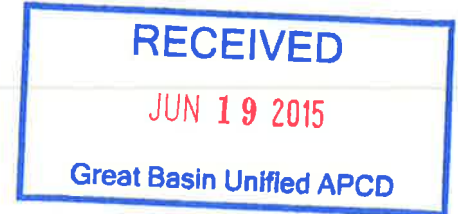


**PETITION FOR VARIANCE
BEFORE THE HEARING BOARD OF THE
GREAT BASIN UNIFIED AIR POLLUTION CONTROL DISTRICT**

PETITIONER: The City of Los Angeles Department of Water and Power
FACILITY ADDRESS: 111 Sulfate Road
CITY, STATE, ZIP: Keeler, CA 93530



1. TYPE OF VARIANCE REQUESTED

REGULAR SHORT EMERGENCY

2. CONTACT:

Name:

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Nelson O. Mejia, Manager of Owens Lake Compliance and Engineering Support
Jennifer F. J. Wong, Project Engineer for Owens Lake Special Studies

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3. *About the City of Los Angeles Department of Water and Power and its activities.*

The City of Los Angeles Department of Water and Power (LADWP) is the largest municipal utility in the United States, meeting the water and power needs of more than 3.8 million residents, or approximately ten (10) percent of the State of California's population. It was founded in 1902 to supply water to residents and businesses in Los Angeles and surrounding communities. In 1916, LADWP started to deliver electricity.

The Los Angeles Aqueduct, local groundwater, and supplemental water purchases from the Metropolitan Water District of Southern California (MWD) are primary sources of water supply to the City of Los Angeles.

The construction of the 240-mile-long Los Angeles Aqueduct began in 1908 and was completed in 1913. The water from MWD is delivered through the Colorado River Aqueduct and the State Water Project's California Aqueduct.

The Los Angeles Aqueduct has been essential to LADWP's mission to provide water to its customers, although in recent years, it has declined as the primary source of the City's supply. Throughout 1970s and 1980s, over 400,000 acre-feet (AF) per year of water was conveyed via the Los Angeles Aqueduct to the City of Los Angeles. These deliveries have significantly declined since early 1990s, primarily due to LADWP's environmental and air quality mitigation obligations within the Eastern Sierra.

LADWP's current estimate indicates that only around 42,000 AF of water could be conveyed by the end of this runoff year (March 31, 2016) via the Los Angeles Aqueduct to the City of Los Angeles. This estimate is based on the assumption of normal precipitation during this runoff year, and the conveyance of such water is not expected to substantially commence until November 2015.

The estimated 42,000 AF of water delivery from the Los Angeles Aqueduct is by far the lowest amount of water ever conveyed to the City of Los Angeles, and it is unprecedented in the 100-year history of LADWP's water gathering activities in the Eastern Sierra. This fact was highlighted in the Los Angeles Times May 17, 2015 Article, entitled "Sobering Facts of Depleted Wells", and accompanying photograph of the Los Angeles Aqueduct which showed no water flowing in the Los Angeles Aqueduct south of Olancho.

The Owens Lake Dust Mitigation Program (OLDMP) is the most extensive environmental mitigation obligation of the City of Los Angeles and its LADWP in the Eastern Sierra. LADWP began OLDMP in 2000, and during the past 15 years, LADWP has significantly reduced the potential emissions of particulate matter less than or equal to ten (10) microns in diameter (PM₁₀) at Owens Lake from approximately 240,000 tons in 2000 to less than 9,500 tons in 2015.

In accordance with the Great Basin Unified Air Pollution Control District's (District) Owens Valley PM₁₀ Area Demonstration of Attainment State Implementation Plans (SIP), Orders, agreements, legal settlements, and stipulated judgments, LADWP has been mitigating dust emissions from Owens Lake playa through implementation of Shallow Flooding, Managed Vegetation and Gravel Cover Best Available Control Measures (BACM). The majority of the Dust Control Areas (DCA) on Owens Lake playa are mitigated through implementation of Shallow Flooding (BACM). Shallow Flooding is achieved

primarily through ponding of water (Pond Shallow Flooding) and/or sheet flow (Lateral Shallow Flooding) methods via extensive network of berms, pipes, pumps, valves, controls, and related infrastructures. The water for Shallow Flooding is diverted from the Los Angeles Aqueduct at Lubken and Cartago Spillgates.

Currently, LADWP is on schedule to complete the construction of the OLDMP – Phase 7A Project (Phase 7A Project) on July 31, 2015. The startup and testing will be completed by December 31, 2015. Upon operation of the Phase 7A Project, LADWP would have mitigated dust emissions from over 45 square miles of Owens Lake playa.

Additionally, LADWP has completed environmental impact analysis and design of the OLDMP – Phase 9/10 Project (Phase 9/10 Project). LADWP is on schedule to complete the Phase 9/10 Project by December 31, 2017. Upon completion of the Phase 9/10 Project, LADWP would have mitigated dust emissions from over 48 square miles of Owens Lake playa. It anticipated that upon operation of the Phase 9/10 Project, the potential emissions of PM₁₀ from Owens Lake will be further reduced to less than 2,700 tons. This represents a very significant reduction in potential PM₁₀ emissions from approximately 240,000 tons in 2000 to less 2,700 tons in 2017.

4. *Business and processes conducted at this facility.*

LADWP is currently mitigating fugitive dust emissions on Owens Lake to reduce release of PM₁₀. LADWP constructs and operates dust control measures on the lakebed in compliance with orders from the District under the authority of California Health and Safety Code Section 42316, legal settlement agreements with the District, lease agreements, and other regulatory requirements.

5. *Dust Control Areas (DCA) and activities that are the subject of this petition.*

See attached table.

6. *Brief description of the activity and its importance to the operation of business:*

In accordance with the 2008 SIP and District Order No. 080128-01, Article 15, LADWP is required to mitigate dust emissions from Owens Lake from October 1st through June 30th. In recognition of the weather conditions and playa surface conditions at Owens Lake resulting in significantly reduced dust emissions during certain days in fall (October 1st through October 15th) and spring (May 16th through June 30th), the 2008 SIP, Sub article 5.2.3.1, assigns shouldering periods for gradual ramp up and/or down of areal wetness cover requirements.

The District and LADWP have been collaboratively examining ambient air quality, meteorological and sand motion data along with lakebed field observations (Data) for the past 15 years. For the District to consider the DCAs' Data, it had to meet the following very conservative standards:

- A minimum of five (5) years of Data prior to implementation of mitigation measures
- Daily sand flux measurement of less than five (5) grams during any dust year

LADWP believes the District's analysis of the Data has led to its air quality staff's conclusion that the dust season may be shortened for the DCAs identified in the above-referenced table without negatively impacting the Ambient Air Quality Standards at the regulatory shoreline, either through a dust mitigation compliance start date later than October 16th and/or an end date of the dust mitigation season earlier than June 30th.

Additionally, there are other adjacent DCAs with similar soil and surface characteristics to the DCAs analyzed by the District that would qualify for shortened dust season. These additional DCAs have been discussed with the District staff and have been included in this variance petition.

LADWP has numerous environmental mitigation obligations in the Eastern Sierra and it is attempting to meet the water demands of all of them during a year when the water supply is depleted.

The State of California is entering its fourth (4) year of record-breaking drought resulting in directives and orders from the Governor Edmund G. Brown, Jr. since early 2014. In May 2015, Governor Brown ordered mandatory twenty-five (25) percent statewide reduction in urban water use.

The severe drought and extremely low snowpack have placed LADWP, a public agency, at risk of being unable to provide an essential public service, to wit, meeting the water needs of its users in the Owens Valley and the City of Los Angeles. Currently, LADWP does not anticipate exporting any water from its upper watershed in the Eastern Sierra to Los Angeles during the first half of the 2015-2016 runoff year (April 1st through October 1st).

As a result of the severe drought and Governor Brown's May 2015 order, the State Water Resources Control Board (SWRCB) adopted emergency conservation regulations. These regulations, in part, severely limit water use, set a baseline for reduction of water use, require local water agencies to report their enforcement activities on monthly basis, and impose up to \$10,000 per day fine if local water agencies fail to meet the adopted emergency conservation measures.

LADWP's April 1, 2015 snowpack was measured to be four (4) percent of normal. This is the lowest recorded snowpack by LADWP in the Eastern Sierra. The runoff associated with this very low amount of snowpack is estimated to be approximately twenty-five (25) percent of normal for the first six (6) months of this year. The runoff for the entire year is forecasted to be approximately thirty-six (36) percent of normal based on assumption of normal precipitation in the summer, fall and winter months.

As LADWP investigates and implements water saving measures within the boundaries of the City of Los Angeles, there are also opportunities for water conservation within the Eastern Sierra and specifically on Owens Lake without the likelihood of actual violation of the Ambient Air Quality Standards.

7. *Regular maintenance/inspection schedule:*

LADWP personnel routinely monitor and patrol all DCAs for any infrastructure failure and/or dust emissions. Additionally, the District has various air quality monitoring equipment throughout Owens Lake that monitors, measures, and records ambient air quality parameters.

8. *LADWP is seeking variance relief in anticipation of a violation of the State mandated dust control measure.*

LADWP is seeking variance relief from Sub article No. 5.2.3.1 of the 2008 SIP, Fall Shoulder Season, areal wetness cover requirements which states:

“...full levels of dust control will not be required until October 16 of each year. From an operational standpoint, however, gradually increasing levels of dust protection will occur starting in early September as water deliveries begin. These protection levels will ramp up as additional water is delivered until full levels of protection are provided on October 16.”

LADWP's variance relief entails the following:

- LADWP seeks modification of the gradual ramp up of water deliveries to the following DCAs starting from early September to early November with full levels of dust control (areal wetness cover) commencing on December 1st: T1-1, T9-S, T10-1 and T23-5
- LADWP seeks modification of the gradual ramp up of water deliveries to the following DCAs starting from early September to early December with full levels of dust control (areal wetness cover) commencing by January 16th: T5-3, T5-3 Addition, T9, T10-2, T10-2_a, T10-2_b, T10-3, T11, T13-1_s, T13-1 Addition, T13-3, T17-1, T17-2, T18-0, T18N, T18S, T21, T23E, T23W, T25S, T25-3, and T37-2

This variance Petition only covers 14.79 square miles of more than 42 square miles of LADWP's dust mitigation activities on Owens Lake. Over 37 square miles of Owens Lake playa continue to be mitigated via Shallow Flooding and/or Managed Vegetation BACMs on October 15, 2015, which is the start of Fiscal Year 2015-2016 dust season.

9. *Equipment or activities specifically subject to this request currently under variance coverage:*

None

10. *Equipment or activities currently (or within the last six months) under variance coverage:*

None

11. *Notice(s) of Violation or Notice(s) to Comply concerning referenced DCAs within the past year:*

None

12. *Complaints received from the public regarding the operation of referenced DCAs within the last six months:*

None

13. *Explanation of why it is beyond your reasonable control to comply with Sub article No. 5.2.3.1 of the 2008 SIP, Fall Shoulder Season:*

Both the District and LADWP agreed to make efforts to reduce lake-wide water use as specified in Section 7 of the 2014 Stipulated Judgment. LADWP and the District have been working together to jointly develop "Dynamic Water Management" for incorporation into a 2015 SIP revision. As indicated above, analysis of the Data suggests that the Fall Shoulder Season Dust Control measures can be modified by shorting the compliance period without violating the Ambient Air Quality Standards. Use of this modified Fall Shoulder Season period means these DCAs must remain largely unsaturated or well below the wetness cover requirements as currently defined in Section 5.2.3.1 of the 2008 SIP. Therefore, to utilize the modified Fall Shouldering Season periods prior to final adoption of the 2015 SIP revision on December 31, 2015 (as agreed upon and memorialized in Section 11.B of the 2014 Stipulated Judgment) and its

implementation to have these specific DCAs meet current 2008 SIP requirements is beyond LADWP's reasonable control.

14. *When and how did you first become aware that you would not be in compliance with the rule(s) and/or permit condition(s)?*

LADWP has consistently operated its dust control areas on Owens Lake in compliance with 2008 SIP requirements. The District has expressed support for LADWP mitigating dust emissions by using less water than it has traditionally used for dust control. LADWP has been working collaborating with the District to implement the provisions of 2014 Stipulated Judgment since January 2015. The 2014 Stipulated Judgment requires investigations of lake-wide efforts to reduce water use at Owens Lake. The Data and analysis in support of this variance petition is a direct result of this ongoing collaboration. The Data analysis that demonstrated that District staff could accept certain areas of the Dust Control Project being controlled for a shorter period of time during the Dust Season (defined earlier in the Petition) was finalized during a meeting on June 9, 2015.

15. *Is curtailing operations in lieu of variance an option that may reduce the emissions?*

No.

16. *How do you plan to monitor or quantify emission levels from the equipment or activity(s) during the variance period, and to make such records available to the District?*

LADWP and the District currently operate and maintain a vast and complex network of air quality monitoring systems on Owens Lake in accordance with 2008 SIP. These air quality monitoring systems will continue to be used to monitor and quantify potential emissions level from the DCAs.

17. *Explain how you plan to reduce (mitigate) excess emissions during the variance period to the maximum extent feasible, or why reductions are not feasible.*

Based on LADWP's and the District's collaboration and the joint examination of the Data for past 15 years, it is extremely unlikely for surfaces of these DCAs to become emissive during the Fall Shoulder Season resulting in measured violations at the regulatory shoreline. Because existing shallow flooding infrastructures are in place, LADWP has the ability to wet areas if deemed necessary by the District due to unexpected development of erodible and potentially emissive surface conditions during the modified Fall Shoulder Season test. Emission limits and full performance standards for dust mitigation can be achieved in short period of time if needed.

18. *Compliance Efforts:*

LADWP maintains a very large construction yard and substantial number of personnel at Owens Lake for purpose of maintaining and operating its extensive dust mitigation infrastructures as well as to ensure compliance with Ambient Air Quality Standards within the Owens Valley Planning Area.

19. *Corrective Actions:*

None

20. *State the date by which you expect to achieve final compliance:*

LADWP will be in compliance with areal wetness cover requirements on December 1, 2015 for T1-1, T9S, T10-1, and T23-5 DCAs.

LADWP will be in compliance with areal wetness cover requirements on January 16, 2016 for T5-3, T5-3 Addition, T9, T10-2, T10-2_a, T10-2_b, T10-3, T11, T13-1_s, T13-1 Addition, T13-3, T17-1, T17-2, T18-0, T18N, T18S, T21, T23E, T23W, T25S, T25-3, and T37-2 DCAs.

The undersigned, under penalty of perjury, states that the above petition, including attachments and the items therein set forth, is true and correct.

Executed on June 16, 2015, at Los Angeles, California


Signature

Dat Quach
Print Name

Manager of Air Quality
Title

Variance Petition Table of Effected Dust Control Areas							
No.	Dust Control Area Designation	Size		Variance Duration		Variance Compliance Date	Best Available Control Measure
		Square Miles	Acres	Current Start of Fall Shoulder Season	Later Start to Fall Shoulder Season		
1	T1-1	0.24	155.00	10/15/2015	11/30/2015	12/1/2015	Shallow Flooding
2	T9-S	0.07	44.60	10/15/2015	11/30/2015	12/1/2015	Shallow Flooding
3	T10-1	0.70	447.50	10/15/2015	11/30/2015	12/1/2015	Shallow Flooding
4	T23-5	0.11	69.30	10/15/2015	11/30/2015	12/1/2015	Shallow Flooding
Subtotal		1.12	716.40				
1	T5-3	0.22	141.40	10/15/2015	1/15/2016	1/16/2016	Shallow Flooding
2	T5-3 Addition	0.12	78.40	10/15/2015	1/15/2016	1/16/2016	Shallow Flooding
3	T9	0.39	248.20	10/15/2015	1/15/2016	1/16/2016	Shallow Flooding
4	T10-2	0.31	196.70	10/15/2015	1/15/2016	1/16/2016	Shallow Flooding
5	T10-2_a	0.44	282.80	10/15/2015	1/15/2016	1/16/2016	Shallow Flooding
6	T10-2_b	0.64	412.30	10/15/2015	1/15/2016	1/16/2016	Shallow Flooding
7	T10-3	0.28	178.80	10/15/2015	1/15/2016	1/16/2016	Shallow Flooding
8	T11	0.66	424.80	10/15/2015	1/15/2016	1/16/2016	Shallow Flooding
9	T13-1-S	0.24	152.60	10/15/2015	1/15/2016	1/16/2016	Shallow Flooding
10	T13-1 Addition	0.12	79.70	10/15/2015	1/15/2016	1/16/2016	Shallow Flooding
11	T13-3	0.68	435.40	10/15/2015	1/15/2016	1/16/2016	Shallow Flooding
12	T17-1	0.83	528.80	10/15/2015	1/15/2016	1/16/2016	Shallow Flooding
13	T17-2	0.93	597.90	10/15/2015	1/15/2016	1/16/2016	Shallow Flooding
14	T18-0	0.53	338.50	10/15/2015	1/15/2016	1/16/2016	Shallow Flooding
15	T18N	0.85	541.20	10/15/2015	1/15/2016	1/16/2016	Shallow Flooding
16	T18S	1.80	1,154.90	10/15/2015	1/15/2016	1/16/2016	Shallow Flooding
17	T21	0.49	316.40	10/15/2015	1/15/2016	1/16/2016	Shallow Flooding
18	T23E (T23NE + T23SE)	1.15	738.60	10/15/2015	1/15/2016	1/16/2016	Shallow Flooding

Variance Petition Table of Effected Dust Control Areas									
No.	Dust Control Area Designation	Size		Variance Duration		Variance Compliance Date	Best Available Control Measure		
		Square Miles	Acres	Current Start of Fall Shoulder Season	Later Start to Fall Shoulder Season				
19	T23W (23NW + T23SW)	0.69	444.40	10/15/2015	1/15/2016	1/16/2016	Shallow Flooding		
20	T25S	0.41	259.90	10/15/2015	1/15/2016	1/16/2016	Shallow Flooding		
21	T25-3	1.28	820.00	10/15/2015	1/15/2016	1/16/2016	Shallow Flooding		
22	T37-2	0.59	377.80	10/15/2015	1/15/2016	1/16/2016	Shallow Flooding		
Subtotal		13.67	8,749.50						
Total		14.79	9,465.90						