CALENDAR ITEM 95

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06/28/16 PRC 8079.9 D. Simpkin G. Kato

AMENDMENT OF LEASE

LESSEE/APPLICANT:

City of Los Angeles Department of Water and Power 111 North Hope Street Los Angeles, CA 90012

AREA, LAND TYPE, AND LOCATION:

Sovereign land on the dry lake bed of Owens Lake, Inyo County.

EXISTING LEASE AND PROPOSED AMENDMENT:

On June 14, 1999, the Commission authorized the issuance of Lease No. PRC 8079.9, a General Lease – Public Agency Use (Lease), to the City of Los Angeles Department of Water and Power (City) for a period of 20 years, for the Owens Lake South Sand Sheet Air Quality and Sand Fence Effectiveness Monitoring System on Owens Lake in Inyo County. Since that time, the Commission has authorized 16 amendments to the Lease for the construction, operation, and maintenance of additional components of dust control. Exhibit B provides a summary of these amendments.

On August 19, 2015, the Commission authorized the 16th amendment to the Lease, which authorized the City to implement part of the Owens Lake Dust Control Project Phase 9 and 10 (Phase 9/10). As proposed by the City, Phase 9/10 included 3.6 square miles of new dust control in 17 Dust Control Areas (DCAs) and 1.82 square miles of transitional dust controls in one existing DCA (T18S). The Commission authorized the amendment excluding the transition of 1.82 square miles of transitional dust controls in DCA T18S due to concerns over the potential loss of Public Trust resources (loss of bird habitat). The City is requesting an amendment to the Lease to authorize the transition of DCA T18S from 1.82 square miles of shallow flooding to approximately 1.02 square miles of shallow flooding with 0.81 square miles of gravel cover.

LEASE TERM:

20 years, beginning May 1, 1999.

CONSIDERATION:

The consideration for the Lease is the 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.

BACKGROUND:

Owens Lake is located in southwest Inyo County, approximately 200 miles north of Los Angeles. Owens 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 residents depended on and benefited from Owens Lake, which covered approximately 110 square miles and was 50 feet deep in places. Early settlers diverted water from the Owens River to grow crops and irrigate pasture for livestock, and steamboats carried cargo across Owens Lake.

In 1908, the City commenced construction of an aqueduct to divert water from the Owens River north of Owens Lake. After completion of the Los Angeles Aqueduct in 1913, the lake 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 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 U.S. Environmental Protection Agency 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 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 PM_{10} Planning Area."

The District 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 caused Owens Lake to become dry and the lakebed to be in a condition that produces dust. The District has the authority to issue orders, known as Supplemental Control Requirements Determinations, to the City for dust control purposes.

California is facing one of the most severe droughts on record. The current drought has resulted in observations of new, record-high temperature and record low snowpack for California. The City has stated that it must significantly reduce its delivery of water to Owens Lake for dust control to meet its expected delivery demands in the years to come. With that in mind, it has proposed reducing overall water use on the lake by at least 50 percent through implementation of the Owens Lake Master Project (Master Project).¹ The City has also stated that each project it proposes prior to completion of the Master Project process must be "water neutral" or reduce overall water use.

The Commission has approved several projects that meet the City's stated need to conserve water on Owens Lake, including Phase 8 (gravel cover), Phase 7a (allowed transition of shallow flood to hybrid), and Tillage with Best Available Control Measure backup (BACM). In addition, staff coordinated with the City in the fall of 2015 for implementation of a variance to achieve additional water savings on Owens Lake. This variance allowed for water releases to be delayed to areas identified by the District as not requiring a wetted surface to control dust until later in the year. To help offset potential impacts to wildlife due to drought and the allowed variance, the City released water to the lakebed in late summer. This was the first time since beginning dust control operations that the City released water on the lake outside of dust mitigation periods specifically for the benefit of birds. Staff is encouraged by the City's actions to provide habitat during these drought conditions and its recognition of the importance of preserving this Public Trust resource. The availability of water for the six identified bird guilds on Owens Lake is especially important now due to the lack of other available habitat.

STAFF ANALYSIS AND RECOMMENDATION:

Authority:

Public Resources Code sections 6005, 6216, and 6301; California Code of Regulations, Title 2, section 2000, subdivision (b).

Public Trust and State's Best Interests Analysis:

As the Legislature's delegated trustee over the State's sovereign lands and resources at Owens Lake, the 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. The discretionary action to be taken by the Commission on the proposed amendment to transition

¹ The City released the Notice of Preparation for an EIR for the Master Project on June 23, 2015.

DCA T18S is ultimately a policy decision taking into account all relevant factors in determining whether the proposed project is in the State's best interests. 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 (Pub. Resources Code, §§ 6301 and 6216).

For years, the City has been diverting water from Owens Lake, which forever changed and almost eliminated the Public Trust resources at Owens Lake. However, since the City began implementing dust control measures at Owens Lake with shallow flooding and managed vegetation, the bird population of the lake has increased significantly. The identified Public Trust resources at Owens Lake include wildlife habitat, public access, recreation, and aesthetic enjoyment among others.

As discussed in more detail below, the project, as proposed, could threaten valuable Public Trust resources on the lake because of the uncertainty surrounding the Habitat Suitability Model (HSM) validation effort and the HSM's ability to adequately predict habitat values for certain bird guilds, and in turn, facilitate the City's maintenance of bird diversity and abundance. The potential loss of wildlife habitat also could impact recreational opportunities for members of the public who access the lake for bird watching and to experience nature.

Commission staff believes these Public Trust concerns could be addressed if the City develops and implements an Adaptive Management Plan consisting of specific and enforceable monitoring and remediation actions. The Adaptive Management Plan would ensure habitat values are maintained at T18S, and further, the information collected through the T18S Adaptive Management Plan would test the HSM in a real world, lake-specific context, providing mechanisms for refinement and correction of the HSM, to ensure it adequately predicts actual bird use through time.

In addition, Commission staff believes improving the reliability of the water supply to the City's customers and seeking to balance habitat maintenance with water conservation practices is in the public interest, particularly in light of climate change and drought. For all the reasons above, Commission staff believes the issuance of this lease amendment is consistent with the common law Public Trust Doctrine and in the best interests of the State.

Analysis of T18S:

T18S is one of the largest DCAs on Owens Lake. It had the highest bird species richness and abundance rankings on the lake during the 2012-2014 survey period and is the most used DCA by the Diving Waterbird guild (source: Los Angeles Department of Water and Power 2012-2014 Lakewide Avian Surveys Report). DCA T18S is approximately 1,166 acres in size (1.8 square miles) and possesses significant biological value for Diving Waterbirds, Breeding and Migrating Waterfowl, and Breeding and Migrating Shorebirds. The City proposes transitioning T18S from shallow flooding to a combination of shallow flooding and gravel cover as a means of offsetting the approximately 1,778 acre-feet per year that will be required to implement dust control on the 17 new DCAs under the Phase 9/10 Project.

As part of the Master Project planning process, the City and Master Project stakeholders developed the HSM as a tool to measure multiple parameters thought to be important indicators of habitat value, including water depth, water salinity, and water availability, to estimate the ability for the habitat to support one or more of the bird guilds occurring on Owens Lake and assign a "Habitat Value" number. In 2010, the City used the HSM to calculate the Habitat Value of each existing DCA on Owens Lake – this became the baseline. In the Phase 9/10 EIR, the City used the HSM to show that the Habitat Value of T18S could be maintained while reducing water use by converting DCA T18S to approximately 651 acres of shallow flooding and 515 acres of gravel cover, when managed in accordance with the HSM.

As part of the 15th amendment to the Lease, the Commission required that the City validate and update the HSM "in order to determine if the HSM parameters are effectively providing habitat for the target guilds." There has been five years of data collection since the HSM was first used on the lake and that data can be used to evaluate to what extent the calculated model values accurately predict Habitat Value (as confirmed by bird use), and what modifications may need to be made. The City contracted with Point Blue Conservation Science (Point Blue) to review the bird survey data together with the HSM and provide recommendations for refining the HSM. The Point Blue report, "Owens Lake Habitat Suitability Model Validation and Refinements," dated April 28, 2016, concluded that while the existing HSM generally showed a "good fit" with the bird use data, some adjustments to the parameter index values would

better reflect habitat preferences and observations of the target guilds. While most of the recommended refinements did not result in significant changes to the calculated Habitat Value Acres on existing DCAs for the various guilds, the recommended changes for Diving Waterbirds would result in a decrease in Habitat Value Acres as compared to the existing model.

As stated above, the existing HSM predicts a maintenance of habitat values on T18S under the proposed design. In contrast, the Point Blue HSM predicts a decline of approximately 60 percent for Diving Waterbirds and 13 percent for Breeding Shorebirds. The City states that it expects T18S to perform similarly to DCA T25S, after which T18S was modeled during the design phase because of the consistently high use of T25S by Diving Waterbirds. Both the City's scientific staff and the Point Blue report acknowledge that the model parameters rely to some extent on data collected in other areas rather than Owens Lake specifically, and as a result, some uncertainty exists. Because T18S is an important DCA for Diving Waterbirds, Commission staff believes this discrepancy merits additional study. Additionally, in its application the City proposes that overall Habitat Values will be augmented beyond what is predicted by the HSM for shorebirds. The City states important additional data on potential HSM criteria can be collected and evaluated through several design features it is incorporating on T18S, including constructing islands with different relief scales to provide nesting refuges, placing 200-foot by 100foot "gravel bars" of small-rock gravel adjacent to shallow water for shorebirds, and using small grade (9/16-inch or less) gravel within 100 feet of pond shallow flood areas to provide nest-scrape material for snowy plovers.

In light of the above, and recognizing the value of additional data collection in a real world setting on the lakebed, Commission staff has developed a requirement for the City to use the transition of T18S as an opportunity to "test" the existing and Point Blue versions of the HSM by monitoring the performance of the area after transition and adaptively managing it to achieve success.

Staff Recommendation:

Based on the discussion and analysis above, and in consideration of the need to both explore DCA designs that use less water and maintain the functionality of the DCAs as wildlife habitat, Commission staff

recommends the Commission authorize an amendment to the lease to allow the transition of T18S, including the specific lease terms described below. These lease terms are necessary because Commission and City staffs recognize that uncertainties remain with the HSM developed for Owens Lake and that the HSM can be refined and improved over time with robust monitoring and "ground-truthing" of the model's ability to predict performance of the DCAs. Commission staff believes the monitoring data that will be collected will be of value not only to the longterm management of T18S, but also to the overall management of Owens Lake under the Master Project, because this information will strengthen the HSM and maximize the alignment of wildlife use and HSM predictions. Additionally, because the condition requires long-term performance assurances, Commission staff believes the risk to Public Trust values will be minimized.

Specific Lease Terms:

- Lessee shall ensure that T18S is constructed and managed to maintain habitat values as described in Section 4.3.5.2 of the Environmental Impact Report (EIR) prepared for the Owens Lake Phase 9/10 Dust Control Measures Project and certified by the City on June 2, 2015. Performance of the initial design (see Exhibit C), which includes the construction and maintenance of a minimum of 1.02 square miles of shallow flood comprised of two shallow and two deep permanent ponds, shall then be monitored to determine whether modifications to the HSM (and, potentially, the design of T18S) are warranted to improve its accuracy in predicting wildlife use. To accomplish this, Lessee shall develop an Adaptive Management Plan that includes, at a minimum, the following components:
 - A proposed habitat monitoring protocol to evaluate postconstruction performance of T18S, specifically, maintenance of habitat values. The protocol shall include both habitat parameter monitoring (e.g., salinity, water availability, topography, etc.) and effectiveness monitoring (i.e., wildlife surveys), to evaluate whether management targets (maintenance of habitat values and wildlife use) are being met.
 - A description of thresholds of expected habitat use by each guild for the entire project area that is statistically similar to preproject conditions, based on a comparison to guild use of similar dust control areas and lake-wide and off-site monitoring (e.g., in

order to determine whether changes in use are due to habitat conditions or off-site/regional factors). If lower habitat use is determined to be caused by changes in habitat conditions on T18S, then the habitat parameters responsible will be identified and the Habitat Suitability Model (HSM) will be updated to reflect best available science and results of site-specific data analysis. This refinement will be developed in coordination with the Habitat Working Group and the independent third-party science organization, and may include changes to existing parameter index values and/or identification of new parameters that are more predictive of wildlife use.

- A remediation protocol that includes a description of management options and corrective actions that would be implemented if monitoring indicates Habitat Value Acres are more than 10 percent below the values projected by the HSM after 3 complete years of data collection, or if effectiveness monitoring and Wildlife Use Assessment indicates wildlife use is deficient. Management options are expected to include operational adjustments to optimize habitat parameters and refinement and adjustment of the HSM, in coordination with the Habitat Working Group and independent third-party science organization, to incorporate new data on wildlife preferences, as appropriate.
- A description of habitat value replacement options that could feasibly be implemented in the event operational adjustments fail to result in maintenance of use by the wildlife guilds after 10 years, including infrastructure changes to T18S that would improve performance and/or design and construction on another dust control area that would address the guild(s) that are deficient.
- 2. Lessee shall provide for peer review of the proposed Adaptive Management Plan by an independent third-party scientific organization and shall submit the proposed Adaptive Management Plan along with the comments and recommendations of the peer reviewers to Lessor's staff for approval no later than December 31, 2016. Lessor's approval of the Adaptive Management Plan will not be unreasonably withheld.

OTHER PERTINENT INFORMATION:

- 1. Commission staff has participated in the Owens Lake Master Project process starting in March 2010 with the City, the District, other public agencies, tribes, non-governmental organizations, and other interested stakeholders to develop a framework to manage the variety of important resources on the lake while continuing to control dust. On June 23, 2015, the City released a Notice of Preparation for an Environmental Impact Report (EIR) for the Master Project. The Commission's consideration of the Master Project and a new Lease is anticipated to occur following completion of the Master Project EIR and action by the City.
- 2. The proposed action is consistent with Strategy 1.1 of the Commission's Strategic Plan to deliver the highest levels of public health and safety in the protection, preservation and responsible economic use of the lands and resources under the Commission's jurisdiction.
- 3. An EIR, State Clearinghouse No. 2014071057, was prepared for this project by the Los Angeles Department of Water and Power and certified on June 2, 2015. The Commission staff has reviewed such document and Mitigation Monitoring Program prepared pursuant to the provisions of CEQA (Pub. Resources Code, § 21081.6) and adopted by the lead agency. Findings made in conformance with the State CEQA Guidelines (Cal. Code Regs., tit. 14, §§ 15091, 15096) are contained on file in the Sacramento office of the California State Lands Commission. As part of the Commission's approval of a previous lease amendment on August 19, 2015, the Commission relied on the same environmental document and the Commission adopted a Mitigation Monitoring Program and Findings. (Calendar Item C61 http://archives.slc.ca.gov/Meeting_Summaries/2015_Documents/08-19-

<u>15/Items_and_exhibits/C61.pdf</u>)

4. 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.

FURTHER APPROVALS REQUIRED:

California Department of Fish and Wildlife

EXHIBITS:

- A. Site and Location Map
- B. Summary of Lease Amendments
- C. T18S Design Site Plan

RECOMMENDED ACTION:

It is recommended that the Commission:

CEQA FINDING:

Find that an EIR, State Clearinghouse No. 2014071057, was prepared for this project by the Los Angeles Department of Water and Power and certified on June 2, 2015, and that the Commission has reviewed and considered the information contained therein. The Commission adopted a Mitigation Monitoring Program and Findings at its August 19, 2015, meeting.

Readopt the Mitigation Monitoring Program as set forth in Exhibit C to Calendar Item C61 of the Commission's August 19, 2015 meeting.

Readopt the Findings, made in conformance with California Code of Regulations, Title 14, sections 15091 and 15096, subdivision (h), as set forth in Exhibit D to Calendar Item C61 of the Commission's August 19, 2015 meeting.

Determine that the Project, as approved, will not have a significant effect on the environment.

PUBLIC TRUST AND STATE'S BEST INTERESTS:

Find that the proposed lease amendment will not substantially interfere with the Public Trust needs and values at this location, is consistent with the common law Public Trust Doctrine, and is in the best interests of the State.

AUTHORIZATION:

- Authorize the amendment of Lease No. PRC 8079.9, a General Lease – Public Agency Use, to authorize the transition of Dust Control Area T18S, as shown on Exhibit A (for reference purposes only) attached and by this reference made a part hereof; 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, subject to the Lessee's development and submittal by December 31, 2016, to Commission staff for approval, of an Adaptive Management Plan, and the subsequent implementation of and compliance with the Adaptive Management Plan; all other terms and conditions of the lease will remain in effect without amendment.
- 2. Delegate to the Commission's Executive Officer the authority to review and approve the Adaptive Management Plan and any subsequent revisions.

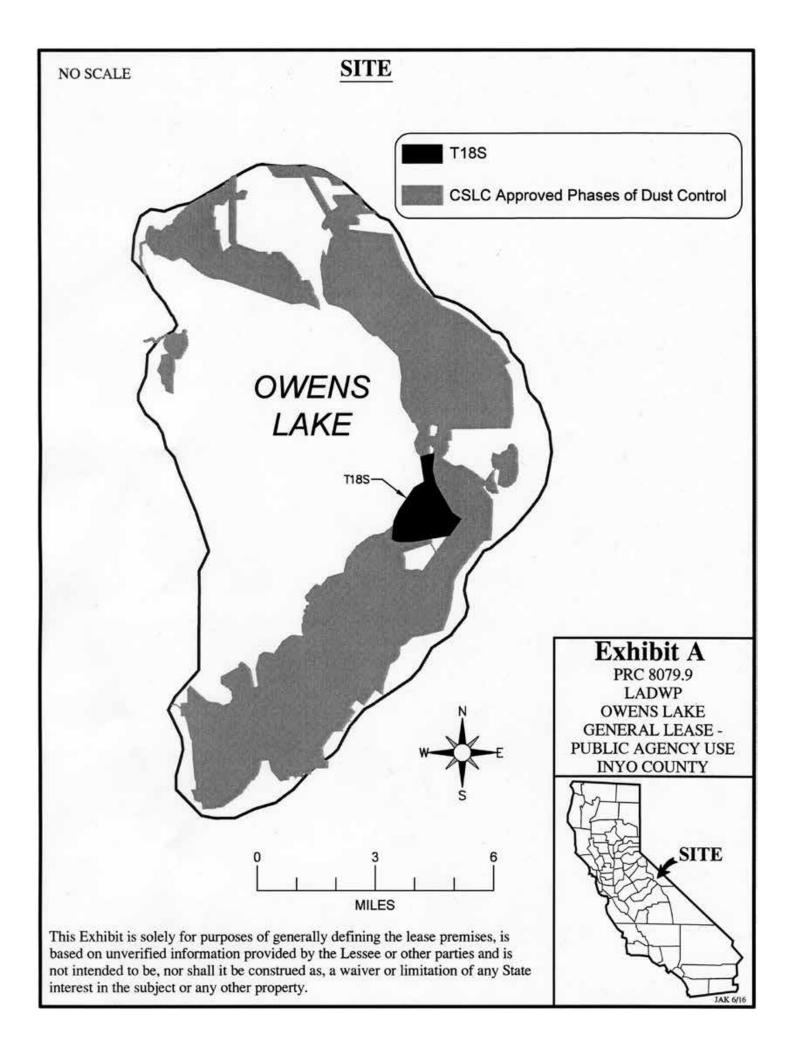


Exhibit B: Summary of Lease Amendments

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: <u>http://archives.slc.ca.gov/Meeting_Summaries/1999_Documents/06-14-99/Items/061499C06.pdf</u>)

<u>First Amendment</u>. 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)

<u>Second Amendment</u>. 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: <u>http://archives.slc.ca.gov/Meeting_Summaries/2001_Documents/11-26-01/Items/112601C18.pdf</u>)

<u>Third Amendment</u>. 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/ltems/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: <u>http://archives.slc.ca.gov/Meeting_Summaries/2008_Documents/08-22-08/ITEMS_AND_EXHIBITS/C05.pdf</u>)

<u>Sixth Amendment</u>. 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)

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

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/Voting_Record.pdf; Note: Recommendation modified; for actual approval, see: http://archives.slc.ca.gov/Meeting_Summaries/2009_Documents/12-17-09/Voting_Record.pdf; Note: Recommendation modified; for actual approval, see:

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/Voting_Record.pdf)

<u>Tenth Amendment</u>. Allowed 2.03 square miles of Gravel Cover on 2.03 square miles and roadway expansion. (Approved: 12/10/2010; Available at: <u>http://archives.slc.ca.gov/Meeting_Summaries/2010_Documents/12-10-</u> 10/Complete_Items/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/ltems_and_Exhibits/C43.pdf)

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

<u>Thirteenth Amendment</u>. 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: <u>http://archives.slc.ca.gov/Meeting_Summaries/2013_Documents/09-20-13/Items_and_Exhibits/C82.pdf</u>)

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/ltems_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) <u>Sixteenth Amendment</u>. 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: <u>http://archives.slc.ca.gov/Meeting_Summaries/2015_Documents/08-19-15/Items_and_exhibits/C61.pdf</u>)

