

**CALENDAR ITEM  
INFORMATIONAL  
82**

A	34	02/09/16 W 26428 G. Kato
S	17	D. Simpkin

**INFORMATIONAL UPDATE ON THE OWENS LAKE MASTER PROJECT,  
OWENS LAKE, INYO COUNTY**

**INTRODUCTION:**

The purpose of this staff report is to update the Commission on activities involving Owens Lake, including the Owens Lake Master Project (Master Project), current and potential future dust control projects, and the status of the Phase 7a and Phase 9/10 dust control projects.

**BACKGROUND:**

Owens Lake (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. The Lake covered approximately 110 square miles and was 50 feet deep in places. Wildlife, waterfowl, and the nearby residents depended on and benefited from the Lake. Early settlers diverted water from the Owens River to grow crops and irrigate pasture for livestock, and steamboats carried cargo across the lake. The Lake was an important feeding and resting stop for millions of waterfowl each year.

Beginning in 1913, the City of Los Angeles Department of Water and Power (City) began diverting water from the Lake and transporting the water southwest to Los Angeles through a City-constructed aqueduct system. The Lake level rapidly declined and, by the mid-1920s, the Lake was essentially dry. Since then, dust storms have carried away as much as four million tons (3.6 million metric tons) of dust from the lakebed each year, causing respiratory problems for residents in the Owens Valley.

In 1987, the U.S. Environmental Protection Agency (U.S. EPA) established new ambient air quality standard for "Particulate Matter 10" (PM<sub>10</sub>)<sup>1</sup> and identified

---

<sup>1</sup> An abbreviated reference for suspended particulate matter (dust) less than or equal to ten microns in mean aerodynamic diameter (approximately 1/10 the diameter of a human hair).

CALENDAR ITEM NO. 82 (CONT'D)

portions of the Owens Valley as being in violation. The U.S. EPA designated the southern part of the Owens Valley as a Serious Non-Attainment Area for PM<sub>10</sub>. The Great Basin Unified Air Pollution Control District (District) subsequently designated the Non-Attainment area as the "Owens Valley PM<sub>10</sub> Planning Area." The District has determined that water diversions by the City have caused the Lake to become dry and the lakebed to be in a condition that produces dust and that these dust emissions from the dry lakebed are responsible for causing the air in the Owens Valley PM<sub>10</sub> Planning Area to exceed the PM<sub>10</sub> national ambient air quality standards.

After extensive legal challenges by the City concerning the Phase 9/10 dust control areas, the Sacramento Superior Court approved a stipulated judgment on December 30, 2014. Pursuant to the Stipulated Judgment the City will mitigate the Phase 9/10 areas and up to an additional 4.8 square miles if required by the District. The District has approved three best available control measures (BACM) proven to mitigate the emissions. These are shallow flooding, managed vegetation, and gravel cover. In addition, the City may also use a modified form of dust control known as tillage with BACM backup. This method allows tilling an area of the lakebed and then re-wetting it periodically when the tilled area becomes emissive. Neither the Commission nor the California Department of Fish and Wildlife are a party to the Stipulated Judgment, and are, therefore not bound by it.

Currently, much of the Lake is under lease from the Commission to the City to facilitate the implementation of BACM to mitigate dust emissions. The existing lease, including 16 amendments, is scheduled to expire in 2019.

The breakdown of the dust control measures currently being implemented on Owens Lake is as follows:

- 33.8 square miles of Shallow Flooding;
- 5.58 square miles of Managed Vegetation;
- 3.23 square miles of Gravel Cover;
- 2.32 square miles of Tillage with BACM Backup;
- 0.30 square miles of Sand Fencing.

**THE PUBLIC TRUST DOCTRINE:**

As the Legislature's delegated trustee over the State's sovereign lands and resources at the Lake, the State Lands Commission has the responsibility to manage the dry lakebed in the best interests of the State and consistent with the common law public trust doctrine, taking care to protect the identified public trust resources and values. Water diversions have eliminated many of the public trust resources at the Lake. However, since the City began implementing dust control measures with shallow flooding and managed vegetation, the bird population of

CALENDAR ITEM NO. 82 (CONT'D)

the Lake has increased significantly. The identified public trust resources at the Lake include wildlife habitat, public access, recreation, and aesthetic enjoyment, among others.

The Commission exercises its discretionary authority over the management of the lakebed by taking into account all relevant factors in determining whether a proposed project is consistent with and further promotes the public trust resources and values on the lakebed and is in the State's best interests. This effort requires the Commission to carefully balance the public trust resources the Commission is entrusted to protect and the responsibility of the City to control dust emissions consistent with federal and state air quality laws. Each time the Commission considers a project at the Lake, it is exercising its authority and responsibility as trustee of the State's public trust lands as authorized by law. (Public Resources Code sections 6005, 6216, and 6301; California Code of Regulations, title 2, section 2000, subdivision (b).)

**STATUS OF THE MASTER PROJECT:**

The City currently operates the Owens Lake Dust Mitigation Program to reduce dust in the Owens Valley to meet state and federal air quality standards. Under the existing program, the City has historically relied on shallow flooding as the primary tool for controlling dust. According to the City, it has used as much as 80,500 acre-feet of water in a year for shallow flooding. The Master Plan concept was introduced in the Eighth Amendment to the Lease, approved by the Commission at its December 2009 meeting, to comprehensively manage the lakebed for dust control, water conservation, and habitat maintenance. It was anticipated that completion and approval of the lake-wide "Master Plan" would facilitate issuance of a master lease to replace Lease No. PRC 8079.9 and its numerous amendments, and allow for a more effective, efficient, and consistent approach to the Lake's management by the City. In December 2011, a draft Master Plan document was completed and circulated for review by the agencies, tribes, environmental organizations, and other stakeholders comprising the Planning Committee for the Master Plan effort. The draft Master Plan included a Habitat Suitability Model (HSM) developed for the Lake that included various physical parameters that could be objectively measured as a means of predicting and monitoring habitat suitability and ensuring maintenance of wildlife habitat and use on the Lake.

In April 2013, the City sought and received approval from its Board of Water and Power Commissioners to initiate a new lake-wide dust control project that would carry the work of the Master Plan forward, but better meet the City's particular needs and constraints as the entity implementing dust control on the Lake; this effort is known as the Master Project. As a result of this new project effort, the Master Plan collaboration was terminated and a new stakeholder group, the

CALENDAR ITEM NO. 82 (CONT'D)

Advisory Committee, was formed to assist the City in developing the Master Project.

The Master Project for the Lake raises issues and involves various competing interests. The District is responsible for enforcing dust suppression on the Lake to accomplish State and federal air quality standards in the Owens Valley. The City has a responsibility to secure a reliable water supply for its customers. The Commission must ensure that the remaining public trust resources on the Lake, including bird habitat, are preserved and protected. Additionally, all of the involved parties have a responsibility to culturally-affiliated tribes to ensure that any cultural resources on the Lake are protected according to law and treated with respect.

The goals of the Owens Lake Master Project include: controlling dust to obtain good air quality and reduce the dust-related risk to public health; protecting, creating, and enhancing habitat; protecting cultural resources, including Native American heritage sites; promoting area-wide economic development, including tourism and public use of Owens Lake; exploring opportunities for renewable energy development; creating a flexible adaptive management plan that allows future alterations in response to changing conditions in the Owens Valley and statewide; and, reducing the total lake-wide water use by at least 50% through the strategic use of waterless or water efficient control measures and groundwater under Owens Lake for dust control.

The City has issued a notice of preparation for the environmental impact report (EIR) for the Master Project and is holding regular Master Project Advisory Committee meetings. Commission staff provided comments on the notice of preparation and is participating in the Advisory Committee meetings. The City anticipates that the Draft EIR will be circulated in the fall of 2016 and that the Final EIR will be presented to the City for certification in early 2017.

Since the current lease will soon expire on April 30, 2019 and the Master Project will likely require additional authorizations from the Commission, Commission staff anticipates working with the City to negotiate a new lease in the near future.

**CURRENT AND POTENTIAL FUTURE DUST CONTROL:**

In addition to the three standard BACM approved by the District, the City is permitted to use tillage with BACM backup and implement soil roughness elements, rendering it more resistant to wind erosion. The City and the District are currently in discussions to implement a brine study as another alternative to control dust on the lakebed.

## CALENDAR ITEM NO. 82 (CONT'D)

Pursuant to the Stipulated Judgment, the City is required to complete a total of 48.6 square miles of dust control on the lakebed. At any time after January 1, 2016, the District may order the City to implement up to an additional 4.8 square miles of dust control to provide emission reductions necessary to meet the National Ambient Air Quality Standards. Any additional areas would require authorization by the Commission to be included in the lease.

### **STATUS OF PHASE 7a AND PHASE 9/10 DUST CONTROL:**

Phase 7a was authorized by the Commission on September 20, 2013 to allow 3.1 square miles of new BACM in 6 areas and transition of 3.4 square miles of shallow flood to other BACM. Phase 7a utilized a combination of shallow flooding, managed vegetation, and gravel cover, as well as a tillage test area. In addition to the dust control measures, and in partial fulfillment of lease requirements, the City proposed a mix of public amenities, including a visitor outlook, a boardwalk loop trail, and elevated boardwalk with three overlook plaza features. Based on a review of Commission records, the City is in substantial compliance with the major habitat related mitigation measures. The dust control components of Phase 7a were completed on December 31, 2015. The public access components of Phase 7a are anticipated to be completed March 31, 2016. Staff anticipates receipt of final as-built construction plans and compliance and monitoring reports in June 2016.

Tillage with BACM backup was authorized between the authorizations for Phase 7a and Phase 9/10. The total area to be tilled was 4.09 square miles. Currently 2.32 square miles has been tilled, with 1.03 square miles remaining.

Phase 9/10 was authorized by the Commission on August 19, 2015 and includes 3.6 square miles of dust control. The Commission did not authorize the transition of cell T-18S from shallow flood to a combination of shallow flood and gravel, pending the validation of the Habitat Suitability Model. T-18S is one of the largest dust control areas and has one of the highest bird species richness and abundance rankings on the Lake, with a reported fall average of around 43 different species and total abundance numbers around 10,500 individual birds. The Commission supported the staff's recommendation that the potential loss of this public trust resource outweighed the potential water savings from the transition of T-18S from shallow flooding to a combination of shallow flooding and gravel. Since development of the HSM, data has been collected annually on both the physical parameters used in the model as well as on actual bird use of each cell. This data is being reviewed by Point Blue, the City's environmental consultant, as a means of evaluating the HSM and potentially revising it to improve its reliability in predicting habitat health. Point Blue is scheduled to have a final report out by March 1, 2016. If the City intends to transition T-18S following the outcome of the report, it will need to submit an application for a

CALENDAR ITEM NO. **82** (CONT'D)

lease amendment for Commission consideration. In addition, the Commission authorized a deposit of \$700,000 into the Kapiloff Land Bank Fund for the loss of potential enhancement of public trust values on the 2.83 square miles of Owens Lake to be covered by gravel. The Notice to Proceed for the construction of the Phase 9/10 project was issued on January 28, 2016. The Stipulated Judgment requires the City to complete Phase 9/10 by December 31, 2017.