Shallow Flood, and to redesignate BACM (from Gravel Cover to Brine) in approximately 0.5 square miles.

5.1 AESTHETICS

Final EIR Impact Summary. Construction activities for the Project include site preparation (excavation, soil conditioning, and land leveling), preparation of gravel stockpile areas, raised roadway and irrigation pipeline installation, installation of electrical and mechanical equipment related to the irrigation systems, installation of the geotextile and gravel or concrete mat layer, and planting activities. Throughout the construction period, additional vehicles including gravel haul trucks from the mines would be present on the lakebed. Views of the Project site during construction would include over 100 vehicles – including dozers, scrapers, flatbed trucks, backhoes, water trucks, fuel trucks, gravel haul trucks, and light duty trucks. The level of construction activity required for the Phase 9/10 Project would alter views of the Project site. However, within the context of the construction and maintenance activity ongoing on the lakebed, the impact of ground disturbance associated with installation of Project facilities would be temporary and less than significant on the visual character of the Project site.

Operation of the Project would create views of saturated soils and standing water that would visually blend with existing areas of Shallow Flooding. New areas of Managed Vegetation would increase the diversity and density of the vegetation on the lake, an aesthetic improvement.

The proposed new Gravel Cover areas would not substantially alter the elevation of the affected DCAs. Gravel from local sources would be within the range of existing lakebed color. Since the same gravel sources would be used as the raw materials for the concrete blocks, the concrete block mat would not substantially differ in color from existing Gravel Cover areas. Therefore, installation of Gravel Cover and/or Concrete Block Mat would alter, but would not substantially degrade the visual character of the site. The Final EIR found that the aesthetic impact of Gravel Cover proposed under the Phase 9/10 Project would be less than significant.

Impact Assessment with Addition of Two Brine with Shallow Flood Backup DCAs to the Project Description. The inclusion of two additional DCAs would extend the construction period but not affect the appearance of construction activity on the lakebed. The original Phase 9/10 DCAs were installed over approximately 3 square miles of Owens Lake, with five active work areas assumed in the EIR. The new DCAs would cover approximately 0.24 square miles, or less than 10 percent of the total Project area. For the two new DCAs, up to three active work areas would be visible at any one time over the approximately 12-month construction period.

If on-site (Sulfate Yard) gravel sources are not sufficient for berm/roads at T1A-4 Addition and T10-3a Addition, the additional truck trips related to off-site gravel acquisition would be consistent with existing use of area roadways. Per the terms of the 1998 Memorandum of Agreement (MOA) between LADWP and GBUAPCD, gravel used for the two new DCAs would be comparable in coloration to the lakebed soils. Consistent with this requirement, gravel would be used that is complementary in color with the underlying lakebed and surrounding landscape to the maximum extent feasible.

Views of the Project site during construction of the original Phase 9/10 DCAs were assumed to include over 100 vehicles – including dozers, scrapers, flatbed trucks, backhoes, water trucks, fuel trucks, gravel haul trucks, and light duty trucks. The same types of vehicles and equipment will be required for the two new DCAs, but the number of vehicles will be substantially less. As was described for the original Phase 9/10 DCAs, limited lighting may temporarily be used in the immediate area of Project construction or for emergency repairs. However, after construction is completed there will be no permanent nighttime lighting at T1A-4 Addition or T10-3a Addition. The level of construction activity required for the two new DCAs would alter views of the Project site. However, within the context of the construction and maintenance activity ongoing on the lakebed, the impact of ground disturbance associated with installation of Project

facilities would be temporary and less than significant on the visual character of the Project site.

Once installed, the appearance of the Brine Shallow Flood DCAs would be consistent with the existing engineered appearance of the DCAs on the lake; the new DCAs would be bermed and periodically wetted. Once a stable salt crust is developed, the appearance of the DCAs would be similar to existing lakebed areas of unvegetated playa. Therefore, impacts on visual resources would be less than significant with modification of the Project description to include two additional DCAs. Overall, modification of the Project description would not result in additional aesthetics impacts over that described in the Phase 9/10 EIR.

5.2 AGRICULTURAL AND FOREST RESOURCES

Final EIR Impact Summary. There are no agricultural or forest resources, or designated agricultural land uses, located on Owens Lake. Active ranches are located near the lakebed – Horseshoe Livestock to the south and Islands and Delta Livestock, Lubkin Adjunct Livestock, and Mount Whitney Ranch north and west of the lake. The presence of livestock on the lake is limited to stray animals from adjacent leases. However, since the Project does not include new permanent fences, alter water distribution to the ranches or include haul routes across ranch properties, there would be no impact on agricultural operations from construction and operation of the Phase 9/10 Project. Therefore, the Final EIR found that there would be no impact on agricultural resources from implementation of the Project.

Impact Assessment with Addition of Two Brine with Shallow Flood Backup DCAs to the Project Description. Inclusion of two additional DCAs in the Project would have no impact on agricultural or forest resources, as none are present on the Project site.

5.3 AIR QUALITY

Final EIR Impact Summary. Since the Phase 9/10 Project would be implemented in compliance with the 2008 State Implementation Plan (SIP) as modified and superseded by the relevant Amendments, GBUAPCD Orders and Judgments, the Project would be consistent with the applicable air quality plan and impacts on the air quality plan would be less than significant.

Construction activities would result in emissions of criteria pollutants. With the exception of PM_{10}, however, these emissions would not result in a net increase of any nonattainment pollutant for the Project region. Therefore, with the exception of PM_{10}, air pollutant emissions during construction would be less than significant. However, to reduce tail pipe emissions from construction and

maintenance vehicles and equipment to the maximum extent feasible, mitigation measures were identified and would be implemented.

Construction activities would generate PM_{10} emissions due to surface disturbance, creation of berms, travel of vehicles and construction equipment on unpaved surfaces, and material handling of gravel for those areas that would use gravel installation for dust control. Mitigation has been proposed to reduce fugitive dust generation during construction to the extent feasible. Because the Project is intended to comply with the requirements of the SIP to implement dust control at Owens Lake, the Project would result in an overall benefit to the air quality of the area.

Operational emissions would be associated with inspection and maintenance activities, and with periodic berm building and upkeep, upkeep on roads and turnouts, re-seeding of managed vegetation areas, and replacement of gravel in those areas where Gravel Cover is installed. Maximum daily emissions associated with these operational activities would be much lower than during construction, as they would require a small subset of the equipment, vehicles, and workers required to complete initial construction.

The increase in construction emissions would not violate any air quality standard or contribute substantially to an existing or projected air quality violation with the implementation of mitigation. The Project is located in an uninhabited area and, therefore, does not expose any sensitive receptors to substantial pollutant concentrations. The Project also would not result in any objectionable odors that would affect a substantial number of people. With implementation of mitigation measures Air-1 to Air-5 as defined in the MMRP, impacts related to air quality were found to be less than significant.

Impact Assessment with Addition of Two Brine with Shallow Flood Backup DCAs to the Project Description. Two additional DCAs would enhance the ability of the OLDMP to meet the overall dust control goals for the air basin. Implementation of BACM on the ordered 34 acres of T1A-4 Addition would be beneficial and consistent with the applicable air quality plan. Implementation of BACM on additional areas of the lake not yet ordered for dust control (90 acres of T1A-4 Addition and 28 acres T10-3a Addition) would further reduce overall lakebed dust emissions. The operational impact would be beneficial and consistent with the applicable air quality plan.

Worst-case maximum daily construction emissions were estimated for the original Phase 9/10 DCAs based on an assumed work area of up to 200 acres disturbed on a daily basis (up to 40 acres per work area and up to 5 active work areas). Construction emissions assumed operation of offroad equipment, worker trips, construction trucks, as well as fugitive dust emissions from surface disturbance. Construction of the two additional DCAs would have three active work areas at most, and would disturb less than 200 acres total per day. Similar

equipment would be used as described in the Final EIR Appendix C Table C-1. However, the substantially smaller Project area and the reduced number of active construction areas would require fewer vehicles and workers, fewer deliveries, and less heavy equipment. Therefore, worst-case peak-day emissions for construction of T1A-4 Addition and T10-3a Addition would be substantially less than as described in the Final EIR.

Other than PM_{10}, Project emissions would not result in a net increase of any pollutant for which the Project region is in nonattainment under an applicable federal or state ambient air quality standard. Therefore, with the modifications to the Project description, air pollutant emissions during construction would remain less than significant. As discussed in the EIR, the Owens Lake area is classified as a serious nonattainment area for PM_{10}. The dominant source of PM_{10} emissions from the modification of the Project description to add two new DCAs would be grading of the 0.24 square-mile area. As described in mitigation measure Air-1, a Dust Control Plan will be implemented during construction. The Dust Control Plan will define dust minimization activities including:

- Vehicle speed controls
- Watering travel routes via water trucks to increase soil moisture
- Watering of stockpiles and active work areas via water trucks and/or temporary irrigation systems
- Installation of sand fences placed perpendicular to the predominant wind direction
- Tillage
- Employee education
- Maintenance of a Dust Control Log

The Project as a whole will still result in an overall benefit to the air quality of the air basin by reducing PM_{10} emissions on Owens Lake and the Project will remain consistent with the SIP. The Project as modified will not conflict with or obstruct implementation of the applicable air quality plan and the increase in construction emissions would not violate any air quality standard or contribute substantially to an existing or projected air quality violation in this basin with the implementation of mitigation as described in the MMRP. Therefore, the impacts of modifying the Project description to add two additional DCAs would be less than significant as mitigated.

5.4 BIOLOGICAL RESOURCES

Final EIR Impact Summary. Special status bird species, including Snowy Plover, are known for the Project area and could be adversely impacted during Project construction and maintenance activities, including by construction lighting. Active bird nests of other species could be disturbed by Project construction activity, including by construction lighting. The Project would

increase the species diversity in Managed Vegetation DCAs – a beneficial impact. Based on the impact assessment presented in the Final EIR, LADWP determined that the Project would maintain and enhance existing habitat values. With incorporation of mitigation measures, the Final EIR found that impacts on biological resources would be less than significant.

Impact Assessment with Addition of Two Brine with Shallow Flood Backup DCAs to the Project Description. Impacts to biological resources from the Project are related to ground disturbance and noise generation during construction activities on the lake. Modification of the Project description to expand the list of DCAs to include T1A-4 Addition and T10-3a Addition would expand the area of disturbance on the lake by 0.24 square miles. Database review, field survey and assessment of potential impacts to biological resources were conducted by LADWP staff; results are presented in Appendix A.

Soils of T1-A4 Addition and T10-3a Addition are light gray silty loam covered in a thin salt crust. No vegetation is present on these parcels and no wetland vegetation occurs. Habitat Suitability Modeling was conducted to evaluate changes to habitat value by the Project for Owens lake species guilds: breeding waterfowl, migrating waterfowl, snowy plover, migrating shorebirds and alkali meadow species. The results demonstrate that there is no or negligible loss in habitat for the five guilds, when converting from existing dry playa to Brine BACM (Table A-3).

The addition of the two new DCAs to the Project would not affect the habitat value created for all guilds by implementation of the Phase 9/10 Shallow Flooding and Managed Vegetation DCAs. Mitigation measures to protect biological resources during construction and operation of T1-A4 Addition and T10-3a Addition would be implemented as per the MMRP. Overall, the impact on biological resources of adding the two new DCAs would be less than significant as mitigated.

Table A-3. Habitat Value Acreages (Existing and with Modification of the Project Description)

DCA	Conditions	Total Acres	Breeding Waterfowl	Migrating Waterfowl	Snowy Plover	Migratory Shorebird	Alkali Meadow
T1A-4 Addition	**Existing**	**124**	0	0.25	0.62	4.84	0
T1A-4 Addition	**Projected**	**124**	0	0	0.25	1.36	0
T10-3a Addition	**Existing**	**28**	0	0.06	0.17	1.09	0
T10-3a Addition	**Projected**	**28**	0	0	0.06	0.31	0

5.5 CULTURAL RESOURCES

Final EIR Impact Summary. Since previously recorded historic and prehistoric archaeological sites are known for Owens Lake, extensive surveys and cultural resources investigations were conducted for the Phase 9/10 Project areas. Based on these evaluations, it was determined that Project construction could dislodge, relocate, crush, and otherwise cause substantial adverse changes to unique cultural resources recommended as eligible under the CRHR. Additionally, it was determined that the potential exists for presently unidentified significant historic era structures and buildings, and significant archaeological resources, to be disturbed during Project construction. The Project has the potential to directly destroy unevaluated, but potentially unique, paleontological resources or sites. The Project has the potential to disturb unanticipated human remains, if any are present in the Project areas. As described in the Final EIR, these impacts would be significant with implementation of feasible mitigation measures. Therefore, the Avoidance Alternative was identified and adopted to avoid direct impacts to known cultural resources. With adoption of the Avoidance Alternative and implementation of mitigation measures, the Final EIR found that impacts on cultural resources would be less than significant.

Impact Assessment with Addition of Two Brine with Shallow Flood Backup DCAs to the Project Description. T1A-4 Addition and T10-3a Addition were surveyed for cultural resources by Bridget Wall, M.A., Cameron Caywood, B.A., and Emily Bales, B.A. of Far Western Anthropological Research Group on August 9 and 19, 2021. Supplementary fieldwork was carried out by Caywood and Bales on September 23, 2021. Native American monitoring of the survey was provided by Eric Eddy of the Timbisha Shoshone Tribe, and Esther Fillingame of the Lone Pine Paiute-Shoshone Reservation.

The two new DCAs have been disturbed by human activity, including mining and dust mitigation, and natural erosional processes. Historic records are vague, but U.S. Borax may have graded the surface of both survey areas while collecting trona in the past.

A records search of previously recorded sites and associated reports within a half-mile of the survey areas was conducted. Historical USGS maps and air photos were also consulted. No previous surveys have been conducted in the two new DCAs, and no sites have been documented. However, adjacent areas have been subjected to previous survey as part of the Phase 7/7a and Phase 9 dust control projects. As part of those studies, six sites have been recorded nearby, including both pre-contact sites and historic-period sites, the latter consisting of industrial machinery parts and debris. Three sites were evaluated for eligibility for the California Register of Historic Resources by Denardo et al.

(2013)[1] in advance of Phase 7 implementation, and all were recommended ineligible.

Two archaeological sites were documented, both within the T1A-4 Addition parcel, and 12 isolated finds were recorded (aluminum pull tab cans, aqua glass insulator fragments, a push pile (approximately 30+ basalt cobbles with slag and plastic), remains of metal equipment or machinery, wire nails, and a metal barrel).

Site CC-01 is located in the eastern portion of parcel T1A-4 Addition, approximately 470 meters north of a cluster of particulate matter monitoring utilities (TEOM instruments) located at the south end of the parcel. The site is a sparse historic refuse scatter. The site is in good condition though the area has been disturbed by the construction of access roads. Artifacts consist of clear glass demijohn container fragments (body and base), wire nails, scrap metal, and remnants of a metal barrel. Concentration 1 consists of six body fragments and five base fragments of the glass demijohn. No artifacts were collected.

Site CC-02 is located in the west portion of parcel T1A-4 Addition, approximately 250 meters north of a cluster of particulate matter monitoring utilities (TEOM instruments) located at the south end of the parcel. The site is a sparse historic refuse scatter. The site is in good condition although the surrounding area has been disturbed by the construction of access roads and past dust mitigation activities. Dozer push piles are present on the north end of the site. Artifacts consist of a clear glass bottle (Owens-Illinois, post-1954), scrap metal fragments, wire nails, and remnants of a metal barrel. Small amounts of slag were present throughout the site (>5 cm in length). No artifacts were collected.

Neither of these sites appear eligible for the National Register of Historic Places or the California Register of Historic Resources. Both are scatters of industrial debris associated with mid-20th-century carbonate mining, located in a highly disturbed context. They are not associated with significant events or people, nor do they contain distinctive architectural or stylistic elements, nor do they retain potential to yield important historical data. There is extremely low potential for intact subsurface features or deposits. Similarly, the isolates are considered categorically ineligible for listing. Further management of these resources is not recommended. However, consistent with the Phase 9/10 MMRP, ground-disturbing activities would be subject to archaeological and tribal monitoring. As mitigated, impacts on cultural resources with modification of the Project description to add two additional DCAs would be less than significant.

[1] Denardo, Carole, Matthew Steincamp and Rachael Greenlee (2013). Final Cultural Resources Survey Report for the Owens Lake Dust Mitigation Program 2011 Supplemental Control Requirements Determination (Phase 9 Project), Inyo County, California. (BLM Permit No. CA-11-13; FWA Request No. 13-38b). Garcia and Associates.

5.6 GEOLOGY AND SOILS

Final EIR Impact Summary. The Project site is located in a seismically active area. However, since habitable structures would not be built as part of the Project, people would not be exposed to adverse effects involving seismic hazards. Damage to Project facilities (irrigation lines, drainlines, turnouts, roadways, geotextile membranes or gravel layers) would be repaired as necessary; impacts would therefore be less than significant.

Earthwork required for construction has the potential to temporarily increase soil erosion from the disturbed areas. However, since construction methods would include best management practices (BMPs) identified in a Stormwater Pollution Prevention Plan (SWPPP) completed in compliance with the NPDES General Permit for Storm Water Discharges Associated with Construction Activity (General Permit), wind and water erosion of soils during construction would be minimized. The impact would be less than significant.

The intent of installing Gravel Cover, Shallow Flood, Managed Vegetation, and potentially other dust control measures on the lakebed is to stabilize soils in an effort to reduce soil erosion via wind. Therefore, the Final EIR found that the Project would have a beneficial impact by reducing soil erosion.

Impact Assessment with Addition of Two Brine with Shallow Flood Backup DCAs to the Project Description. Modification of the Project to increase the Project area to include T1A-4 Addition and T10-3a Addition, would expand the area of Owens Lake disturbed for Project construction. This expansion would not change existing seismic hazards but would reduce the potential for soil erosion on 152 acres of Owens Lake. No habitable structures are planned for new DCAs T1A-4 Addition and T10-3a Addition, and infrastructure installed at these sites would be repaired as necessary if damaged by a seismic event. With modification of the Project description to add two additional DCAs, impacts on geology and soils would be less than significant and as described in the Phase 9/10 EIR.

5.7 GREENHOUSE GAS EMISSIONS

Final EIR Impact Summary. Emissions of greenhouse gases (GHG) generated during Project construction were estimated at 382 metric tons per year of CO_2-equivalent emissions. Although the GBUAPCD does not have established GHG thresholds of significance, the Project would generate emissions below thresholds established by other agencies (South Coast Air Quality Management District (SCAQMD) and California Air Resources Board (CARB)).

Operational GHG emissions would be associated with inspection and maintenance activities, and with periodic berm building and upkeep, upkeep on

roads and turnouts, re-seeding of managed vegetation areas, and replacement of gravel in those areas where Gravel Cover is installed as BACM. It is assumed that an additional four workers (in addition to the existing maintenance personnel headquartered in LADWP's Keeler office) would be required for continual inspection and maintenance activities. For the purpose of estimating annual GHG emissions from operational activities, it is assumed that annual maintenance would be approximately equal to two percent of the estimated level of construction activity for the proposed Gravel Cover. Since the total emissions associated with operations and amortized construction emissions would remain below the thresholds proposed by the SCAQMD and CARB, the Final EIR found that impacts to climate change would be less than significant.

Impact Assessment with Addition of Two Brine with Shallow Flood Backup DCAs to the Project Description. Based on the acreage of the two new DCAs (0.24 square miles), construction air pollutant emissions can be roughly estimated to be on the order of 8 percent increased over emissions estimated in the Phase 9/10 EIR (Table A-4). Note that new maintenance personnel are not anticipated to be required for operations of the two new DCAs. Since the total greenhouse gas emissions associated with operations and amortized construction emissions would remain substantially below the thresholds proposed by the SCAQMD (10,000 metric tons CO_2-equivalent emissions per year for industrial projects) and CARB (7,000 metric tons of CO_2-equivalent emissions per year for operational emissions - excluding transportation), impacts to climate change would be less than significant with modification of the Project description to add two additional DCAs.[2]

Table A-4. Estimated Annual GHG Emissions from Construction

Source	**CO_2** (metric tons)	**CH_4** (metric tons)	**N_2O** (metric tons)
Offroad Equipment	5,476	0.79	4.60
Worker Trips	2,115	0.11	0.10
Construction Trucks	10,997	0.20	4.65
Total	**18,588**	**1.10**	**9.35**
Global Warming Potential	**1**	**21**	**310**
CO_2-Equivalent Emissions	**18,588**	**23**	**2,899**
Total CO_2-Equivalent Construction-related Emissions	**19,602** metric tons		
Amortized Construction-related Emissions	**653** metric tons		

LADWP has reviewed the Supreme Court decision in *Center for Biological Diversity v. California Department of Fish and Wildlife* (November 30, 2015, Case No. 217763), ("*CBD v CDFG*") as it relates to the evaluation of the impact

[2] The amortization period specified in the DEIR was adopted from the SCAQMD interim thresholds for greenhouse gases for industrial projects construction impacts (adopted December 5, 2008). (DEIR, p. 4.2-16.)

associated with a project's GHG emissions, and notes that the ruling does not mandate any particular methodology for analyzing GHG emissions, and does not apply to the Phase 9/10 Project EIR's GHG emissions analysis because the EIR does not compare the project emissions to the Business as Usual (BAU) scenario. Because the GBUAPD does not have established greenhouse gas thresholds of significance, the EIR used the thresholds defined by SCAQMD and the statewide air resources agency, CARB. The Court in *CBD v CDFG* specifically stated that a lead agency may rely on "existing numerical thresholds of significance for greenhouse gas emissions." (*Id.*, at 27.) Thus, the EIR looked to SCAQMD's numeric threshold of 10,000 metric tons of CO_2 equivalent emissions per year (which includes construction emissions amortized over 30 years and added to operational GHG emissions), as well as CARB's threshold of 7,000 metric tons per year for operational emissions. (DEIR, p. 4.2-16.)

Further, because the Phase 9/10 Project EIR has already been approved, the determination of how to evaluate greenhouse gases and climate change is governed by the law on supplemental or subsequent EIRs (Public Resources Code Section 21166 and CEQA Guidelines Sections 15162 and 15163). Greenhouse gases and climate change are not required to be analyzed under those standards unless the analysis constitutes "new information of substantial importance, which was not known and could not have been known at the time" the previous Supplemental EIR was approved (CEQA Guidelines Section 15162(a)(3)). Consistent with the statutory language, the courts have repeatedly held that new information that "was known" or "could have been known with the exercise of reasonable diligence" at the time of the EIR certification does not trigger the supplemental EIR standard. (*Citizens for Responsible Equitable Environmental Development v. City of San Diego* (2011) 196 Cal.App.4th 515, 532 ("*CREED II*"); *Concerned Dublin Citizens v. City of Dublin* (2013) 214 Cal.App.4th 1301 [court held that potential effects of GHGs were known and could have been addressed in conjunction with the approval of the EIR in 2002]; *A Local and Regional Monitor v. City of Los Angeles* (1993) 12 Cal.App.4th 1773, 1800–1803 ("*ALARM*").)

Under CEQA standards, the Court's opinion in *CBD v. CDFG* is not new information that requires analysis in a supplemental EIR or negative declaration. No subsequent environmental review of the project's impacts on this issue is required under CEQA (CEQA Guidelines Section 15162 (a)).

5.8 HAZARDS AND HAZARDOUS MATERIALS

Final EIR Impact Summary. LADWP would employ standard operating procedures for the routine transport, use, storage, handling, and disposal of hazardous materials related to the construction and operation of the DCAs. LADWP also prepares an annual update on the transport, use, storage, handling, and disposal of hazardous materials. Therefore, with adherence to the standard operations procedures for hazardous materials use, impacts related to release or

accidental exposure to humans or the environment would be less than significant.

Water would be used during Project construction for dust control but water would not be used in volumes sufficient to cause standing water. During Project operation, water would be used to irrigate areas of Managed Vegetation and for Shallow Flood. Since the Projects would not increase water commitments, the overall area of standing water on the lakebed would not significantly increase. Creation of mosquito habitat by the creation of standing water would be managed as under existing conditions, impacts related to vectors would be less than significant.

There are no schools within ¼ mile of the Project area, and hazardous materials use would be limited to fuels for construction vehicles. Since these materials would be properly handled, the impact on the schools from hazardous materials would be less than significant.

There are no known hazardous materials sites on Owens Lake on the Cortese List. Therefore, the Project would have no impact related to hazardous waste sites.

The Project does not propose new tall structures and the Project area is not located sufficiently near either a private airstrip or public airport to pose a safety risk. Therefore, there would be no Project-related impacts on airport safety.

Internal Owens Lake roadways are not part of an emergency evacuation plan route and therefore construction and operation activities on the lake would have no impact on a designated emergency route. Gravel transport necessary for the Project would require gravel trucks to cross SR 136 (from the F.W. Aggregate or the LADWP Shale pit) which would be coordinated with Caltrans. However, since Owens Lake is not designated as an emergency staging area, the Project would have a less than significant impact on emergency access and evacuation plans.

The Project area is not typically subject to wildland fires and the Project site has only limited areas of vegetation. Permanent habitable structures do not exist and none are proposed for the Project site. The new areas of Gravel Cover would not alter the existing low risk of fire and areas of Shallow Flood would reduce the risk. Managed Vegetation areas would be irrigated. Therefore, the Project would have a less than significant impact related to wildland fires.

Overall, the Final EIR found that impacts related to hazardous materials would be less than significant.

Impact Assessment with Addition of Two Brine with Shallow Flood Backup DCAs to the Project Description. There are no known hazardous materials sites on T1A-4 Addition or T10-3a Addition. Modification of the Project

description to include two additional DCAs would increase the volume of fuel used for Project construction. However, with adherence to standard operations procedures for hazardous materials use, impacts related to release or accidental exposure to humans or the environment would be less than significant. Impacts related to hazards other than fuel use would be as described in the Final EIR and less than significant.

5.9 HYDROLOGY AND WATER QUALITY

Final EIR Impact Summary. To protect water quality, the SWPPP details Best Management Practices (BMPs) to be implemented during construction, including:

- Good Site Management "Housekeeping"'
- Employee Training Program
- Erosion and Sediment Controls
- Spill Prevention and Control
- Concrete Truck Waste
- Hazardous Waste Management and Disposal
- Materials Handling and Storage
- Vehicle and Equipment Maintenance, Repair and Storage
- Waste Management and Disposal
- Scheduling
- Vehicle ingress and egress
- Stockpile management
- Run on and Run off controls
- Rain Event Action Plan
- Inspections, Maintenance and Repair

With implementation of the required SWPPP, potential increases of sediment load in stormwater would not adversely affect surface water.

The Phase 9/10 Project would be implemented under General Waste Discharge Requirements for Small Construction, including Utility, Public Works and Minor Streambed/Lakebed Alteration Projects (Board Order R6T-2003-004-259). Therefore, the impact on water quality during Project construction and operation would be less than significant.

The Project site is within a designated flood hazard area. However, the Project does not include habitable structures, and storm flows would continue toward the brine pool as under existing conditions. Due to the distance from the ocean and other bodies of water and the low relief of Owens Lake, the Project would have no impacts related to inundation by seiche, tsunami, or mudflow. Overall, the Final EIR found that the Project is water conserving and would not impact groundwater, a beneficial impact.

Impact Assessment with Addition of Two Brine with Shallow Flood Backup DCAs to the Project Description. Construction of the two additional DCAs would include implementation of the same or similar SWPPP BMPs as were implemented for the original Phase 9/10 DCAs. Potential impacts on stormwater quality during construction would be less than significant. The expanded Project area would be subject to similar flood hazards as the original Phase 9/10 DCAs. Operation of the Brine Shallow Flood DCAs would include discharge of brine in volumes sufficient to cover the bottom of the ponds, and through evaporation form a salt crust. Discharge of brine volumes sufficient to allow percolation to the groundwater table will not be conducted. Discharges associated with the Project would continue to be in compliance with applicable Waste Discharge Requirements (WDRs). Therefore, impacts related to hydrology and water quality with addition of the two new DCAs would be less than significant.

5.10 LAND USE AND PLANNING

Final EIR Impact Summary. Reductions in dust emissions under the Project would improve public health and safety, a public trust benefit. Water conservation, recreational amenities, and habitat enhancements achieved under the Project are also public trust benefits. Therefore, based on LADWP's analysis, the impact of the Phase 9/10 Project on land use and planning related to CSLC's policies would be less than significant. Bureau of Land Management (BLM) provided review of cultural resources on federally-owned Project land. Impacts to archaeological resources on federal lands that could conflict with federal land use policies related to cultural resources were avoided with adoption of the Avoidance Alternative. Impacts on federal land use policies were found to be less than significant.

Impact Assessment with Addition of Two Brine with Shallow Flood Backup DCAs to the Project Description. Like the vast majority of the Phase 9/10 DCAs, T1A-4 Addition and T10-3a Addition are located on lands administered by the CSLC. No federal lands would be impacted by addition of the two new DCAs. Reductions in dust emissions under the modified Project description would improve public health and safety, a public trust benefit. Implementation of Brine Shallow Flood BACM in the new DCAs would also conserve water, another public trust benefit. As described above, the new DCA areas are devoid of vegetation and provide little to no habitat value, therefore implementation of Brine Shallow Flood would have less than significant impacts on biological resources. Therefore, overall, addition of two new DCAs to the Phase 9/10 Project would have no impact on CSLC or BLM policies beyond those described in the Final EIR. Impacts on land use and planning would be less than significant.

5.11 MINERAL RESOURCES

Final EIR Impact Summary. The U.S. Borax lease on Owens Lake occupies the central portion of the lake, extending to the west. None of the Phase 9 DCAs overlap or are immediately adjacent to the lease, or to active mining operations. Active mining operations are located immediately northwest of Phase 10 DCA T10-3-L1. Implementation of dust control at T10-3-L1 would make approximately 149 acres of the approximately 16,000-acre lease unavailable for mining operations. Since this represents less than 1 percent of the total lease area and since active mining operations are not located within T10-3-L1, the impact on the U.S. Borax lease area would be less than significant.

The proposed Project would include the use of gravel, a locally-important mineral resource, but would not result in a substantial loss of availability of the resource. Since mineral resources would still be available, impacts on mining operations adjacent to Owens Lake would be less than significant.

Impact Assessment with Addition of Two Brine with Shallow Flood Backup DCAs to the Project Description. The additional DCAs are immediately adjacent to U.S. Borax decommissioned mining areas. No active mining will be displaced by construction of T1A-4 Addition and T10-3a Addition. However, a portion (approximately 129 acres) of the new DCAs overlaps with the U.S. Borax lease area. Therefore, a quit claim will be issued for this overlapping acreage and this area, along with the 149 acres of original Phase 10 T10-3-L1, will be unavailable for mining operations. The total area represents less than 1 percent of the 16,000-acre lease and no active mining areas will be impacted. Therefore, the impact of the modified Project on mining will be less than significant. Additionally, construction activities in the new DCAs would be coordinated with U.S. Borax, and LADWP and U.S. Borax will share usage rights for the Lake Minerals Road.

5.12 NOISE

Final EIR Impact Summary. During construction of the Project, noise would be generated from dozers, flatbed trucks, water trucks, and dump trucks at the DCAs and along the gravel truck haul routes. Noise would be noticeable to on-lake workers and potentially persons visiting the lake for recreation. The minimum distance of 1,000 feet between residents and the Project areas is generally considered sufficient distance to reduce noise generated from construction activities. Construction activity would not occur during 10:00 p.m. to 6:00 a.m. when there is greater potential for noise disturbance to residences. Therefore, given the distance from the Project site and the haul routes to sensitive residential receptors, the Final EIR found that the Project would not cause noise levels to exceed established thresholds and noise impacts would be less than significant.

Impact Assessment with Addition of Two Brine with Shallow Flood Backup DCAs to the Project Description. The construction work hours and delivery hours, and the noise emitted by equipment, would be as described in the Phase 9/10 EIR. The two new DCAs are located more than 4 miles from sensitive receptors in Cartago, further than the closest original Phase 9/10 DCA (approximately 1,200 feet). At that distance, noise would be not generated in excess of applicable noise standards. The impact on noise from construction and operation of the two new Brine Shallow Flood DCAs would be less than significant.

5.13 POPULATION AND HOUSING

Final EIR Impact Summary. Since the Project does not include construction of homes or businesses, it would not directly impact population growth in the Owens Lake area. However, construction of the Project would require workers to be in the area from 2015 to 2021. These workers may be LADWP staff or a mix of LADWP staff and contractors. Additional workers would be required after the initial construction to develop and maintain areas of Managed Vegetation. The Final EIR found that the number of workers over the construction period would have a less than significant impact on population growth.

Impact Assessment with Addition of Two Brine with Shallow Flood Backup DCAs to the Project Description. Addition of two new DCAs to the Project description would extend the construction period for the project but not increase the maximum number of construction personnel present on the lake at any one time over the 100 workers described in the Phase 9/10 EIR. Therefore, the addition of two new DCAs would have a less than significant impact on construction of homes or business, or population growth in the Owens Lake area. As described in the Final EIR, the number of workers over the construction period would have a less than significant impact on population growth and housing.

5.14 PUBLIC SERVICES

Final EIR Impact Summary. The Project area has only limited areas of vegetation and therefore limited fuel for fires; habitable structures do not exist and none are proposed for the Project site. The new areas of Gravel Cover would not alter the existing low risk of fire and areas of Shallow Flooding would reduce the risk. Managed Vegetation areas would be irrigated. Therefore, the Project would have a less than significant impact related to provision of fire suppression services.

Habitable structures are not present on the Project site and none are proposed as part of the Project. The limited number of construction workers required to

implement the Project would not generate substantial population growth or create the need for new or expanded public services. Therefore, the Final EIR found that there would be no Project-related impacts on police protection, schools, parks, or other public facilities.

Impact Assessment with Addition of Two Brine with Shallow Flood Backup DCAs to the Project Description. There is no existing vegetation on the T1A-4 Addition and T10-3a Addition sites. Therefore, no fuel for fires exists or would be impacted by installation of BACM in these areas. The addition of two new DCAs would extend the overall construction period for the Project but would not increase the number of construction workers present on the lake at any one time over the 100 workers described in the Phase 9/10 EIR. Therefore the addition of two new DCAs would have a less than significant impact on population growth, or new or expanded public services (police protection, schools, parks, or other public facilities). Project impacts on fire suppression services would be less than significant, as described in the Phase 9/10 EIR.

5.15 RECREATION

Final EIR Impact Summary. Habitable structures are not present on the Project site and none are proposed as part of the Project. The number of construction workers required to implement the Project would not generate substantial population growth or create the need for new or expanded parks. Therefore, the Project would have no impact on neighborhood or regional parks or other recreation facilities.

The Project would not generate population growth that would require the construction or expansion of recreational facilities. Limited public access opportunities (e.g., boardwalks, trails, access berms and visitor overlooks) included in the Project would enhance the recreational amenities of Owens Lake, a beneficial impact.

The Owens lakebed is openly accessible to the public for recreation. However, during construction and maintenance, access may be temporarily limited if determined by LADWP to be necessary for public and/or worker safety. After construction is complete, public access would be increased (expansion of on-lake roadway system) and recreational opportunities would be enhanced. Therefore, the Final EIR found that impacts on recreation during Project construction and maintenance would be less than significant.

Impact Assessment with Addition of Two Brine with Shallow Flood Backup DCAs to the Project Description. The two additional DCAs do not contain any recreational amenities that would be disturbed by implementation of Brine Shallow Flood BACM**.** During construction for the two additional DCAs, public access may be restricted for safety. Once installed, the on-lake roadway system would be expanded by the addition of berm/roads around T1A-4 Addition and

T10-3a Addition, an enhancement of recreational opportunities. Overall, the impact on recreation from addition of two DCAs to the Project would be less than significant.

5.16 TRANSPORTATION AND TRAFFIC

Final EIR Impact Summary. Construction of the Phase 9/10 Project would increase traffic for the transport of gravel, delivery of seed and plant material, delivery of pipelines and other infrastructure. Additionally, local roadways would be used for the movement of construction equipment and personnel to the lake. Construction equipment would be mobilized to the staging areas and then would remain on the lake; plant material and infrastructure deliveries would be limited. Therefore, the primary impact on local roadways would be for gravel transport.

The analysis presented in the Final EIR concluded that construction of the Project would require approximately 200 truck crossings of SR 136 per day during installation of Gravel Cover. Since SR 136 and SR 190 operate well below capacity and at LOS A, the addition of approximately 20 trucks on SR 136 or SR 190 per hour would not substantially degrade the level of service on these roadways and Project-related impacts on traffic would be less than significant. However, since these crossings are not signalized and would be on-going for approximately 1.5 to 2 years, impacts related to traffic hazards would be potentially significant. Additionally, degradation of the road surface on SR 136 at these crossing could result from traffic related to construction. With implementation of mitigation measures (Traffic Work Safety Plan and repair of roadway damage at the SR 136 crossings), impacts would be reduced to a less than significant level.

Impact Assessment with Addition of Two Brine with Shallow Flood Backup DCAs to the Project Description. The Phase 9/10 EIR described installation of approximately 1,000,000 tons of gravel on Owens Lake as the primary impact on local traffic and roadways. Addition of two new DCAs would require approximately 16,000 tons of gravel, a less than 2 percent increase. Also, existing gravel at the Sulfate Yard would be preferentially used for the two new DCAs, limiting traffic-related impacts on SR 136 and SR 190. Off-site gravel would be obtained only as necessary. As with the original Phase 9/10 DCAs, the following measures would apply as relevant:

- Dump trucks within the Caltrans legal load limit (i.e., less than 80,000 pounds) would be used for construction.
- LADWP will install debris racks at relevant crossings.
- Corrugated steel plates will be installed to reduce dirt tracking onto the highways. Debris tracked onto the highways will be removed in a timely manner.
- LADWP will repair damage to SR 136 and SR 190 if Project-related truck traffic results in damage to these roadways. LADWP will prepare and

submit to Caltrans a pre- and post-construction survey of the roads (including photographs and a profile survey of the road). Interim repairs will be made, as warranted, to asphalt concrete surfacing with commercially available hot mix asphalt concrete or cold mix. Shoulders and approach areas will be repaired with Class 2 aggregate base conforming to Section 26 of the Caltrans Standard Specifications or other material approved by the Permits Field Inspector. After construction is complete, final repairs will be made, as relevant.

- A Traffic Work Safety Plan will be developed for construction for review by Caltrans. The plan will address the use of warning lights, signs, traffic cones, signals, flag persons and/or comparable measures as needed to maintain safe travel of haul trucks on SR 136 and SR 190 during construction. Speed limit signs (18-inch-by-24-inch) will be installed based on field conditions. Speed limits will be limited to:

  - 25 mph within Owens Lake
  - 15 mph through snowy plover nest buffer
  - 5 mph through Owens River spillway crossing

The addition of two new DCAs would extend the construction period for the Project, but would not increase the maximum number of Project-related daily truck trips on SR 136 and SR 190 for materials deliveries and potentially gravel. At most, traffic for construction of T1A-4 Addition and T10-3a Addition would consist of 1 to 2 truck trips per hour (substantially less than the 7 - 20 trips per hour assumed in the Phase 9/10 EIR). Compared to passenger cars, heavy trucks have an additional traffic impact, which varies by vehicle type, proportion of trucks in the traffic stream, flow rates and terrain. However, impacts to area roadways would be temporary (limited to approximately 1 year), and gravel already present on Owens Lake would be used preferentially, reducing off-site truck trips for the Project. Additionally, mitigation measures Trans-1 and Trans-2 would be implemented during construction of T1A-4 Addition and T10-3a Addition. Therefore, as mitigated the impact of adding two DCAs to the Project would be less than significant on transportation and traffic.

5.17 UTILITIES AND SERVICE SYSTEMS

Final EIR Impact Summary. Habitable structures are not present on the Project sites and none are proposed. The limited number of construction workers required to implement and maintain the DCAs would not generate substantial population growth or create the need for new or expanded water or wastewater service facilities. Therefore, the impact of construction and operation of the Project on water and wastewater facilities was found to be less than significant.

The existing DCAs do not connect to any off-site storm drain facilities. Project DCAs would be surrounded by raised roadways. Since stormflows would

continue to drain in the direction of brine pool, as under existing conditions, the Final EIR found that impacts on stormwater facilities would be less than significant.

Impact Assessment with Addition of Two Brine with Shallow Flood Backup DCAs to the Project Description. Modification of the Project description to add two additional DCAs would extend the construction period but not increase the total number of construction workers employed at the lake at any one time. Stormwater controls for T1A-4 Addition and T10-3a Addition would be as described for the original Phase 9/10 DCAs. Overall, impacts on water, wastewater, stormdrain or other utility services would be less than significant.

6.0 DETERMINATION THAT AN ADDENDUM IS APPROPRIATE FOR THIS PROJECT

CEQA Guidelines §15164(a) allows a lead agency to prepare an Addendum to a Final EIR if all of the following conditions outlined in CEQA Guidelines §15162 (in *italics* below) are met.

- *Substantial changes with respect to the circumstances under which the project is undertaken do not require major revisions to the previous Final EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.*

  Since adoption of the 2015 Final EIR for the Phase 9/10 Project, some of the Owens Lake contingency area (34 acres) referenced in the EIR has been ordered by GBUAPCD for dust control. This area, along with 90 acres adjacent to the 34 acres plus the 28 acres of T10-3a Addition, are proposed as additional Phase 9/10 DCAs. The sites do not contain significant biological resources, are not known to contain significant cultural resources, and would be controlled with Brine Shallow Flood which, once installed, would be similar in appearance to unvegetated playa areas of the lakebed. Based on the environmental assessment presented in this Addendum, new significant environmental effects would not result from this modification of the Project description. There would be no substantial increase in the severity of previously identified significant effects with modification of the Project description.

- *No new information becomes available which shows new significant effects, significant effects substantially more severe than previously discussed, or additional or modified mitigation measures.*

  There would be no new significant effects or substantial increase in the severity of previously identified significant effects with modification of the Project description to add two DCAs to the Phase 9/10 Project. No new or revised mitigation measures would be required to reduce the environmental impacts of the Project. The MMRP adopted for the Owens Lake Dust Mitigation Program – Phase 9/10 Project would be

implemented during construction and operation of T1A-4 Addition and T10-3a Addition.

- *Only minor technical changes or additions are necessary to make the Final EIR under consideration adequate under CEQA.*

  Addition of two new DCAs (total of 152 acres) is the only addition necessary to make the Phase 9/10 Project Final EIR adequate under CEQA.

- *The changes to the Final EIR made by the Addendum do not raise important new issues about the significant effects on the environment.*

  The change to the Final EIR described in this Addendum is the addition of two new DCAs. The new DCAs would control dust by implementation of Brine Shallow Flood BACM, an GBUPACD-approved BACM that occurs elsewhere on Owens Lake. Construction of the new DCAs would result in impacts as described in the Final EIR, impacts that are beneficial, less than significant or less than significant as mitigated. Operation of the new DCAs, along with operation of the original Phase 9/10 DCAs under the Avoidance Alternative, would contribute to overall dust control efforts on Owens Lake, a beneficial operational impact. Overall, the Project, as modified by inclusion of two new DCAs and as mitigated, does not have any significant effects on the environment. This Addendum to the 2015 Phase 9/10 Final EIR does not raise important new issues about significant effects on the environment.

Based on review of the 2015 Phase 9/10 Project Final EIR and the environmental assessment presented in this Addendum, LADWP has determined not to prepare a subsequent EIR or negative declaration for this Project. LADWP has determined that no new significant environmental effects would result from modification of the Project description. There would be no substantial increase in the severity of previously identified significant effects with modification of the Project description to expand the list of DCAs. Therefore, LADWP has determined that an addendum is the appropriate CEQA document for the modification of the Owens Lake Dust Mitigation Program – Phase 9/10 Project to expand the list of DCAs to include T1A-4 Addition and T10-3a Addition, and to redesignate BACM (from Gravel Cover to Brine) in approximately 0.5 square miles.

7.0 MITIGATION MONITORING AND REPORTING PROGRAM

The MMRP for the Owens Lake Dust Mitigation Program – Phase 9/10 Project Final EIR was adopted by the LADWP Board of Water and Power Commissioners on June 2, 2015. No modifications to the MMRP are proposed as part of this Addendum for the addition of T1A-4 Addition and T10-3a Addition to the Phase 9/10 DCAs. Only measure CR-2 is not applicable, as this measure was deleted in the Final Phase 9/10 EIR. Since cultural resources evaluations on private property within the Phase 9/10 Project area have been completed and

significant resources were not identified, mitigation measure CR-2 was deleted in its entirety. No private parcels are relevant for T1A-4 Addition and T10-3a Addition.

Appendix A – Owens Lake T1A-4 Addition and T10-3a Addition Biological Assessment

Owens Lake T1A-4 Addition and T10-3a Addition
Biological Assessment

Prepared by:
Los Angeles Department of Water and Power

LA DWP Los Angeles Department of Water & Power

April 2022

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List of Abbreviated Terms

BACM	Best Available Control Measure
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CR	California Rare
CSC	California Species of Special Concern
CSLC	California State Lands Commission
DCA	Dust Control Area
DCM	Dust Control Measure
EC	Electroconductivity
ESA	Endangered Species Act
FE	Federally Endangered
FT	Federally Threatened
GBUAPCD	Great Basin Unified Air Pollution Control District
GPS	Global Positioning System
HSM	Habitat Suitability Model
HSV	Habitat Suitability Value
HVA	Habitat Value Acres
LAA	Los Angeles Aqueduct
LADWP	Los Angeles Department of Water and Power
MMRP	Mitigation Monitoring and Reporting Program
MV	Managed Vegetation
NSS	Northeastern Sand Sheet
OBWS	Owens Basin Wetland and Aquatic Species
PM_{10}	Particulate Matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PT	Proposed to be listed as threatened under the federal ESA
SCRD	Supplemental Control Requirements Determination
SE	State Endangered
SIP FSEIR	State Implementation Plan Final Subsequent Environmental Impact Report
SIV	Suitability Index Value
SR	State Route
ST	State Threatened
USGS	United States Geological Survey

1.0 SUMMARY

This report is a biological assessment for a modification to the Owens Lake Phase 9/10 Project to add two additional Dust Control Areas (DCAs) - T1A-4 Addition and T10-3a Addition. Thirty-four acres of T1A-4 Addition have been ordered by Great Basin Unified Air Pollution Control District (District, GBUAPCD) for dust control and an additional 118 acres adjacent to existing DCAs have been identified by the Los Angeles Department of Water and Power (LADWP) for dust control. Dust control on the combined 152 acres is the proposed project modification (hereafter referred to as the Project). The Proposed dust control measure is Brine with Shallow Flood Best Available Control Measure (BACM) Backup (Brine Shallow Flood). Biological resources effects were assessed from database searches and results of field surveys. Snowy Plover occur occasionally in the Project areas during the summer; however, mitigation measures for the protection of Snowy Plover would be implemented as described in the Phase 9/10 Mitigation Monitoring and Reporting Program (MMRP) if construction activity occurs during nesting season. No suitable habitat occurs in the Project area for Burrowing Owl, Mohave Ground Squirrel or Agassiz's Desert Tortoise. No adverse biological resources impacts are anticipated from this project.

2.0 BACKGROUND

On July 7, 2021, the District issued an Owens Lake Contingency PM_{10} (particles ≤ 10 micrometers in diameter) Control order for a 34-acre area located immediately north of existing dust control area (DCA) T1A-4. As required per the 2014 Stipulated Judgment; District Rule 433 - Control of Particulate Emissions at Owens Lake; and District Governing Board Order (BO) #160413-01, LADWP is now required to implement BACM in the 34-acre area within three years of the order date. As such, the regulatory deadline is July 7 2024. Failure to implement dust control by the ordered deadline will result in regulatory violation fines of up to $10,000 per day.

The LADWP believes it is prudent to proactively design and implement dust mitigation measures in an additional 118 acres adjacent to existing dust control areas T1A-4 and T10-3a. These additional areas may be contributing to sand deposition in existing control areas resulting in increased maintenance. As such, LADWP will proactively mitigate dust in these additional areas with Brine Shallow Flood. These DCAs are located on property managed by the California State Lands Commission (CSLC).

The approximate locations of these DCAs are shown in Figures 1 and 2. Photos of the locations are shown in Figures 7 and 8.

Figure 1. T1A-4 Addition Project Area

Figure 2. T10-3a Addition Project Area

3.0 PROJECT DESCRIPTION

Brine BACM will be used as the dust control method at T1A-4 Addition and T10-3a Addition. Brine with BACM Backup is a modification to the Shallow Flood BACM where the wetness surface cover requirement is replaced with thick stable surface salt crusts. Brine BACM areas are evaluated for compliance based on extent and types of surface coverage and whether the area is in a potentially emissive state.

Stable surfaces for Brine BACM are defined as:

- Water: Standing water or hydrologically saturated surface as defined by Shallow Flooding BACM. Water may have any salinity.
- Evaporite Salt Deposit: A crystalline deposit of salt minerals precipitated on the surface of the lakebed from evaporation of Owens Lake brine. The evaporite salt deposit does not include the development of salt crust by upward capillary movement of saline fluids through the soil column. The evaporite salt deposit must have a thickness of 1.5 centimeters or greater and may be either wet or dry.
- Capillary Brine Salt Crust: A crust enriched in salt minerals formed at the soil surface by upward capillary movement of water through the soil. The capillary brine crust typically consists of a mix of salt minerals and soil particles in various proportions. The capillary brine salt crust within a Brine BACM area must have an average thickness of 10 centimeters or greater and may be either wet or dry.

The combined areal surface cover of the qualifying component stable surfaces within a Brine BACM area must be at least the percentage required for fully compliant Shallow Flooding BACM. New perimeter berm roads will be constructed to provide a drivable loop around each DCA. Internal berm roads will be constructed to impound the shallow flood ponds.

T1A-4 Addition and T10-3a Addition Brine Shallow Flood DCAs will be divided into two or three terraced shallow flood ponds - an upper, middle, and lower pond, or an upper and lower pond. Each pond will have a constant finished grade elevation operated with a maximum water level of 4 inches above the finished grade. Mass grading will be conducted using low ground pressure tracked equipment hauling pull type scrapers.

Material from the upgradient halves of the basins will fill the downgradient halves of the basins. If on-site soils are not suitable, fill material for berm road construction will be sourced from the existing T2-2 shallow flood DCA borrow site. T2-2 is being graded to achieve habitat target water depths. The berm roads will be gravel-surfaced 12-foot wide roadways. Berm road side slope will be 3:1 with a 4-inch thick gravel surface. Traffic turnouts will be located where machinery/equipment exists or where there are straight sections for more than 1000 feet.

Water will be delivered to the T1A-4 Addition and T10-3a Addition DCAs via a new submain with isolation valves constructed with a connection to the existing T10-3a brine submain. The existing T10-3a pond outfall at the end of the existing T10-3a brine submain will be capped-off and abandoned in place.

Operations and Maintenance

Initially, a target water level is set and brine is introduced to the basin to maintain a constant water level, which provides compliance as wetted surface area. As the wetted surface evaporates, a stable (non-emissive) salt crust forms. Generally, several cycles of wetting and drying are required to achieve a non-emissive surface. A brine salt crust will form over time that provides a stable, non-emissive surface that meets dust control requirements without the use of additional water. If the salt crust is disturbed or insufficient to control dust emissions, the area is re-flooded.

The T1A-4 Addition and T10-3a Addition DCAs are each designed with one pond outfall. Down-gradient ponds within each DCA will be filled by manually opening a gated culvert between each terraced pond. This will allow the water to be conveyed from the upper pond to the middle pond, from the middle pond to the lower pond, or from the upper pond to the lower pond. The culvert outlet structures will have stoplogs to allow manual adjustment to control water levels in the ponds, and allow for overflow in an emergency.

Periodic grading will be required to maintain surface grades within the ponds. Periodic excavation of the sand silt that accumulates around the inlets will be required.

Additional gravel surfacing may be required for berm road surfacing repairs and erosion protection.

Dewatering for construction will consist of constructing diversion berms and/or ditches to direct flow outside the working area. New subsurface drain lines will be installed within the pipe corridor adjacent and parallel to the pipe corridor berm road. Construction of dewatering pits along the mainline pipe excavation to allow gravity drainage of groundwater encountered during pipeline trench excavation. Temporary diesel-powered pumps will dewater pit locations. Water will be discharged into adjacent T1A-4 and T11 shallow flood DCAs. New culverts will divert stormwater out of the DCAs to protect berm roads in the event of flooding.

Maintenance within Brine Shallow Flood DCAs may include:

- Adjustment to grading of internal pond bottoms and berms
- Adjustment to water levels within each pond through the adjustment of water control structures between ponds

As stable brine crusts develop, brine basins will need less brine water deliveries to maintain dust control compliance. However, if the DCA degrades to an emissive state, the DCA will need to return to shallow flood to meet wetness cover requirements.

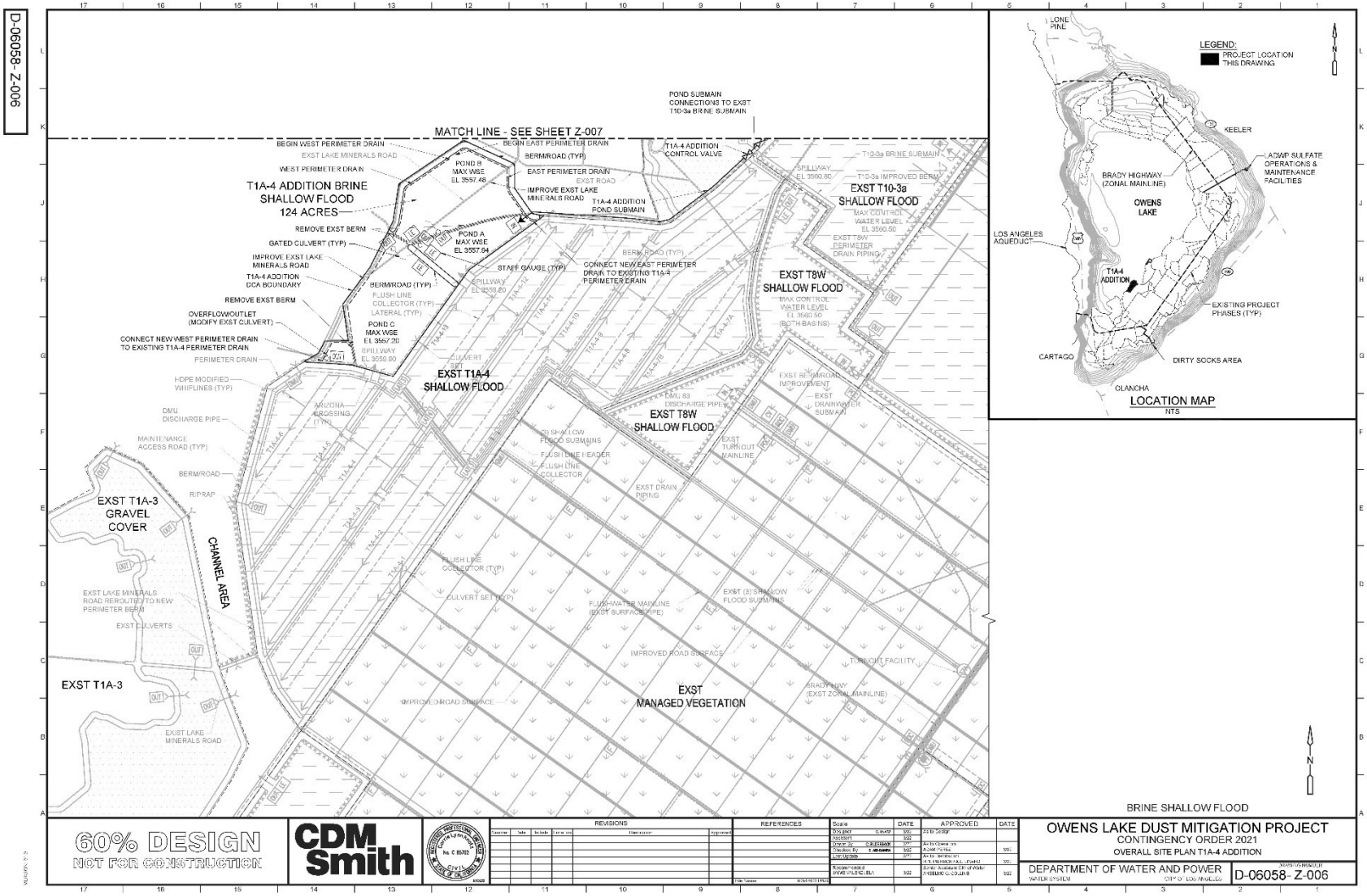

Figure 3. T1A-4 Addition Construction Design

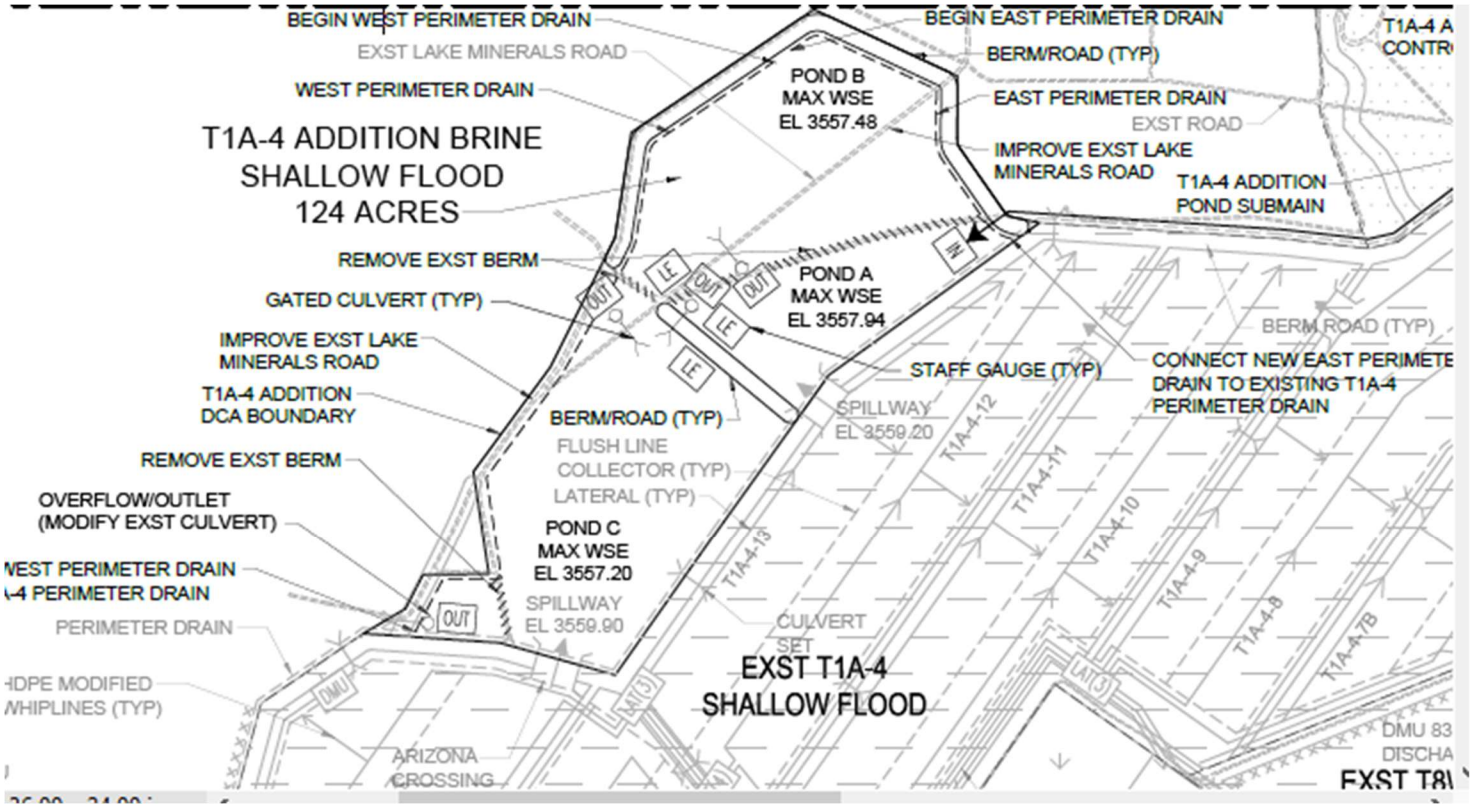

Figure 4. T1A-4 Addition Zoomed In

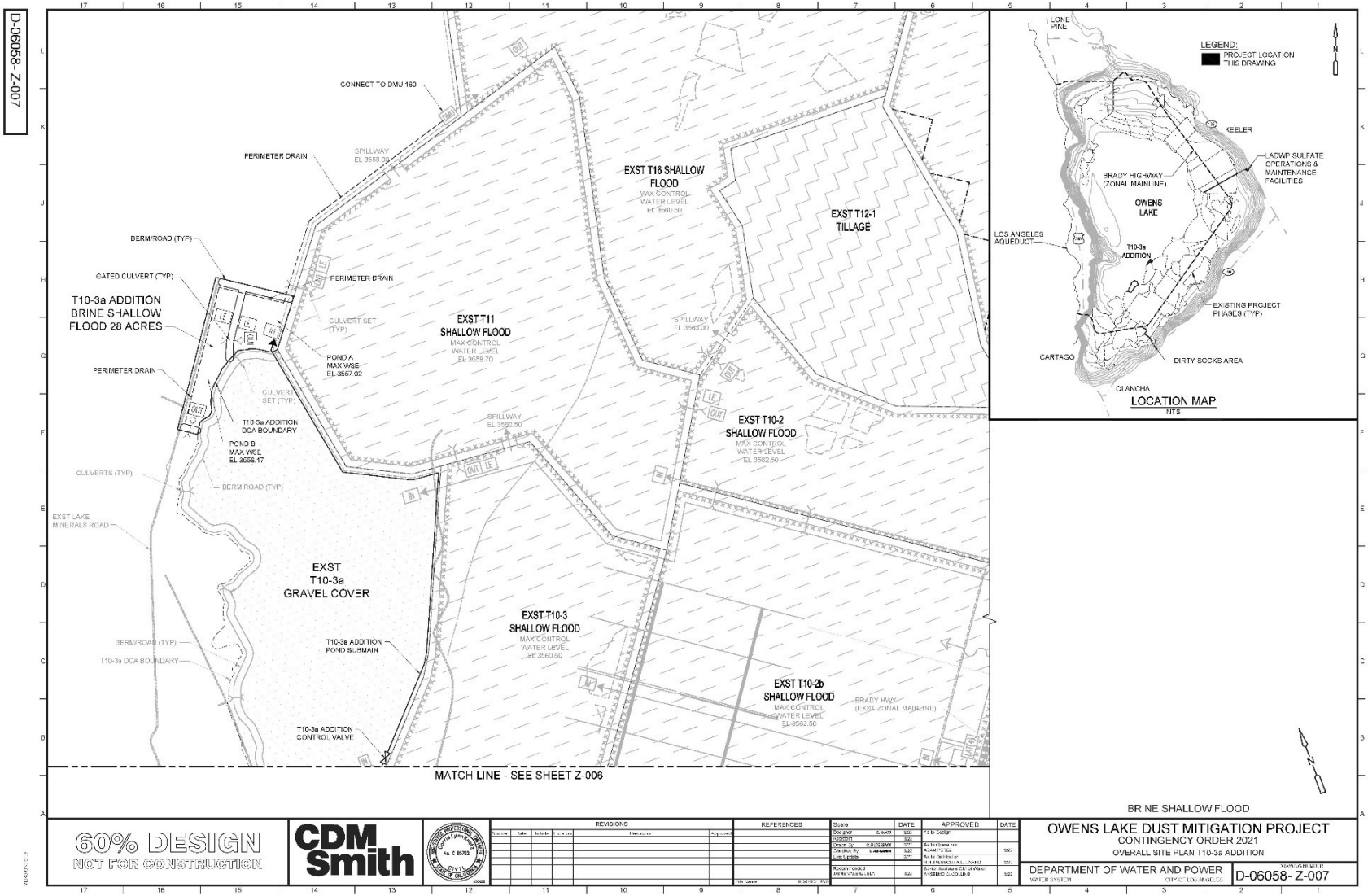

Figure 5. T10-3a Addition Construction Design

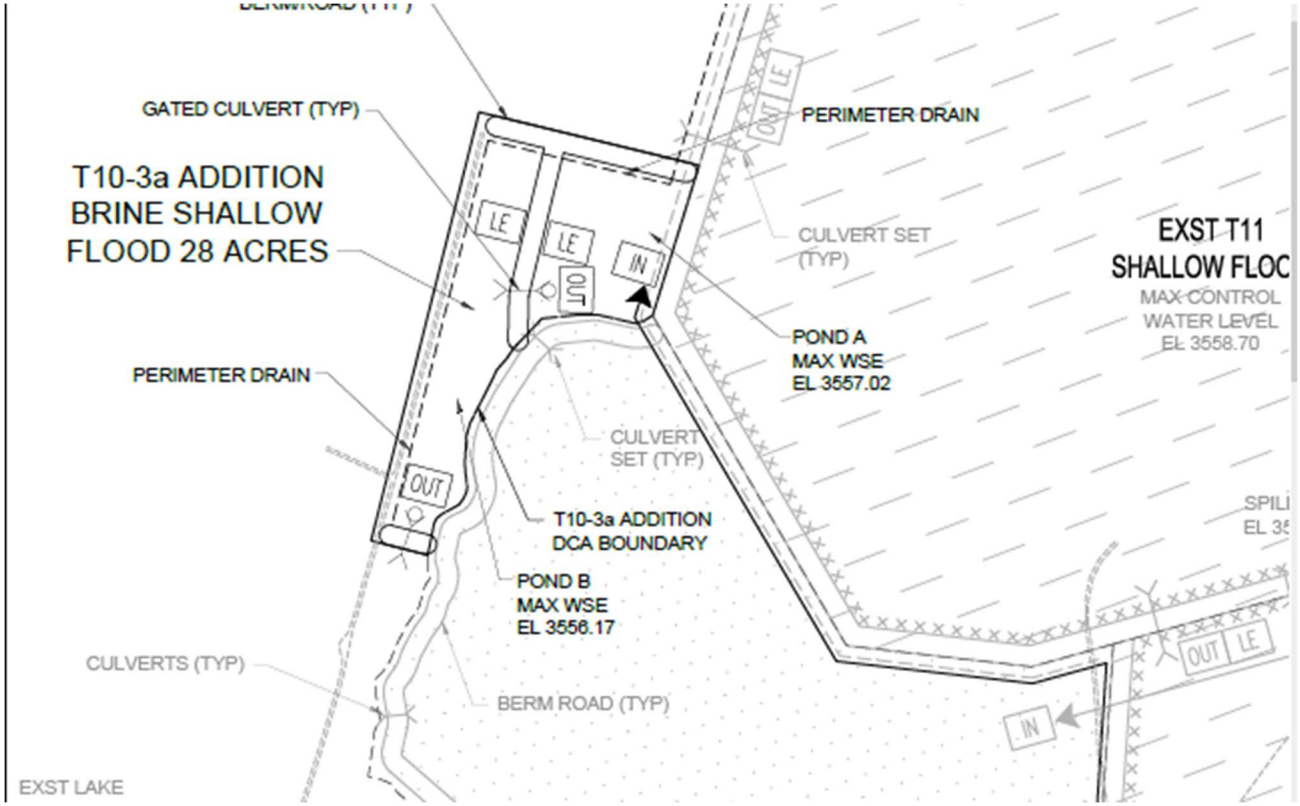

Figure 6. T10-3a Addition Construction Design Zoomed In

Figure 7. Photo of T1A-4 Addition

Figure 8. Photo of T10-3a Addition

4.0 PROJECT LOCATION

The Owens Valley is bounded by the Eastern Sierra Nevada to the west and the Inyo Mountains to the east, with the Coso Range rising to the south. The 110-square-mile dry Owens Lake is located in Inyo County, California, approximately 5 miles south of the community of Lone Pine and approximately 61 miles south of the City of Bishop. Other nearby communities include Dolomite to the northeast, Boulder Creek to the northwest, Keeler to the east, and Cartago and Olancha to the south. Owens Lake is bounded by State Route (SR) 136 to the north and east, SR 190 to the south, and U.S. Highway 395 to the west. The project area is in the central section of the lake adjacent to the brine pool.

Owens Lake is characterized by vast areas of unvegetated desert playa, limited areas of vegetation, mining operations, the brine pool (which fluctuates in size) and the existing system of dust control (bermed areas of shallow flooding, managed vegetation and gravel), and the internal roadway network. The project area is not currently being managed as dust control.

5.0 ENVIRONMENTAL SETTING

Prior to implementation of the Dust Control Project in 2000, Owens Dry Lake consisted of a large expanse of unvegetated playa, a remnant hypersaline brine pool, and scattered springs and seeps along its shoreline. Sparse vegetation, including saltgrass and occasional shrubs, occurred on the playa within isolated spring mounds.

LADWP is implementing the Dust Mitigation Program at Owens Lake, as mandated in the 1998 Memorandum of Agreement between the City of Los Angeles (City) and the Great Basin Unified Air Pollution Control District (District). The Project involves implementation of dust control measures (DCMs) on emissive portions of the lakebed to control fugitive dust (also known as PM_{10}), in order to protect human health. Construction of DCMs by LADWP at Owens Lake began in 2000. Currently LADWP has implemented approximately 45.6 square miles of dust control over 10 phases. The implementation of DCMs has resulted in an increase in the use of Owens Lake by many wildlife species as water and vegetation are now present on much of the former unvegetated playa.

5.1 Geography and Geology

The Owens Lake bed is located at the south end of the Owens Valley, with the Sierra Nevada to the west, the Inyo Mountains to the east, and the Coso Range to the south. Owens Lake is approximately five miles south of the town of Lone Pine, and is bordered on the west by U.S. Highway 395 (US 395) and on the east by State Route 190 (SR 190). The lake bed is approximately 110 square miles in size, 17 miles north to south and 10 miles east to west. The historic shoreline is considered to be 3,597 feet above mean sea level. Although historic lake levels were as high as 3,597 feet in 1878, surface water diversions over the past 125 years have reduced the lake to less than one third of its original area and about 5% of its original volume. From the 1860s to the early 1900s, withdrawals from the Owens River for agricultural purposes substantially reduced surface water inflow to the lake. Extensive irrigation projects compounded by drought caused the lake level to drop as low as 3,565 feet in 1906. However, by 1912, as the drought ended, the level had risen to 3,579 feet. In 1913, the City completed the

Los Angeles Aqueduct (LAA) and began diverting waters of the Owens River, exporting it 223 miles south to the City. By the 1920s, Owens Lake had shrunk to a small hypersaline remnant brine pool approximately 25 square miles in size and a few feet deep. Demand for exported water increased as Los Angeles grew while diversions for irrigation continued in the Owens Valley (mainly on City-owned property). These factors resulted in Owens Lake becoming virtually dry by 1930; its level having dropped to an elevation of 3,554 feet (2008 SIP FSEIR).

The brine pool exists in the lowest portion of the basin and begins at the high-water mark of 3,553.55 feet, as defined by the U.S. Army Corps of Engineers. This brine pool can fluctuate substantially based on the amount of precipitation received in a year and seasonally due to evaporation rates. At the high water mark it occupies 25 square miles. This brine pool supports little life as the concentration of dissolved solids can be as high as 77% by weight, averaging approximately 15 times the salinity of seawater.

5.2 Plant Communities

5.2.1 Playa

The project area consists of unvegetated and emissive playa. Playa primarily represents areas of the Owens Lake bed that were exposed as the lake dried. Whereas many playas in the west produce little dust owing to the stability of their halite crusts, salts found at the surface of Owens Lake playa are salts of sodium carbonate and sodium sulfate. These later salts form a friable crust that is easily eroded by sand saltation. As a result, evaporation of the underlying groundwater, leading to the subsequent precipitation of salts, is an important process in the formation of dust from Owens Lake.

5.3 Wildlife-Plant Community Associations

5.3.1 Playa

Unvegetated playa can support a variety of invertebrate species when water is found, with the species richness and diversity expected to be higher in areas where standing water of appropriate salinity exists. Several species of brine and shore fly were identified at Owens Lake during baseline surveys, including *Ephydra hians*, *E. auripes*, *Lamproscatella* (*Haloscatella*) *salinaria*, *Ptilomtia occidentalis*, and *Paracoenia* sp. (Herbst 1997). Brine and shore flies (Ephydridae) were found to be locally abundant in

areas where streams or springs discharged onto alkali playa. A variety of other invertebrate species were collected in playa areas supporting standing water including midges (Family Chironomidae), water boatmen (Family Corixidae), water scavenger beetles (Family Hydrophilidae), and backswimmers (Family Notonectidae), among others. Generally, there is no standing water in the project area, so it is unlikely that these species would be present.

On playa areas that were seasonally moist or saturated, four species of tiger beetles may be found: *Cicindela tranquebarica inyo*, *C. tenuicincta*, *C. willistoni psudosinilis*, and *C. haemorrhagica*. *C. haemorrhagica* is abundant and widespread throughout the southwestern U.S. The other three species are limited and patchy in their distribution in the west. Both larvae and adult tiger beetles prey on small insects. These beetles can complete their entire life cycle on the lakebed. Tiger beetles are associated with damp areas due to their need for softened soil to form burrows and for small insects to prey upon. Tiger beetles may occur in the project area only if soils are moist or saturated.

Use of playa areas by reptiles and amphibians is expected to be limited. There are no amphibians known or expected to use playa habitats. Diurnal lizards and snakes in adjacent shrub communities may venture onto unvegetated alkali playa, but are not found far from vegetated communities. Species which may be found on playa adjacent to shrub communities include Zebra-tailed Lizard (*Callisaurus dracanoides*), Side-blotched lizard (*Uta stansburiana*), Western Whiptail (*Aspidospelis tigris*), Coachwhip (*Masticophis flagellum piceus*), and Gopher snake (*Pituophis catenifer deserticola*). However, with no cover from thermal extremes and predation they are not found as far out onto playa as the Project area.

Bird species associated with dry playa include Killdeer (*Charadrius vociferous*), Snowy Plover (*Charadrius alexandrinus*), and Horned Lark (*Eremophila alpestris*). On wet playa, Killdeer, Horned Lark (*Eremophila alpestris*) and Common Raven (*Corvus corax*) may be present throughout the year. Several bird species use wet playa areas seasonally including a variety of waterbirds. Shorebirds, gulls, and waders were observed during spring and fall migration, or as a wintering location, namely American Pipit (*Anthus rubescens*). Only a few species use unvegetated playa for nesting.

Species that may use playa areas for nesting include Snowy Plover, American Avocet (*Recurvirostra americana*), and Killdeer. Horned Lark may nest in nearby alkali meadow habitats and forage in adjacent playa. The Snowy Plover is the only sensitive species expected to use playa habitats for nesting.

With the implementation of shallow flooding dust control Owens Lake serves as a migratory stop-over site for shorebirds and waterfowl during spring and fall migration. Western (*Calidris mauri*) and Least Sandpipers (*Calidris minutilla*) are the most abundant shorebirds during migration. Wilson's (*Phalaropus tricolor*) and Red-Necked Phalaropes (*Phalaropus lobatus)* are also common during migration, particularly in fall. Thousands of waterfowl such as Ruddy Duck (*Oxyura jamaicensis*), Gadwall (*Mareca Strepera*), Northern Shoveler (*Spatula clypeata*) and Mallard (*Anas platyrhynchos*) also utilize the Shallow Flooding DCAs during migration and are particularly abundant in fall. Snowy Plover continue to nest on Owens Lake and have shown a positive response to shallow flooding. Before implementation of shallow flooding, breeding was restricted to natural springs and outflows. With the additional water, Snowy Plover expanded into previously unused habitat (Ruhlen, Page, and Stenzel 2006). Not only has shallow flooding increased Snowy Plover habitat, with additional water available on the lake bed later into summer-- when warm temperatures and high evaporation dry natural sources of water-- implementation of shallow flooding has significantly extended the breeding season (LADWP 2010, Ruhlen, Page, and Stenzel 2006).

Only two bat species, the Spotted Bat (*Euderma maculatum*) and Yuma myotis (*Myotis yumanensis*), were detected over playa habitats (District 1998). Due to the limited insect resources of playa, bats detected in playa habitats may have simply represented individuals enroute to other more productive habitats. These species may forage over exiting dust control areas.

6.0 METHODS

6.1 Literature/Data Review

Prior to conducting verification of current field conditions, LADWP Watershed Resources Staff conducted a literature review of the 2008 SIP/EIR (District 2008) and the Owens Lake Revised Moat and Row Supplemental EIR (LADWP 2009) to

determine studies already conducted on the new T1A-4 Addition and T10-3a Addition Project Area.

LADWP consulted the California Natural Diversity Database (CNDDB) for information on sensitive species that could potentially exist within the project area. CNDDB was searched on April 6, 2022 for USGS quadrangle maps (see Appendix). T10-3a Addition is on the USGS Owens Lake quadrangle map, T1A-4 Addition is partially on the USGS Owens Lake quadrangle map and mainly on the USGS Vermillion Canyon quadrangle map. The surrounding USGS quadrangle maps were also included in the search: Bartlett, Dolomite, Centennial Canyon, Upper Centennial Flat, Cerro Gordo Peak, Haiwee Pass, Haiwee Reservoirs, Keeler, Lone Pine and Olancha. The California Native Plant Society (CNPS) Rare Plant Inventory was searched on November 23, 2021 for, the same 12 USGS quadrangle maps (listed below), CNPS List 1 and 2 plants, rare or endangered in California. Elevation was limited to below 5,000 feet. The Project areas are below 3,600 feet in elevation.

Lone Pine	Dolomite	Cerro Gordo Peak
Bartlett	Owens Lake	Keeler
Olancha	Vermillion Canyon	Centennial Canyon
Haiwee Pass	Haiwee Reservoirs	Upper Centennial Flat

6.2 Biological Surveys

Wildlife presence/absence and habitat assessment surveys were conducted on December 21, 2021. No wildlife was observed. Habitat assessment for Burrowing Owl, Mohave Ground Squirrel and Agassiz's Desert Tortoise was conducted on December 21, 2021 and no suitable habitat was found in the Project Areas.

6.3 Avian Use of Project Vicinity

6.3.1 Snowy Plover

A breeding population of Snowy Plover occurs on Owens Dry Lake. Avian nesting activity is frequently monitored in various parts of Owens Lake as part of preconstruction surveys required for the Snowy Plover. Per the terms of previous mitigation measures, LADWP is required to maintain a baseline of 272 Snowy Plovers as determined during dedicated annual surveys (District 2003). LADWP staff conducts an annual week-long lakewide survey for Snowy Plover. Other lakewide bird surveys (see next section) also include Snowy Plover observations and occassionally reports of Snowy Plover or other nests. The LADWP construction clearances and lake-wide surveys are focused on existing DCAs.

Snowy Plover nests are found on playa, gravel roads, and in areas with sparse vegetation. Generally, three eggs are laid and chicks hatch after one month incubation. Existing nesting potential occurs in the dry portions of existing dust control management cells. Snowy Plover nest surveys are conducted before and during construction during nesting season (March 15 to August 15). These surveys are conducted in areas where construction will occur. Nests are also found due to reports of broken wing displays observed by construction staff and others present on the lake. These broken wing displays are reported to LADWP biologists, who will locate nests and erect buffer zones if the nests are in areas near construction. Nests are also found as part of the plover census and other lake-wide bird surveys, these surveys are focused on finding adult birds and not locating nests. During the time period from 2006-2021, 24 nests were found in DCAs adjacent to the Project area. While the emissive nature of the playa in the Project area and errosive effects of sand movement limit the areas usability for nesting during windstorms, nests may occur in the Project area during construction.

Table 1. Historical Plover Nests in Project Area and Vicinity

DCM Cell	Date Found	Comments	Location
Channel Area North	6/7/2012	Buffer zone erected. They will avoid when installing drip lines.	On playa. 700 feet west of road between T2-4 and C1. Just south of T2-5, T2-4 intersection. 3 egg nest.
Channel Area North	6/12/2012	Nest buffer installed. Surveyor stakes and air monitoring station located within buffer zone. Nest first observed by surveyors laying out stakes for the sprinkler installation. 7/10/12 2 chicks 1/4 adult size. Removed buffer 7/11/12.	Nest located approximately 100 meters north of cell T1a-2 in the Channels Area North. Nest located directly on sub-main installation area for soon to be installed sprinklers.
T10-3	3/27/2017	Perimeter berm of T10-3a Phase 9/10 Was a 1 egg nest at time of discovery 3 eggs on 4/3/2017	On shoulder of road
T10-3a	6/17/2020	No need to close road	In large gravel.
T10-3E	5/5/2020	Did not walk up to nest but bird was clearly sitting on a nest. Coordinates estimated. Sitting bird on nest was easily visible from the southwest corner of T11. Suspect nest failed, possibly due to high winds	Near the bend in the road that is between T11 and T10-3E. Along the southwest edge of the road.
T11	6/15/2021	Adult male gave broken wing display after ~15 mins of observation when approaching closer to the nest site. Road closed at nearest intersections on both sides.	Nest location presumed on south shoulder of road
T11	7/2/2019	3 eggs	less than 100m NW of road closure barricade on right (north) shoulder of road
T11	7/2/2019	3 eggs 7/29-- 3 eggs still in nest, no SNPL seen in immediate area.	More than 100m beyond road closure barricade on right (north) shoulder of road, near nest number 1438
T11	5/8/2020	Did not approach nest, but bird immediately went back to nest after I drove past it. Hot day.	On the south side of the road edge.

T11	5/8/2020	Road is open but we may want to put in speed limit signs and the nest is very close to the road.	Nest is approximately 20 meters from the edge of the road and within the DCA. Nest is located on a gravel bar in an area covered by road based gravel.
T11	6/10/2015	The road is closed with cones and green stakes at junctions to prevent anyone from driving down the road.	3 egg nest on center of road that separates T11 from T10-2
T11	6/29/2010	One adult male and 3 chicks, 1/4 size of the adult	Towards southeast
T1A-4	6/28/2021		One adult and three chicks observed. One chick had been resting in the shade of a sprinkler. Then they moved off and two more chicks were observed. Brood seen during the 2021 drawdown survey.
T1A-4	5/30/2019	Road closed 200' from nest	3 egg nest on NW side of road
T1A-4	4/28/2020		On road
T1A-4	6/27/2018	nest found during drydown survey. Speed Limit sign erected	2 egg nest under bubbler
T1A-4	6/29/2017	Road closed with barricades at both ends of road	2 egg nest on North side of road
T1A-4	6/6/2016		Outside edge of curve
T1A-4	3/29/2017	Found inactive	Road between laterals 2&3 20 yards NE of arizona crossing on NW shoulder of road
T1A-4	5/1/2017	1 egg nest on May 1, 2017	About 100 yds NE of valves on north shoulder of road
T1A-4	5/6/2016	3 Egg nest	Nest is on the north shoulder of berm road.
T3SW	5/27/2009	Did not display broken wing behavior	Located on berm separating bays in north central portion of the cell
T3SW	5/27/2009		Located on berm separating two bays in central portion of the cell.
T1-4 (NE part of D19)	5/20/2007	PRBO	11S 0411141 / 4024526

Note that Snowy Plover nests found are incidental to clearance surveys for construction and are not the result of comprehensive surveys every year. Due to the emissive nature of the project area, not likely that Snowy Plover nests would be found there.

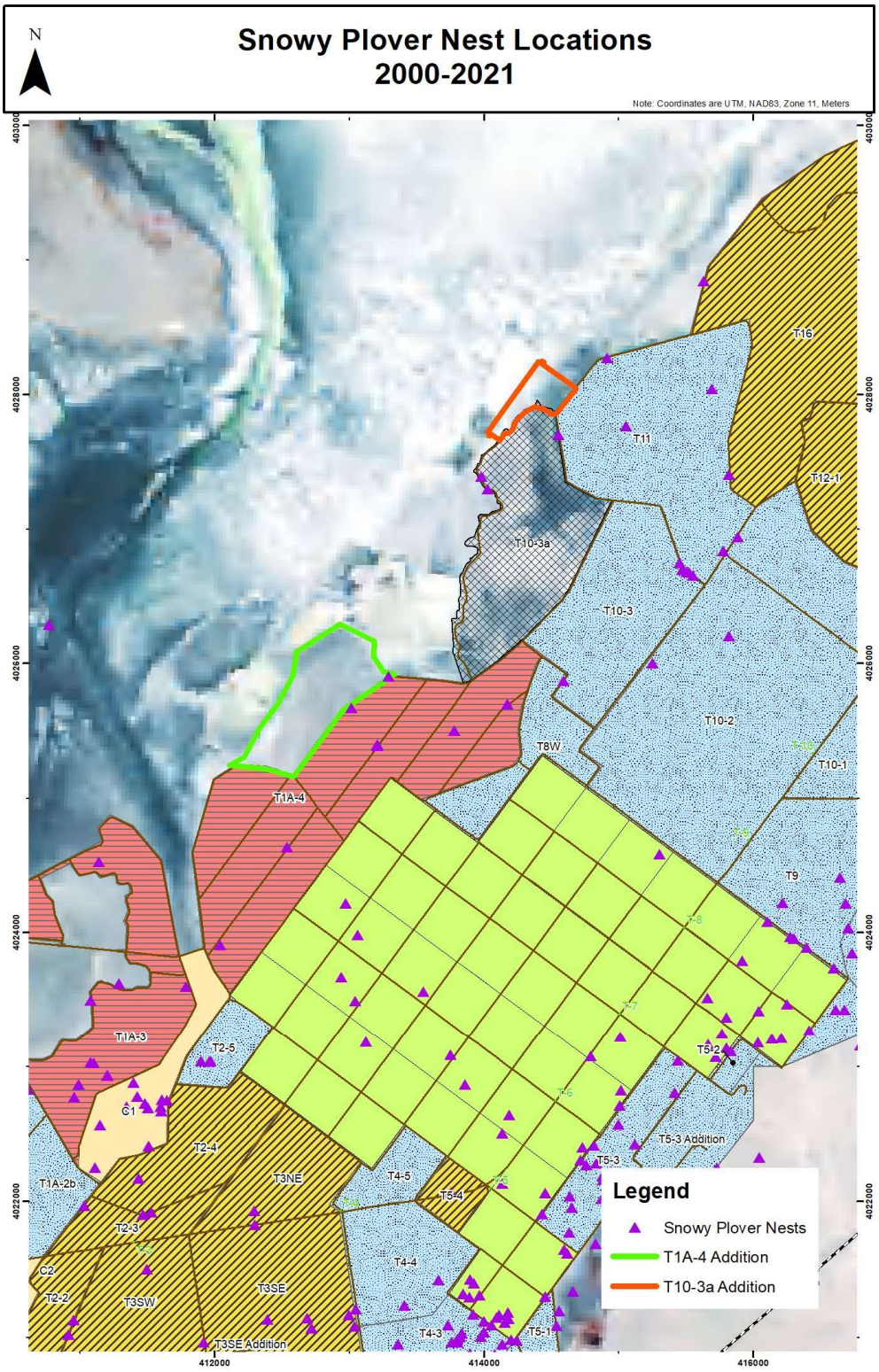

Figure 9. Historical Snowy Plover Nests in Vicinity of Project Area
Note that due to the emissive nature of the project area, not likely that Snowy Plover nests would be found there.

6.3.2 Bird Use

With implementation of the dust control since 2000, vegetation conditions and wildlife use of Owens Lake have changed substantially. Implementation of DCMs has resulted in an increase in the use of Owens Lake (compared to pre-2000) conditions by many wildlife species as water and vegetation resources are now present on much of the former unvegetated playa. Implementation of DCMs has attracted large numbers of birds, primarily gulls, avocets, sandpipers and plovers (LADWP 2010). Since the start of the dust control program, Shallow Flooding DCAs have supported invertebrates including midges (Family Chironomidea), water boatman (Family Corixidae), water scavenger beetles (Family Hydrophilidae), and backswimmers (Family Notonectidae). Brine flies are the most abundant aquatic invertebrate in the Shallow Flooding areas. Brine shrimp (*Artemia* sp.) have also been observed in some DCAs with ponded water (LADWP 2010). Fish are not present in the Shallow Flooding ponds. Lizards have been observed on roads, in alkali meadow areas, and adjacent to desert scrub habitat. Due to the lack of cover and food resources, small mammal use of the open playa is limited, although deer mice (*Peromyscus maniculatus*) have been observed within some shallow flood cells. Pocket gopher, Owens Valley Vole, deer mice and other small mammals are more abundant and expected in areas of dry alkali meadow. Larger mammals (coyote, kit fox, and bobcat) may hunt in alkali meadow and upland scrub areas and on the playa and dust control cells (LADWP 2010). A detailed description of wildlife use in the dust control areas on Owens Lake is included in the Owens Lake Habitat Management Plan (LADWP 2010).

A designated Nationally Significant Important Bird Area by the National Audubon Society and America Bird Conservancy, Owens Lake serves as a migratory stop-over site for shorebirds and waterfowl during spring and fall migration. Western and Least Sandpipers dominate during migration. Wilson’s and Red-Necked Phalaropes are common during migration, particularly in fall. Thousands of waterfowl such as Ruddy Duck, Gadwall, Northern Shoveler and Mallard utilize the Shallow Flooding DCAs during migration. Use of the Project vicinity by various waterbirds is much less in summer and winter (Tables 2 and 3). However, Snowy Plover and American Avocet commonly breed

in dust control areas and around lake-fringing wetlands. A detailed listing of bird species observed on Owens Lake from seven lake-wide bird surveys from 2007 to 2008 is included in the Owens Lake Habitat Management Plan (LADWP 2010).

Table 2. Historical Bird Use in T1A-4 (Vicinity of T1A-4 Addition)

Species	Date	Number
Ruddy Duck	2019	8
Eared Grebe	2017	22
	2019	1
American Avocet	2018	71
	2020	6
Snowy Plover	2016	3
	2017	3
	2020	9
Semipalmated Plover	2017	12
	2018	1
Killdeer	2018	61
	2019	14
Bairds Sandpiper	2017	3
Least Sandpiper	2016	29
	2017	155
	2018	278
	2019	206
	2020	41
Unidentified Sandpipers	2017	30
	2018	350
	2019	10
Spotted Sandpiper	2016	1
Red-necked Phalarope	2017	17
California Gull	2018	475
	2019	263
	2020	807
Merlin	2018	1
Peregrine Falcon	2020	1
Prairie Falcon	2018	1
Common Raven	2017	6
	2020	1
Horned Lark	2017	103
	2018	42
	2019	9
	2020	137
Western Meadowlark	2020	2

Species	Date	Number
American Pipit	2019	3
	2020	57
Savannah Sparrow	2017	12
Yellow-headed Blackbird	2016	2

No birds were seen in T10-3a or T10-3 West, the DCAs adjacent to the new T10-3a Addition.

Table 3. Historical Bird Use in T10-3 East (Vicinity of T10-3a Addition)

Species	Date	Number
Eared Grebe	2016	35
	2017	19
American Avocet	2017	20
	2020	105
Dunlin	2016	5
Least Sandpiper	2016	180
	2017	1
	2018	200
	2019	224
	2020	200
Western Sandpiper	2016	2250
	2017	123
	2018	300
	2019	1
	2020	50
Wilsons Phalarope	2017	1
	2020	1
California Gull	2018	3
Horned Lark	2018	1
White-crowned Sparrow	2020	1

6.4 Biological Surveys

Special status species and their potential to occur in the Project area are shown in Tables 4 and 5. Species not included due to change in regulatory status are: American Peregrine Falcon (*Falco peregrinus anatum*), Double-crested Cormorant (*Phalacrocorax auritus*), White-faced Ibis (*Plegadis chihi*), Osprey (*Pandion haliaetus*), Sharp-shinned Hawk (*Accipiter striatus*), Cooper's Hawk (*Accipiter cooperi*), Ferruginous Hawk (*Buteo regalis*), Merlin (*Falco columbarius*), Prairie Falcon (*Falco mexicanus*), Long-billed Curlew (*Numenius americanus*), California Gull (*Larus californicus*), Le Conte's Thrasher (*Toxostoma lecontei*), and Virginia's Warbler (*Oreothlypis luciae*). Additionally, the project area is outside the breeding range for the sensitive subspecies of California Horned Lark (*Eremophila alpestris actia*), Vaux's Swift (*Chaetura vauxi*) and Tricolored Blackbird *(Agelaius tricolor)*. Southern grasshopper mouse (*Onychomys torridus ramona*) and Sage Sparrow (*Artemisiospiza belli belli*) are not present in the project area.

The project area is within the Owens Lake historic lake bed. No signs of Mohave Ground Squirrel (*Xerospermophilus mohavensis*) or Agassiz's Desert Tortoise (*Gopherus agassizii*) were found during the December 2021 survey. No wildlife was observed. There is no suitable habitat for Burrowing Owl, Mohave Ground Squirrel or Agassiz's Desert Tortoise in the Project areas. The substrate consisted of unvegetated playa made up of alkali crust mixed with silt and clay often with shallow groundwater and some sand dunes. The Project area has emissive soils with no vegetation. Therefore, there is no suitable cover for protection or foraging. The saline alkali crust often too hard for burrow construction or too wet due to shallow saline groundwater, depending on the season.

Table 4. Listed Species with the Potential to Occur in the Region of the Proposed Project Sites

Species	Status	Habitat	Occurrence in Project Area
Mojave tarplant (*Deinandra mohavensis*)	SE	Exists in chaparral and other scrub.	Not likely. The project area is unvegetated playa.
Owens Valley checkerbloom (*Sidalcea covillei)*	SE	Associated with alkaline meadows in Owens Valley at elevation range of 1,075-1,425 meters.	Not likely. The project area is unvegetated playa.
Owens pupfish (*Cyprinodon radiosus)*	FE, SE	Typical habitat for the Owens pupfish is shallow (two inches to three feet), still to slow moving warm waters with good water quality, sparse cattails and bulrush, and a sand-silt detritus bottom.	No suitable habitat exists within the project sites.
Owens tui chub (*Gila bicolor snyderi*)	FE, SE	Endemic to the Owens River basin in a variety of habitats needing clear, clean water and aquatic vegetation.	No suitable habitat present with project sites.
Sierra Nevada yellow-legged frog (*Rana sierrae*)	FE, ST	Ponds, meadow and pools of high elevation mountain habitats in the central and southern Sierra Nevada.	No suitable habitat exists within the project areas.
Desert tortoise (*Gopherus agassizii)*	FT, ST	Requires friable soils for burrow construction in open desert scrub, desert wash, and Joshua tree woodland.	Suitable habitat is not present in the project areas.
Mohave ground squirrel (*Spermophilus mohavensis)*	ST	Prefers sandy gravelly soils in open desert scrub, alkali scrub, and Joshua tree woodland.	Suitable habitat is not present in the project areas.
Swainson's Hawk (*Buteo swainsoni)*	ST	The Swainson's Hawk needs trees or large shrubs to nest in, and nearby grassland or agricultural areas in which to forage; migrants may occur throughout the desert.	No suitable nesting habitat present in the project areas. Transient use in the project areas may occur.
Least Bell's Vireo (*Vireo bellii pusillus)*	FE, SE	The Least Bell's Vireo is a riparian obligate breeding species that occurs in cottonwood-willow woodlands, oak woodlands, and mule fat scrub.	No suitable habitat present within the project areas including a buffer zone. No records of this species in the project areas.

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
SC = Listed as candidate by the State of California
ST = Listed as threatened by the State of California
SSC = Listed as species of special concern by the State of California

Table 5. Sensitive Species with the Potential to Occur in the Proposed Project Site
List developed from CNDDB, CNPS lists for the area and professional experience in the area

Species	Status	Habitat	Occurrence in the Project Area
Owens Valley vole *(Microtus californicus vallicola)*	CSC	Found in friable soils of wetlands and lush grassy ground in the Owens Valley	No suitable habitat present in the project area.
American badger (*Taxidea taxus*)	CSC	Most numerous in California in the Great Basin region, fluctuating with populations of squirrels and pocket gophers, in open areas including deserts	No suitable habitat present in the project areas.
Golden Eagle (*Aquila chrysaetos)* (Nesting and wintering)	FPS	Nests on steep cliff faces or atop tall species of trees with snags	Suitable nesting and wintering habitat is not present in the project areas.
Burrowing Owl (*Athene cunicularia)* (Burrow sites)	CSC	Nests and resides in desert scrub and agricultural habitats	Burrowing Owl has been observed near Cottonwood, in upland habitat on the west side of Owens Lake.
Snowy Plover (*Charadrius nivosus)*	CSC	Prefers sandy beaches, salt pond levees and shores of large alkali lakes	Snowy Plover commonly use Owens Lake DCAs for nesting and foraging. If construction occurs during the nesting season, mitigation measures per the MMRP would be implemented.
Mountain Plover *(Charadrius montanus)*	PT, CSC	Agricultural fields and meadow areas	Possible fall migrant although this species has not been observed in the project areas.
Northern Harrier (*Circus cyaneus)* (Nesting)	CSC	Nests in riparian and marshland habitats and forages over open grasslands, marshes, and wetland areas	Northern Harrier have been observed in widespread locations throughout Owens Lake. The project areas are unvegetated playa and does not present foraging opportunities for Northern Harrier.
Yellow-breasted Chat *(Icteria virens)* (Nesting)	CSC	Resides in low, dense riparian habitat consisting of willow, blackberry, wild grape	There is no suitable habitat present within the project areas.
Western Least Bittern *(Ixobrychus exilis hesperis)*	CSC	Nests among fresh and brackish marshes with dense and tall aquatic and semiaquatic vegetation	There is no suitable habitat present within the project area.

Species	Status	Habitat	Occurrence in the Project Area
Loggerhead Shrike *(Lanius ludovicianus)* (Nesting)	CSC	Nests and resides in desert scrub and savannah woodland habitats	Not likely in the project area due to absence of

KEY:
CSC = California Species of Special Concern
FPS = Federally Protected Species
PT = Proposed to be listed as threatened under federal ESA

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6.5 Habitat Value for Owens Lake Species Guilds

Five species guilds, as discussed previously, were identified that utilize Owens Lake: breeding waterfowl, migrating waterfowl, Snowy Plover, migrating shorebirds and alkali meadow. Guilds are made up of species with similar habitat requirements and therefore, habitat use at Owens Lake. A Habitat suitability model (HSM) was collaboratively developed for each guild by the Owens Lake Master Planning habitat workgroup which included members from California Department of Fish and Wildlife, Great Basin Unified Air Pollution Control District, Eastern Sierra Audubon, California Audubon, CNPS Bristlecone Chapter, and LADWP. These models were reviewed and further refined by Bart O'Brien (California Botanic Garden), Gary Page (Point Reyes Bird Observatory) and Don Sada (Desert Research Institute) and Point Blue Conservation Science (Roberts, et.al. 2016). The current HSM was used for all habitat value analysis (LADWP 2017). The five guilds include:

- The **migrating waterfowl** guild includes all members of the Family Anatidae, which includes all species of swan, goose, dabbling and diving ducks.
- The **breeding waterfowl** guild includes all species of dabbling ducks which have been known to breed on Owens Lake including Mallard, Gadwall, Northern Pintail, Cinnamon Teal, and potentially Green-winged Teal.
- The **migrating shorebird** guild includes all members of the Order Charadriiformes excluding the family Laridae (gulls) and includes plovers, stilts and avocets, phalaropes, and all sandpipers (Family Scolopacidae).
- The **Snowy Plover** is the only species-specific model and includes only Snowy Plover.
- The **alkali meadow** guild includes all species associated with alkali meadow communities including various reptiles, amphibians, mammals and birds that use meadow habitats. Species typically associated with meadow habitats on or adjacent to Owens Lake include reptiles such as Side-blotched Lizard, Gopher Snake; mammals such as Botta's Pocket

Gopher, Deer Mouse; and birds such as Northern Harrier, Savannah Sparrow, and Western Meadowlark.

The HSM is evaluated by mathematically combining individual Suitability Index Values (SIVs) for each habitat parameter. These parameters were found to be the most important to describe habitat for each guild. SIVs are assigned to measurements in each parameter in the model based on measurements which are preferred by each guild. The SIVs range from 0 to 1, which indicate the suitability of each component parameter. For example, in the shorebird habitat model, shorebirds prefer shallow water for the water depth habitat parameter, therefore the SIV assigned to this parameter when shallow water is measured is 1. Each parameter's SIVs are combined mathematically to obtain the HSM value. The HSM value for each guild in each area can range from 0.0 (low or non-suitable habitat) to 1.0 (highly suitable habitat). The habitat value for each guild is the product of the habitat suitability model output value and the acreage of the given area. Additional details on habitat suitability modeling can be found in *Habitat Suitability Models for Species Guilds that Occur on Owens Lake* (LADWP 2011) and *Habitat Analyses using Habitat Suitability Models for Species Guilds that Occur on Owens Lake, Inyo County 2012-2014* (LADWP 2015*).*

Habitat Modeling Approach

To demonstrate a change in habitat value for Owens Lake Species guilds, the quality of the habitat was assessed for current conditions and projected for post-construction using the current Owens Lake Habitat Suitability. The criteria used to assign habitat values to both T1A-4a Addition and T10-3a Addition for both current and proposed conditions are detailed in the *Supplemental Control Requirement Determination 2011 and 2012 Dust Control Measures Projected Habitat Value* (LADWP 2014).

Prior to the Project the DCAs consist of dry non-vegetated playa with no standing water. After development of the Brine salt crust it is expected that virtually no standing water will be present during peak migration and breeding seasons. A

description of habitat parameters for both current and projected conditions are shown in Tables 6 & 7.

Table 6. Description of Current Habitat Parameters used for Baseline Habitat Modeling

Habitat Parameters	Description & Assumptions
Acreage of Dry Area	This parameter consists of acreage of the DCA that will be roads, berms, capillary salt crust and dry playa.
Salinity	By convention, salinity is set at 80 ds/m for dry playa.
Monthly Water Availability	Monthly *Landsat 8* imagery from 2019 was used to detect the presence of water in the cells for current conditions.
Micro-topography	Microtopography measures the bumpiness of the surface. It is a parameter used in the Snowy Plover guild. Snowy Plover were found to preferentially select microtopographic relief in the 3-5cm range as detected by LiDAR analysis. Microtopographic relief for existing dry playa was evaluated using a 1-foot resolution LiDAR image that was captured in August of 2020. Relief was estimated over a 4x4 pixel (16 square feet) area and is presented as a proportion of the total DCA area.

Table 7. Description of Habitat Parameters Projected after Project completion

Habitat Parameters	Description & Assumptions
Acreage of Dry Area	Consists of roads, berms, capillary crust and dry playa. This does not include evaporative brine deposits as those deposits do not support either nesting or foraging. Based on evaporative brine deposits occurrence in other DCAs, it is projected that 76% of the dust compliance polygon will be evaporative brine and the remaining portion capillary crust or dry playa. This is based upon the percentage of dry area in brine DCAs from a supervised classification using the *Pleiades* satellite image captured in November of 2019.
Salinity	Following construction of the DCAs salinity values will exceed 200 ds/m if/when liquid water is present, because of the hyper-saline brine solution used.
Monthly Water Availability	Post-construction it was assumed that water will only be available in the month of January, during rain events. This assumption reflects the likelihood of precipitation during winter that will quickly evaporate.
Micro-topography	For proposed micro-topography associated with Brine BACM, an average was generated from two existing Brine DCA's, T11 and T18S. The LiDAR resolution in these cells was 0.5 feet and an 8x8 pixel (16 square feet) was used in the analysis. The LiDAR image was captured in August of 2020. It was found that, on average, 30% of the area was in the 3-5cm range (see 0.3 in Table 8).

The values associated with the habitat parameters used in calculating the habitat value before the project (October, 2020) and projected after completion, for each of the 5 guilds are listed in Table 8**.**

The Habitat Suitability Values (HSV) are shown in Table 9, which is the per acre habitat value for each DCA. The final Habitat Value Acres (HVA) scaled to acreage are shown in Table 10 for the 5 guilds.

Table 8. Habitat Parameters used for modeling of Existing and Projected Habitat Value

	T1A-4 Addition			T10-3a Addition	
Habitat parameter	**Existing**	**Projected**		**Existing**	**Projected**
Acreage of Dry Area (acres)	124	29.8		28	6.60
Salinity (ds/m)	80	>200		80	>200
Monthly Water Availability	January	January		January	January
Proportion of Micro-topography acres	0.14	0.30		0.28	0.30

Table 9. Habitat Suitability Values (HSV) for Existing and Projected conditions.

DCA	Project		Breeding Waterfowl	Migrating Waterfowl	Snowy Plover	Shorebird	Meadow
T1A-4 Addition	**Existing**		0	0.002	0.005	0.039	0
T1A-4	**Projected**		0	0	0.002	0.011	0
T10-3a Addition	**Existing**		0	0.002	0.006	0.039	0
T10-3a	**Projected**		0	0	0.002	0.011	0

Because of the dry saline habitat inherit in baseline and projected conditions, HSVs are the marginal habitat (close to 0) and non-habitat conditions (0) for all guilds.

Habitat Modeling Results

Table 10. Habitat Value Acreages (Existing and Projected After Project)

DCA	Project	Total Acres		Breeding Waterfowl		Migrating Waterfowl	Snowy Plover	Migratory Shorebird	Alkali Meadow
T1A-4 Addition	**Existing**	**124**		0		0.25	0.62	4.84	0
T1A-4	**Projected**	**124**		0		0	0.25	1.36	0
T10-3a Addition	**Existing**	**28**		0		0.06	0.17	1.09	0
T10-3a Addition	**Projected**	**28**		0		0	0.06	0.31	0

Discussion

There is no significant change in habitat value for all guilds due to the lack of foraging habitat availability in both baseline and projected conditions after construction. Descriptions of the findings for each guild are as follows:

There is no breeding and negligible migrating waterfowl habitat value in the Project areas due to lack of vegetation and water for foraging.

Snowy Plover will have a biologically insignificant decline in habitat value due to less dry area for nesting. Marginal habitat will exist in both current and projected conditions.

The migrating shorebird guild shows a biologically insignificant decline in habitat value from current to projected conditions. This decline while detectable with habitat modeling is negligible due to a lack of foraging habitat in either condition. Substantial resources for foraging and nesting were created by Phase 9/10 DCAs shown in Table 11 (LADWP 2020). When habitat parameters for water and salinity are suitable for foraging and nesting significantly higher habitat value is observed (see T37-2a).

Lastly, there's no Alkali Meadow habitat due to the absence of vegetation.

Table 11. Habitat Value (2019) in previously constructed Phase 9/10 DCAs

	Breeding Waterfowl HVA	Migrating Waterfowl HVA		Snowy Plover HVA	Migrating Shorebird HVA		Meadow HVA	
DCA	Spring	Spring	Fall	Spring	Spring	Fall	Spring	Fall
T10-1a	0	3.2	0	9.3	20.8	4	0	0
T10-3a	0	0.7	0.7	3	32.4	32.4	0	0
T15	0	0.2	0.2	0.7	7.8	7.8	0	0
T20	0	0.3	0.3	1.3	14.3	14.3	0	0
T21-1	0	0.2	0.2	1	10.7	10.7	0	0
T21-2	0	0.1	0.1	0.5	5.7	5.7	0	0
T2-1b	15.6	10.8	2.7	4.8	27.4	11.8	32.8	32.8
T2-1c	46	14.5	5.9	11.7	42.3	25.9	77.2	77.2
T22	0	0.8	0.8	3.5	37.7	37.7	0	0
T32-2	20.2	1.4	1.4	4.4	47.8	47.8	17	17
T35-3	0	0.1	0.1	0	1.2	1.2	0	0
T37-2a	0	17.3	18.4	39.9	54.6	56.3	0	0
T37-2b	0	0.6	0.8	7	14.8	15.3	0	0
T37-2c	0	0.7	0	1.5	5.3	1.6	0	0
T37-2d	0	2.5	0	28.6	49.9	12.9	0	0
Total	81.8	53.4	31.6	117.2	372.7	285.4	127	127
Seasonal Average	81.8		42.5	117.2		329.05		127

7.0 IMPACT AND AVOIDANCE AND MINIMIZATION EFFORTS

Potential Impacts

The Project area is dry, hypersaline, unvegetated playa. Consequently, no impacts to sensitive habitat are expected. Snowy Plover could potentially nest in the Project areas during the nesting season. Therefore, avoidance and minimization measures outlined in the MMRP for the Phase 9/10 Project will be implemented as applicable.

8.0 CONCLUSIONS

Modification of the Phase 9/10 Project to include two additional DCAs (T1A-4 Addition and T10-3a Addition) will convert non-vegetated emissive playa to Brine Shallow Flood dust control on Owens Lake. With the exception of Snowy Plover, no species of special concern exist or have the potential to exist on the additional project area. While the habitat quality is marginal due to the emissive and saline nature of the soil, Snowy Plover have nested in nearby areas in the past. If construction occurs during the nesting season pre-construction surveys would be performed and appropriate buffers to protect the nest placed until the nest is no longer active. Habitat modeling shows no significant change in habitat value for Snowy Plover and the other four guilds considered.

9.0 REFERENCES

Great Basin Unified Air Pollution Control District. 2003 Owens Valley PM10 Planning Area Demonstration of Attainment State Implementation Plan 2003 Revision. Mitigation Monitoring Program. Prepared by Sapphos Environmental, Inc.

Great Basin Unified Air Pollution Control District. 2008 Owens Valley PM10 Planning Area Demonstration of Attainment State Implementation Plan. Final Subsequent Environmental Impact Report. Volume III. SCH No. 2007021127. 115 pp. Prepared by Sapphos Environmental, Inc.

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LADWP. 2020. Owens Lake Dust Mitigation Program 2019 Lakewide Avian Surveys and Habitat Value Report. Prepared by Watershed Resources Management Section, Los Angeles Department of Water and Power. April 2020

Roberts, L. J., R. D. Burnett, W. D. Shuford, and G. W. Page. 2016. Owens Lake Habitat Suitability Model Validation and Refinements. Final Report to the Los Angeles Department of Water and Power. Contribution No. 2076 of Point Blue Conservation Science, Petaluma, CA.

Ruhlen, T. D., G. W. Page, and L. E. Stenzel. 2006. Effects of a changing environment on nesting Snowy Plovers at Owens Lake, California. Western Birds 37:126–138.

10.0 APPENDICES

1. CNDDB List

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Lone Pine (3611851) OR Dolomite (3611758) OR Cerro Gordo Peak (3611757) OR Bartlett (3611841) OR Owens Lake (3611748) OR Keeler (3611747) OR Olancha (3611831) OR Vermillion Canyon (3611738) OR Centennial Canyon (3611737) OR Haiwee Pass (3611821) OR Haiwee Reservoirs (3611728) OR Upper Centennial Flat (3611727))
 AND (Federal Listing Status IS (Endangered OR Threatened OR Proposed Endangered OR Proposed Threatened OR Candidate) OR State Listing Status IS (Endangered OR Threatened OR Rare OR Candidate Endangered OR Candidate Threatened))
 AND Elevation IS less than OR equal to "5000"

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
Charadrius nivosus nivosus western snowy plover	ABNNB03031	Threatened	None	G3T3	S2	SSC
Cyprinodon radiosus Owens pupfish	AFCNB02090	Endangered	Endangered	G1	S1	FP
Deinandra mohavensis Mojave tarplant	PDAST4R0K0	None	Endangered	G2	S3	1B.3
Gopherus agassizii desert tortoise	ARAAF01012	Threatened	Threatened	G3	S2S3	
Rana sierrae Sierra Nevada yellow-legged frog	AAABH01340	Endangered	Threatened	G1	S1	WL
Sidalcea covillei Owens Valley checkerbloom	PDMAL11040	None	Endangered	G2	S2	1B.1
Siphateles bicolor snyderi Owens tui chub	AFCJB1303J	Endangered	Endangered	G4T1	S1	
Vireo bellii pusillus least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S2	
Xerospermophilus mohavensis Mohave ground squirrel	AMAFB05150	None	Threatened	G2G3	S2S3	

Record Count: 10

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2. CNPS List

Inventory of Rare and Endangered Plants of California

CALIFORNIA NATIVE PLANT SOCIETY

Search Results

1 matches found. Click on scientific name for details

Search Criteria: CRPR is one of [1A:1B:2A:2B] , 9-Quad include [3611748:3611738], Elevation below 5000 feet

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
Sidalcea covillei	Owens Valley checkerbloom	Malvaceae	perennial herb	Apr-Jun	None	CE	G2	S2	1B.1	No Photo Available

Showing 1 to 1 of 1 entries

Suggested Citation:
California Native Plant Society, Rare Plant Program. 2021. Inventory of Rare and Endangered Plants of California (online edition, v9-01 1.0).
Website https://www.rareplants.cnps.org [accessed 23 November 2021].

Exhibit E: Substituted Mitigation Measure CR-3

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
CR-3	Installation of Project facilities could result in disturbance of unknown cultural resources.	**Cultural Resources Construction Monitoring Program**. Impacts to surface and subsurface cultural resources not previously identified shall be mitigated through preparation of a cultural resources monitoring program and its implementation during construction or other ground-disturbing activities. The Cultural Resources Construction Monitoring Program shall include: • The retention of a qualified archaeologist to implement a monitoring and recovery program. The "qualified archaeologist" shall meet the U. S. Secretary of the Interior's Historic Preservation Professional Qualification Standards for Archaeology. • The Lone Pine Paiute-Shoshone tribe shall be contacted prior to the start of Project construction. Qualified Lone Pine Paiute-Shoshone cultural resources monitors shall be afforded an opportunity to be present during earthwork and excavation activities associated with construction of the Phase 9/10 Project. • The qualified archaeologist or LADWP shall be required to secure a written agreement with the Lone Pine Paiute Shoshone Reservation repository ~~a recognized museum repository, such as the University of California, Riverside~~, regarding the final disposition and permanent storage and maintenance of any ~~unique~~ archaeological resources or historical resources recovered as a result of the archaeological monitoring, as well as corresponding geographic site data that might be recovered as a result of the		LADWP			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		treatment (i.e., preparation, identification, curation, cataloging, etc.) required before the collection would be accepted for storage. • The qualified archaeologist shall provide cultural resources awareness training prior to the start of construction for all construction personnel. Construction personnel shall be briefed on procedures to be followed in the event that a unique archaeological resource, historical era building or structure, or human remains are encountered during construction. A training log shall be kept on-site throughout the construction period. The qualified archaeologist will also prepare and distribute informative Fact Sheets regarding archaeological and Native American sensitivities that provide samples of possible finds and procedures to be followed in the event of a discovery. The Fact Sheet will also have relevant contact information for the archaeologist, including a telephone number where they can be reached by the construction contractor, as necessary. • The qualified archaeologist shall monitor ground-disturbing activities, including trenching, grading, and other earth-moving activities in each of the Phase 9/10 Project DCAs, including C2-L1, Duck Pond-L1 (including an access road), T10-1-L1 (including an access road), T17-2-L1, T21-L1, T21-L2, T32-1-L1, T35-2-L1, T37-1-L1, T37-2-L1, T37-2-L2, T37-2-L3, T37-2-L4, Duck Pond-L2, T10-3-L1, T21-L3, and T21-L4. In T18S DCA, which was previously disturbed by shallow flooding, the qualified					

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		archaeologist will determine monitoring locations and frequency. Monitors will move among construction locations as directed by LADWP in consultation with the cultural resources manager and the construction contractor. Backfilling and removal of previously constructed berms composed of previously disturbed soils generally will not require monitoring. In those areas, it will be up to the discretion of the archaeological monitor to determine which areas will require monitoring and how frequently. The archaeologist will consult with LADWP and LADWP will halt work briefly in a single location as necessary to examine soils and possible archaeological features. The archaeologist shall coordinate with the construction manager to divert work around the discovery of any potentially significant archaeological resource, if any are encountered. In the event of a cultural resources discovery, avoidance measures such as staking a 100-foot buffer (or in case of human remains, steel plating) will be used to prohibit or otherwise restrict access to sensitive areas until a qualified archaeologist can assess the significance of the find according to CRHR criteria. If the resource is determined to be significant, the qualified archaeologist shall prepare and implement a treatment plan in consultation with LADWP. Construction will not recommence in the area until authorized to do so by LADWP. If significant historic era buildings or structures are newly identified during construction activities, then Historic					

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		American Buildings Survey/Historic American Engineering Record (HABS/HAER) documentation would be prepared to reduce impacts below a level of significance. Under the Avoidance Alternative to the proposed Project, the treatment plan for newly discovered significant archaeological resources will describe avoidance/preservation in place. If the Avoidance Alternative is not adopted, and the proposed Project for the entire 3.61 square miles of dust control is adopted by LADWP, and if avoidance of newly discovered significant archaeological resources is deemed infeasible, a data recovery plan shall be implemented for the resources and the impact on archaeological resources would be significant with mitigation. • If construction personnel discover a cultural resource in the absence of an archaeological monitor, construction shall be halted within 100 feet of the find, and a qualified archaeologist shall be contacted to perform Phase II excavations to evaluate the resource and recommend the appropriate treatment. If the resource is determined to be significant, the qualified archaeologist shall prepare and implement a treatment plan in consultation with LADWP. Construction will not recommence in the area until authorized by LADWP. • The qualified archaeologist shall ensure that all construction personnel are informed of the requirements to notify the Inyo County					

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		coroner within 24 hours of the discovery of human remains on state lands (as required by Public Resources Code 5097). • The coordinates of artifacts, features, and sites will be obtained by the archaeologist, and <u>any</u> artifacts ~~from ineligible sites and isolated artifacts~~ discovered during construction will be collected, cataloged, and placed in a dry and secure temporary storage area until the end of the Project, when they will be given to the CSLC for dissemination to the Lone Pine Paiute-Shoshone Reservation. ~~Any artifacts that may be collected from CRHR-eligible sites will be curated at the repository at University of California, Riverside.~~ • The qualified archaeologist shall maintain daily monitoring logs during ground-disturbing activities that shall be submitted weekly to LADWP. A complete set of the daily monitoring logs shall be kept on site throughout the ground-disturbing activities and be available for inspection. The daily monitoring log shall indicate the area monitored, the date, assigned personnel including tribal representatives, and the results of monitoring, including the recovery of archaeological resources, sketches of recovered materials, photographic record, and associated geographic site data. In addition, progress reports that describe new discoveries and issues in the field shall be submitted weekly to LADWP. Within 120 days of the completion of the archaeological monitoring, a monitoring report shall be submitted to LADWP, CSLC, and to the EIC at the University of California, Riverside.					

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		The report, when submitted to LADWP, shall signify the completion of the program to mitigate impacts to unique archaeological resources or historical resources. • An Unanticipated Discovery Evaluation Protocol shall be developed by the qualified archaeologist. Prior to the evaluation of any newly discovered resources on state lands, the CSLC shall be afforded an opportunity to comment on the research design, including research questions and evaluation methodologies, included in the Unanticipated Discovery Evaluation Protocol. Prior to evaluation of any newly discovered resources on federal lands, the BLM shall be afforded an opportunity to comment on the Unanticipated Discovery Evaluation Protocol.					