CALENDAR ITEM
53

A	34	04/06/10
		PRC 8079.9
S	17	C. Connor

CONSIDER APPLICATION FOR
AMENDMENT OF A GENERAL LEASE – PUBLIC AGENCY USE

LESSEE:

City of Los Angeles, Department of Water and Power
William Van Wagoner
111 North Hope Street, Room 1460
Los Angeles, CA 90012

AREA, LAND TYPE, AND LOCATION:

Sovereign lands in Owens Lake, Inyo County.

AUTHORIZED USE:

Research and monitoring at the South Sand Sheet, implementation of shallow flooding and monitoring at the North Sand Sheet, and the construction and operation of the South Zone Dust Control Project. Construction, installation, operation, and monitoring of shallow flooding dust control measures (DCMs) associated with Phases IV, V, and VII of the Owens Lake Dust Control project. Construction, installation, operation, and monitoring of 0.5 square mile of channel area improvements; and, construction of sand fence and vegetation enhancement in Cell T1A-1, in support of the Phase VII Owens Lake Dust Control Project.

EXISTING IMPROVEMENTS:

The installation of the Owens Lake South Sand Sheet Air Quality and Sand Fence Effectiveness Monitoring System consisting of air monitoring towers, meteorological instrumentation, and sand trapping devices.

Eight Lease Amendments have been executed for construction and maintenance of DCMs on the dry bed of Owens Lake.

LEASE TERM:

20 years, beginning May 1, 1999

CONSIDERATION:

The public health and safety; with the State reserving the right at any time to set a monetary rent if the State Lands Commission (Commission) finds such action to be in the State's best interest.

STAFF SUMMARY AND RECOMMENDATION:

For the reasons set forth in this calendar item, Commission staff again recommends that the Commission find that the proposed application for lease amendment is not in the best interests of the State; disapprove the proposed lease amendment to the City; and deny the City's application for the revised moat and row DCM Project as modified in the Options Analysis.

The following information summarizes the status of the proposed moat and row dust control project beginning in December 2009 when the revised moat and row project was considered for approval. Additional background on moat and row beginning in 2007 is included in the "BACKGROUND" section.

On December 17, 2009, the Commission considered the city of Los Angeles, Department of Water and Power's (City) application to construct moat and row on seven cell areas requiring dust control measures (Calendar Item 41). For the reasons presented to the Commission on December 17, 2009, Commission staff recommended that the Commission find that the proposed application for lease amendment was not in the best interests of the State; disapprove the proposed lease amendment to the City; and deny the City's application for the revised moat and row DCM project.

As a result, the Commission approved sand fences and vegetation enhancement only on Cell T1A-1 so that the City could continue to move forward with dust control compliance work and meet a January 1, 2010, deadline for commencement of construction of the moat and row DCMs set by Great Basin Unified Air Pollution Control District (Great Basin). Several changes to the proposed lease amendment were agreed upon, including a commitment from the City to provide specific mitigation for impacts to biological resources as a result of the lease amendment or until specified in a Master Plan approved by the California Department of Fish and Game and the Commission.

The City was also required to provide a written report to Commission staff by January 31, 2010, detailing the City's progress on the work in Cell T1A-1, on the City's negotiations with Great Basin concerning dust mitigation on Owens Lake, and on the City's progress in developing a solar demonstration project. The Commission requested that staff report back to them at the February meeting on

these matters and any proposed alternative dust control plans for the remaining Phase VII emissive sites previously proposed for moat and row.

Commission staff presented Informational Calendar Item 42 at the February 1, 2010, meeting providing the information requested at the December meeting. The Calendar Item also described next steps, including additional negotiations by the City with Great Basin concerning dust mitigation on Owens Lake, submittal by the City of a lease application for the solar demonstration project, work on the Master Plan, and any other alternatives for the remaining moat and row areas that would minimize environmental Impacts to Owens Lake.

On February 24, 2010, the City submitted its application for the Owens Dry Lake Solar Demonstration and Information Collection Study. City staff has estimated that the CEQA process may be completed in time for this proposal to be heard as early as the August 2010 meeting.

In February 2010, City staff met with Commission staff and presented a modified moat and row design in a document entitled "Moat and Row Options Analysis, February 9, 2010" (Options Analysis, Exhibit C). The City has requested in its letter of March 26th, 2010, that its application be amended to substitute the modified moat and row design shown on p. 2 of the Options Analysis (modified moat and row project) for the previous design. The Options Analysis also presented possible alternatives to moat and row. The moat and row design change and the alternatives are discussed in detail below in the "PROPOSED PROJECT DESCRIPTION" section under "Moat and Row Options Analysis."

During March 2010, the Commission's Executive Officer met with the City's Interim General Manager and attended a Great Basin Board meeting to further explore alternatives to moat and row that would provide dust control on the lakebed without its negative impacts and to support extending the October deadline to allow time to develop other alternatives.

The discretionary action to be taken by the Commission is ultimately a policy decision taking into account all relevant factors, including consistency with the Public Trust, in determining whether the project is in the best interests of the State. Each time the Commission takes action to approve or reject a project it is exercising its authority and responsibility as trustee of the State's public trust lands as authorized by law (Public Resources Code sections 6301 and 6216).

BACKGROUND

One hundred twenty-five years ago, the water of Owens Lake covered 110 square miles and was over 50 feet deep. A steamboat carried cargo across its broad expanse. Early settlers diverted water from the Owens River to grow

crops and irrigate pasture for livestock. Wildlife, waterfowl, and local residents depended on and benefited from Owens Lake. This lake was an important feeding and resting stop for millions of waterfowl each year. After the City began operating the Los Angeles Aqueduct in 1913, the lake level rapidly declined. Within approximately 25 years, only a small brine pool remained of the original 110 square mile lake. Today, dust storms may carry 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.

The United States Environmental Protection Agency (U.S. EPA) has designated the southern part of the Owens Valley as a Serious Non-Attainment Area for PM_{10}. PM_{10} is 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). Great Basin subsequently designated the Non-Attainment area as the "Owens Valley PM_{10} Planning Area."

Great Basin has determined that dust emissions from the dry lakebed of Owens Lake are responsible for causing the air in the Owens Valley PM_{10} Planning Area to exceed the PM_{10} national ambient air quality standards and that water diversions by the City have caused Owens Lake to become dry and the lakebed to be in a condition that produces dust.

In May 2007, the Commission authorized the issuance of a three-year General Lease to the City for a moat and row demonstration project at two locations on Owens Lake for a total of 319 acres. This lease will expire on May 9, 2010.

On August 8, 2007, the City submitted an application to the Commission to amend Lease No. PRC 8079.9 for construction and operation of an additional 9.2 square miles of shallow flooding, 3.5 square miles of the new moat and row DCM, and two access roads on the west shore of the dry bed of Owens Lake. This project was known as Phase VII of the Owens Lake Dust Control Project.

Commission staff expressed concerns both verbally and in writing to the staffs of Great Basin and the City that the moat and row design components of the Phase VII dust control project may not be consistent with the Public Trust needs and values of Owens Lake.

In addition, the City's construction bid package contained revised design elements for the moat and row DCM that were not analyzed in Great Basin's 2008 FEIR certified earlier. The EIR prepared by Great Basin staff included a statement that the DCM designs may not have a significant impact upon wildlife, that spacing of the moat and row dust control units/arrays in the 2008 EIR would be constructed at a minimum spacing of 250 feet apart, and that rows with

sloping sides would not exceed a ratio of 2:1. The new design components that required additional analysis included perpendicular features (grid pattern), instead of the previous sinuous design sand fencing, increased density of moat and row arrays, and increased steepness of slopes among other things.

In a letter to Commission staff dated August 21, 2008, the City withdrew its lease amendment application for the moat and row component of the dust control project to facilitate Commission approval of the shallow flooding. On August 22, 2008, the Commission authorized only the Shallow Flooding components of the City's lease amendment application.

On March 24, 2009, the City submitted a new application to the Commission for consideration of the moat and row dust control project. On August 11, 2009, Commission staff presented an informational report to the Commission (Calendar Item 52) regarding the status of the city's moat and row application, and described the unresolved comments on the Supplemental Environmental Impact Report (SEIR) prepared by the City. At the conclusion of the staff's presentation and public testimony, the Commission Chair directed staff to work with City staff to resolve the concerns with the SEIR as much as possible and requested more information about the advantages and disadvantages of managed vegetation and gravel compared with the moat and row DCM and whether they are feasible in the area proposed for the moat and row DCMs.

On September 15, 2009, the City certified the SEIR, adopted Findings of Fact, a Statement of Overriding Considerations, and a Mitigation Monitoring and Reporting Program. The changes to the SEIR previously requested by Commission staff were not made.

PUBLIC TRUST:

Owens Lake is State sovereign land held in trust for the people of the State under the Public Trust Doctrine. This common law doctrine ensures the public's right to use California's waterways for navigation, fishing, boating, and other water-oriented activities. Preservation of lands in their natural state to protect scenic and wildlife habitat values is also an appropriate Public Trust use (*Marks* v. *Whitney* (1971) 6 Cal.3d 251). Uses that do not protect or promote Public Trust values, are not water dependent or oriented, and exclude rather than facilitate public access and use are not consistent with the trust. The Commission has the responsibility to manage Owens Lake on behalf of the public to protect these rights and values.

CRITERIA FOR COMMISSION REVIEW:

The Commission's authority and conduct is primarily governed by the California Public Resources Code section 6000 et seq., and Title 2, section 1900 et seq., California Code of Regulations.

The Commission's Application Guidelines, General Information and Application Materials Regarding Surface Leasing of State Lands Form, Revised June 6, 2006, Page iv, summarizes the circumstances that may cause the Commission to deny a project. One of the circumstances is the inconsistency with Public Trust restrictions, resources, or values or that the project is not in the best interest of the State as required by Public Resources Code section 6005. The following information is provided to support the staff's recommendation for denial.

PROPOSED PROJECT DESCRIPTION:

The March 24, 2009 application describing the "Owens Lake Revised Moat and Row Dust Control Measures" covers a 3.5 square mile area and may include the elements described below. It should be noted that the design has been modified as shown in Exhibit C, p. 2. Also, because the proposed elements in Cell T1A-1 have been approved, the remaining proposed area is 3.12 square miles.

Moat and Row With Sand Fences: 20.8 miles of earthen berms (rows) five feet high with 1.5:1 side slopes and 4 to 5.5 feet deep. Three inches of base course (crushed rock and soil) would be applied to the tops of the berms to prevent erosion. A moat measuring 17 feet wide across the top and three to five feet wide across the bottom with 1.5:1 side slopes would be constructed on each side of the berm. Sand fences five feet high would be mounted on wooden fence posts measuring eight inches or ten inches square;

Moat and Row without Sand Fences: 42.3 miles of earthen berms five feet high with 1.5:1 side slopes and 4 to 5.5 feet deep. Six inches of base course would be applied to the tops of the berms to prevent erosion. A moat measuring 16 feet across the top and three to five feet wide across the bottom with 1.5:1 side slopes would be constructed on each side of the berm;

Sand Fence Only: 3.8 miles of sand fence five feet high would be installed in area T1A-1 using wooden fence posts measuring eight inches or ten inches square (approved December 17, 2009);

Maintenance Access: up to 190,673 cubic yards of crushed rock would be applied between the moats and rows for maintenance vehicle access to the moats, rows, and fences;

Culvert Crossing: one culvert crossing would be constructed in T37-2 using 14 high density polyethylene (HDPE) culvert pipes measuring 24 inches in diameter and approximately 60 feet long;

Barrier Gate: one galvanized steel barrier gate (cattle guard) measuring 40 feet wide would be installed in T32-1 (The swinging gate is above ground but the posts would be embedded in concrete 4.5 feet below ground. There are two different vehicle barrier gates, each one is 20 feet wide);

Outlets: three outlets would be installed in T1A-1. Each outlet would consist of a HDPE riser, with diameters ranging from eight to 12 inches, surrounded by a 40-foot square area of riprap (approved December 17, 2009);

Riprap Berms: two berms made of riprap, each measuring approximately 1,000 feet long, 1.5 feet high, and 6.5 feet wide would be installed adjacent to T1A-1 and T1A-3 cell areas;

T1A-1 Submains: 2,015 feet of 16-inch, 415 feet of 12-inch, 2,540 feet of 10-inch, and 1,410 feet of eight-inch HDPE submain pipe would be installed along with various valves for control of irrigation water (approved December 17, 2009);

T1A-1 Turnout Facility: a concrete equipment pad measuring 30 feet by six feet by two feet thick would be poured to support various valves (flow control, pressure control, and air release valves), a flow meter, stainless steel piping, and various appurtenances (approved December 17, 2009);

Irrigation Extensions: two irrigation extensions, each 12-inch diameter HDPE pipe approximately 700 feet in length would connect to 12-inch butterfly valves each surrounded by two cubic yards of riprap (approved December 17, 2009);

Temporary Construction Fencing: approximately 2,550 feet of temporary construction sand fencing would be installed at T32-1 and T37-1 prior to start of other construction activities.

Moat and Row Options Analysis

On February 11, 2010, City staff provided the Options Analysis to Commission staff as a discussion tool to explore alternatives that could potentially be implemented to modify or replace moat and row as proposed in the City's March 24, 2009, application.

The Options Analysis presented a modified moat and row design that could be constructed to meet the City's October 2010 compliance deadlines with Great

Basin. The modified moat and row design incorporates a wider, but shallower moat (Exhibit C, p. 2) that is intended to reduce biological impacts, specifically bird entrapment, that could be caused by the deeper moats. The wider, shallower moat replaces the access road situated between the base of the row and the moat in the previous design. One variation of the modified moat and row design does, however, include a narrow ATV track situated between the base of the row and the moat. As with the previous design, sand fences would be placed on top of the row in some areas. As discussed above, the City has amended its application to substitute the modified design presented in the Options Analysis for the design submitted in its March 24, 2009, application.

The Options Analysis briefly describes the site characteristics for each of the seven moat and row dust control areas (cells) and presents possible alternative dust control measures, shallow brine flooding, "seeps and springs" type vegetation/habitat, a "rock garden" variation of gravel cover, and solar arrays. Following is a summary of the possible options by cell:

Cell	**Acres**	**Current Proposal**	**Options**
T1A-1	245	3.8 miles of sand fence & pipeline to enhance vegetation growth in area.	Expand pipeline network to further develop vegetation growth and seeps & springs type vegetation/ habitat, eliminating the need for sand fences.
T1A-3	503	13 miles of moat & row, of which 2.9 miles would have sand fence.	1) moat & row would make site solar ready. 2) shallow brine flooding
T1A-4	616	22.2 miles of moat & row, of which 1.8 miles would have sand fence. Site proposed for 80-acre solar demonstration project.	1) moat & row would make site solar ready. 2) shallow brine flooding
T12-1	220	5.3 miles of moat & row, all of which would have sand fence.	1) moat & row would make site solar ready. 2) modified gravel (rock garden)
T32-1	104	1.1 miles of moat & row	1) moat & row 2) add habitat pond at north end and install irrigation system to promote growth of native vegetation on and in between moat & row.
T37-1	137	6.6 miles of moat & row, of which 1.7 miles would have sand fence.	Modified gravel (rock garden) to make it solar ready
T37-2	378	10.7 miles of moat & row, of which 5.1 miles would have sand fence.	Seeps & springs vegetation in western portion and shallow brine flooding in eastern portion

Shallow brine flooding is a variation on the shallow flooding BACM[1]. In existing shallow flood areas, water from the Owens River is pumped to areas enclosed by berms. The shallow flooding ranges from a few inches up to two feet deep, depending on topography. The water keeps the dust down and provides habitat for birds. With shallow brine flooding, the rows from the moat and row construction would serve as the containment berms into which brine water from the brine pool in the center of the lakebed, or a mixture of brine water and river water, would be pumped. Because of the salt content, the brine water evaporates at a much slower rate thereby reducing the use and loss of river water and extending the dust control period.

The drawbacks to this option are that the brine can leach into and damage or kill nearby managed vegetation areas and that the brine does not create habitat. The City does not believe additional approval from Great Basin would be needed for this option, but approval would likely be required from the California Department of Fish and Game (DFG).

The "seeps and springs" type of vegetation/habitat is a variation on the managed vegetation BACM. In this dust control measure, vegetation is irrigated but allowed to grow in more natural patterns than the more uniformly planted managed vegetation. Great Basin approval may be required to determine if this option meets the required dust control efficiency.

The "rock garden" is a variation of the gravel cover BACM. This option differs from traditional gravel cover by introducing rocks and boulders of different sizes placed at random to present a more natural setting. The City does not believe any additional approvals are needed from Great Basin for this dust control measure. Commission staff has, however, advised City staff on prior occasions that gravel is not considered consistent with Public Trust values for Owens Lake.

The solar option envisions arrays being placed within existing moat and row areas. The rows would act as the initial windbreaks. The interior of the moat and row area would be developed with the solar arrays. A layer of gravel would be added between and around the solar arrays to control dust within the array area. A solar demonstration project is currently proposed for 80 acres within Cell T1A-4. This option would require additional CEQA analysis and other regulatory approvals. Commission staff has unresolved concerns about the use of gravel to augment the solar arrays.

City staff has informed Commission staff that of the various options discussed in the Options Analysis, only the revised moat and row could be constructed and in

[1] Best Available Control Measure, one of three dust control measures approved by the Great Basin Unified Air Pollution Control District. The other two BACMs are managed vegetation and gravel.

place by October 2010 to meet the City's compliance deadline with Great Basin. There are unresolved issues with the other options (shallow brine flooding, "seeps and springs" type vegetation/habitat, "rock garden" variation of gravel cover, and solar) that preclude their use by the October 2010 compliance deadline. The issues include the possible need for additional CEQA analysis, pilot testing/modeling, construction of additional infrastructure (e.g., irrigation piping, substantial grading, access roads, electrical transmission lines), potential impacts to U.S. Borax mining operations, and regulatory approvals (i.e., Great Basin, DFG).

An additional issue is the City's contention that the use of additional water for any options would need to be offset by a reduction in water usage elsewhere on the Lake.

DESCRIPTION OF ISSUES

Public Trust: Public Trust uses at Owens Lake include public access, recreation, wildlife habitat, and aesthetic enjoyment among others. The proposed moat and row Project, as designed, will not enhance but rather diminish these Public Trust values. For years, the City has been diverting water from Owens Lake, which has forever changed and almost eliminated the Public Trust resources at Owens Lake. However, since the City began implementing DCMs at Owens Lake with shallow flooding and managed vegetation, the bird population of the Lake has increased tremendously. As the City is required to control the dust at Owens Lake in perpetuity, the impacts from moat and row to the public trust could be permanent.

After implementation of the shallow flooding and managed vegetation measures, Owens Lake has become a nationally significant Important Bird Area (IBA) as designated by the National Audubon Society and a significant bird migratory stopover. The Lake was designated as an IBA due to the thousands of shorebirds that migrate through each fall and spring between the Arctic and Central and South America and because of the large numbers of snowy plovers that nest there. Additionally, several thousand snow geese and ducks winter at the Lake.

Public access has already been restricted by existing DCMs. The City has posted signs at the public road access points to Owens Lake indicating that all visitors must contact the City before entering the area. Vehicles are subject to low speed limits and must remain on existing roadways. Staff believes that the public use and enjoyment of Owens Lake will likely be further restricted if the moat and row project is approved. Recreational uses on the lake include hiking,

sightseeing, bird watching, seasonal hunting (with posted limitations), and access by horseback riding.

Biologically, the moat and row area would consist of an inhospitable environment that would impede wildlife movement and possibly entrap birds and animals in the moats. The California Department of Fish and Game (DFG) advised Commission staff that they agree with this assessment. While the modified moat and row design might lessen the impact for entrapment and mortality of birds and animals, it would still impede the movement of wildlife.

Lastly, the modified moat and row design would be aesthetically offensive as viewed from the lake bed and would further obstruct and degrade the public's view of the scenic Owens Lake valley due to the density, height, and length of the structures (five-foot high fences on top of five-foot high rows extending 20.8 miles). The extensive grid pattern would have an industrial appearance, out of character with the surrounding natural environment. It is also likely that the moat and row DCMs, if approved, would be visible from a great distance away, degrading the view of the open valley.

The City has stated its belief that the project is consistent with the Public Trust apparently based on the false assumption that the beneficial use of water for domestic and agricultural uses under the California Water Code constitutes compliance with the Public Trust. This is not correct. The Public Trust deals with publicly beneficial uses that depend on the *interrelationship* between land and water and does not address the use of water that is separated from the land. Public Trust needs require water – habitat for wildlife, waterfowl, open space, navigation, fishing, commerce, and for public uses such as wildlife viewing and bird watching.

In contradistinction to the City's assertions, the California Supreme Court concluded in *National Audubon Society* v. *Superior Court of Alpine County* that the Public Trust Doctrine is not subsumed in the California water rights system, instead "the public trust doctrine and the appropriative water rights system are parts of an integrated system of water law. The public trust doctrine serves the function in that integrated system of preserving the continuing sovereign power of the state to protect public trust uses, a power which precludes anyone from acquiring a vested right to harm the public trust, and imposes a continuing duty on the State to take such uses into account in allocating water resources." (*National Audubon Society* v. *Superior Court of Alpine County* (1983) 33 Cal.3d 419, 452.)

For the reasons stated above, staff recommends that the moat and row project as proposed is inconsistent with the Public Trust needs, resources, and values of Owens Lake.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA):

A Subsequent EIR and Mitigation Monitoring Program (SCH# 2007021127) were prepared and certified on January 28, 2008, for the Phase VII project, including moat and row, by the Great Basin. Commission staff reviewed the document and Mitigation Monitoring Program adopted by the Great Basin. Due to changes in the design, as described above, a Supplemental EIR (SCH# 2008121074) was prepared and certified by the City on September 15, 2009, for the revised moat and row DCM project. The California State Lands Commission staff has reviewed such document and Mitigation Monitoring Program adopted by the City.

Commission staff provided comments on the Notice of Preparation for the SEIR to the City and throughout the CEQA process for the Owens Lake Revised Moat and Row Dust Control Measures Project. In a letter dated July 22, 2009, Commission staff provided comments on the DSEIR to the City. After review of the FSEIR, released September 8, 2009, the Commission's staff was concerned that the City's staff had not responded sufficiently to the major concerns of proposed biological entrapment, proposed aesthetic impacts as viewed from the lakebed, and proposed air quality impacts from maintenance required on the many miles of proposed moats. In support of this position, the Commission's staff sent an 11-page letter to City staff dated September 14, 2009. The three areas of concern are biological resources, aesthetic impacts, and air quality.

Substantive Unresolved Environmental Issues:

Commission staff continues to believe that there are significant impacts to public trust values including wildlife and visual resources that are not acknowledged by the City. Additionally, impacts to GHG emissions from equipment (air quality) used to construct and maintain the project, while recognized as significant by the City, are underestimated or unknown because ongoing maintenance needs of the moat and row DCMs are not included in the GHG emissions calculation.

Further detail is provided below or, for an extensive discussion of staff's substantive environmental concerns as well as CEQA procedural concerns, please refer to the Informational Calendar Item prepared for the August 11, 2009, Commission meeting, available online at http://archives.slc.ca.gov/Meeting_Summaries/2009_Documents/08-11-09/ITEMS_AND_EXHIBITS/52.pdf).

Biological Resources: Staff continues to have concerns with the adaptive management proposed in mitigation measure 3.1-12. The wording in the mitigation measures states "to the maximum extent feasible without substantially compromising overall dust control effectiveness," suggesting that there is a question of the feasibility of those mitigation measures. The SEIR should have determined the feasibility of the mitigation measures that were proposed.

Visual Resources Impacts: The FSEIR concluded that the visual impact for the moat and row project would be less than the visual impacts for managed vegetation, even though the ten-foot height of the moat and row elements (a five-foot high row topped with a five-foot high fence) is inconsistent with the natural setting of the Lake bed, whereas the managed vegetation would be no more than two feet in height and would resemble natural native vegetation.

Greenhouse Gas Emissions (GHG): The City has not provided the Operation and Management component of the GHG emissions analysis as requested in a meeting with City staff on August 26, 2009, and in Commission staff's September 9, 2009, letter.

COMPARISON OF SHALLOW FLOODING, MANAGED VEGETATION, AND GRAVEL COVER WITH MOAT AND ROW:

The three alternatives analyzed in the previous subsequent EIR and the supplemental EIR were shallow flooding, managed vegetation and gravel cover. A brief comparison follows.

Shallow Flooding (fresh water)
Benefits of Shallow Flooding:

- Provides wildlife habitat
- Visually similar to historic lake
- Meets Great Basin requirements for dust control efficiencies

Significant Impacts from Shallow Flooding:

- GHG emissions from construction equipment and associated activities. Impact would be less than gravel cover and greater than managed vegetation.

Less than Significant Impacts with Mitigation:

- Archaeological and historical resources. Similar to gravel cover and more than managed vegetation.
- Hazards and hazardous materials. Reduced use and generation of chemicals. Impact would be less than gravel and managed vegetation.
- Utilities and services. This option requires installation of more infrastructure than gravel or managed vegetation.

Managed Vegetation: Commission staff believes that managed vegetation should be preferred to moat and row because it is an approved BACM that is consistent with the Public Trust needs and values of Owens Lake. The FSEIR indicates that because managed vegetation requires water to be initially successful, this alternative is not feasible; however, the City did not evaluate more efficient use of the existing water supply for approved deep flood and shallow flooding areas that could be economized for managed vegetation uses in additional dust control areas.

DFG and the Great Basin have indicated that there is the potential to convert some existing deep flood areas to shallow flood and to more efficiently utilize and manage water on existing shallow flood areas. The resultant water savings could be used to create the development of additional shallow flood and/or managed vegetation areas. The City, in a recent document titled "Draft Owens Lake Habitat Management Plan", pages 23-30, outlines various water conservation practices that are expected to result in the use of less water per acre in shallow flood areas.

Benefits of Managed Vegetation:

- Requires about one-fourth to one-third of the amount of water as Shallow Flooding (2008 FEIR). Once the target cover of 50 percent is attained, saltgrass stands can be sustained at or above this level of cover with 1.0 to 1.3 acre-feet per year (2008 FEIR).
- Provides wildlife habitat. Evidence of use by birds, rabbits, mice, kangaroo rats, gophers, foxes, coyotes, and a diverse group of invertebrates has been found on saltgrass test plots established by the Great Basin on the playa (pp. 5-13; 2008 FEIR).
- Visually similar to native shoreline vegetation as native species are used.
- Meets Great Basin requirements for dust control efficiencies.

Significant Impacts from Managed Vegetation:

- None

Less than Significant Impacts with Mitigation:

- Irrigation, fertigation, and subsurface drainage would likely be required
- Cultural Resources
- Air Quality; GHG emissions from construction, maintenance, and criteria pollutants

Additional:

- There is a period of time (up to several years) required to establish vegetation and may not be suited to some soil conditions.
- Native vegetation is not commercially available in the large quantities needed.

- Project operation and maintenance would occur year-round. Facility maintenance would include changing valves, pipeline sections, pumps, and electronic components.
- Net contribution of operational impacts to GHG emissions were not evaluated as it is very likely the net CO_2 contribution would be much less than associated with the construction phase of the proposed project. However, mitigation measure Air-6 addresses and reduces operational related GHG emissions (2008 FEIR).
- Native drought and salt-tolerant vegetation would be used.

Gravel Cover: The impacts associated with moat and row compared with gravel cover are different. Gravel does not pose an entrapment potential to wildlife or act as a physical barrier to wildlife movement, and it does not block or restrict the viewshed as does moat and row. However, gravel application as a DCM has never been fully evaluated, with respect to biological impacts, as large-scale gravel application has not been considered consistent with the Public Trust. Gravel would likely increase off-road activity by recreational users, it would not offer a significant habitat value, over time it may require significant maintenance activities as windblown sand accumulates, and it would preclude future vegetative development via natural recruitment or other vegetative development.

Benefits of Gravel Cover:
- Does not require the application of water
- Limited maintenance would be required to preserve the gravel blanket.
- Operation of the Gravel Cover would require an average ongoing maintenance amount of gravel of 7,000 cubic yards per square mile per year (this allows for complete gravel replacement once every 50 years).
- Visually it would be approximately the same color as the existing lake bed (depending on gravel source)
- Would not result in significant impacts to utilities and service systems
- Would potentially enhance the rate of rainfall recharge by reducing soil evaporation rates
- Meets Great Basin requirements for dust control efficiencies

Significant Impacts from Gravel Cover as Previously Evaluated:
- GHG emissions were found to be significant and unavoidable
- Would not be consistent with adopted plans and policies in the proposed project area (Public Trust)
- Archaeological and historical resources, due to construction equipment crushing and displacement of artifacts

Less than Significant Impacts (Would be reduced to less than significant with mitigation):
- Air quality from fugitive dust during construction

- May result in the release of hazardous materials from construction equipment related to gravel hauling and dumping (oil, gas, and/or hydraulic fluid)
- Potential increase in recharge to shallow groundwater from precipitation
- Potential for greater impacts related to transportation and traffic, including increased road damage to related roadways during transport of the higher volumes of gravel.
- Would eliminate habitat but not pose entrapment potential; would require additional habitat set-asides.

Additional:
- Gravel areas would be protected from flood deposits with flood control berms, drainage channels, and desiltation/retention basins.

Benefits of Moat and Row:
- Does not use water
- May control dust; moat and row DCM is still considered experimental

Significant Impacts from Moat & Row:
- GHG emissions from construction equipment and associated activities. Impact would be similar to gravel and greater than shallow flooding and managed vegetation.

Less than Significant Impacts with Mitigation:
- Biological impacts are uncertain and are contingent on an adaptive management plan to reduce them to a level of "less than significant" and are likely greater than all the other DCMs due to obstacles to biological movement and habitat loss.
- Archaeological and historical resources. Similar to gravel cover and shallow flooding and more than managed vegetation.
- Hazards and hazardous materials. The impact would be less than gravel and similar to shallow flooding and managed vegetation.
- Utilities and services. This option requires installation of less infrastructure than shallow flooding and managed vegetation and more than gravel.
- Visual impacts are greater than shallow flooding, managed vegetation, and gravel, due to visual obstruction from the height of the feature (as viewed from the lakebed).

Additional:
- Moat and row provides no habitat value
- Has entrapment potential

SUMMARY OF ENVIRONMENTAL CONCERNS:

The CEQA Process:
Commission staff commented extensively on the SEIR in its capacity as a responsible and trustee agency under CEQA. Commission staff believes that the

SEIR exceeded the scope allowed under CEQA for a Supplemental EIR due to the introduction of new, narrowly-defined project objectives, the addition of significant new information that was not previously known (insufficient water or no water for new DCMs), a new alternatives analysis based on the new narrowly defined project objectives, and changed conclusions from those reached in the 2008 Subsequent EIR certified by the Great Basin.

As a result of these procedural issues and the incomplete analysis in the City's SEIR, two of the three DCMs approved as BACM by the Great Basin were determined infeasible by the City. These include shallow flooding and managed vegetation. Staff believes these conclusions overreached what is allowed in a Supplemental EIR and are not supported by the inadequate water supply analysis provided in the SEIR. For example, the City is investigating the possibility of using groundwater for DCMs.

In addition, the City has recently signed a Memorandum of Understanding (MOU) with NASA's Jet Propulsion Laboratory and the California Institute of Technology to develop instruments that would measure the lakebed's surface moisture and increase efficiency of water application. Furthermore, since the third DCM approved by Great Basin as BACM is gravel, and gravel was found infeasible for large-scale application by Great Basin in its 2008 Subsequent EIR, it is unknown what DCM would or could be used to replace the moat and row DCM if it proves unsuccessful.

If moat and row does prove successful as a DCM, it could be argued to have set a precedent for other areas at Owens Lake. The City's 2009 budget document (page 88), the 2008 FSEIR (page 2-15) and City staff comments made after the June 25, 2009, public meeting in Lone Pine, indicate that moat and row has the potential to be used to replace existing DCMs that use water such as shallow flooding and managed vegetation.

APPROVALS OBTAINED:

Great Basin Unified Air Pollution Control District
City of Los Angeles, Department of Water and Power

FURTHER APPROVALS REQUIRED:

California Department of Fish and Game
California Regional Water Quality Control Board

EXHIBITS:

A. Site/Location Map
B. Land Description
C. Moat and Row Options Analysis, dated February 9, 2010

RECOMMENDED ACTION:

IT IS RECOMMENDED THAT THE COMMISSION:

Find and determine that the proposal to lease State-owned land in Owens Lake for the purpose of constructing the modified moat and row dust control measures is inconsistent with Public Trust needs and is not in the State's best interests; and deny approval of a lease amendment for State-owned lands in Owens Lake for the purpose of constructing 3.12 square miles of modified moat and row dust control measures; by the City of Los Angeles, Department of Water and Power.