

Section 2

Mono Basin Operations

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**Compliance with State Water Resources Control Board
Decision 1631 and Order Nos. 98-05 and 98-07**

May 2014

Los Angeles Department of Water and Power

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Introduction

Pursuant to State Water Resources Control Board (SWRCB) Decision 1631 and Order Nos. 98-05 and 98-07 (Orders), the Los Angeles Department of Water and Power (LADWP) undertakes certain activities in the Mono Basin in compliance with the terms and conditions of its water right licenses 10191 and 10192. In addition to restoration and monitoring activities covered in Section 1 of this report, LADWP also reports on certain required operational activities.

MONO BASIN OPERATIONS PLAN RY 2014-15

Forecast for RY 2014-15

The Mono Basin's April 1st forecast for Runoff Year (RY) 2014-15 for April to March period is 59,200 acre-feet (AF), or 48 percent of average using the 1961-2010 long term mean of 122,333 AF (attached). The April runoff forecast did not change from the March runoff forecast. This value puts the year type within the 'Dry' category. According to the Grant Lake Operations Management Plan (GLOMP) approved under SWRCB Order 98-05, LADWP will follow Guideline 'A' (attached) for the operating requirements during RY 2014-15, with certain variations described below.

Rush Creek

Baseflows will follow Guideline 'A' of 31 cubic feet per second (cfs) from April 1 to September 30, 2014, and 36 cfs from October 1, 2014 to March 31, 2015, or when Grant Lake Reservoir (GLR) storage drops below 11,500 AF, the equivalent of Rush Creek inflow at 'Damsite', whichever is less. There is no peak flow release requirement for Dry year type.

Rush Creek Augmentation

In wetter years, LADWP utilizes one or both of its additional facilities to release higher peak flows. These facilities include the 5-Siphons bypass, which can release as tested 100 cfs from Lee Vining Creek, and the GLR Spillway, which can release large reservoir spills into lower Rush Creek during the wetter years.

5-Siphons Bypass

Aside from utilizing the 5-Siphons bypass facility to augment Rush Creek peak flow requirements, LADWP intends to test the physical capability to augment up to 150 cfs from the Lee Vining Conduit through the 5-Siphons bypass facility provided there is adequate runoff. The forecast being Dry, most likely, it will not be possible this runoff year.

Grant Lake Reservoir Spill

GLR is not forecasted to spill during the RY 2014-15.

Lee Vining Creek

Baseflows will follow Guideline 'A' of 37 cfs, or flow at Lee Vining Creek 'Above', whichever is less, from April 1 to September 30, 2014, and 25 cfs, or Lee Vining Creek 'Above', whichever is less, from October 1, 2014 to March 31, 2015. All flows in excess

of these requirements will be diverted to GLR through the Lee Vining Conduit. There is no peak flow passing requirement for Dry year type.

Parker and Walker Creeks

If there is enough runoff available, Parker and Walker creek facilities will be operated according to Guideline 'A'. If the incoming flow is lower than flows in the Guideline, the facilities will be operated as pass through. If the incoming flow is higher, excess flow will be diverted to GLR.

Grant Lake Reservoir (GLR)

GLR storage volume was 29,218 AF, corresponding to a surface elevation of 7,112.2 feet above mean sea level (AMSL) at the start of the runoff year. Using spreadsheet with a representative historical inflow data from the 2007 runoff year (46 percent of normal year), and Guideline 'A' baseflows along with higher export regime, GLR is projected as shown in Scenario A at the end of this section. Forecasted scenarios will be relatively close only if this year's hydrology turns out to be similar to the hydrology of the selected historical runoff year. Operations are subject to change with variations in actual hydrology during the upcoming runoff year.

Planned Exports for RY 2014-15

LADWP plans to export the allowed 16,000 AF this year in accordance with SWRCB Decision 1631. The plan is to export the 16,000 AF much earlier than previous years and finish off export by mid-June 2014. The flows are necessary to provide LADWP operational flexibility and storage in Crowley Reservoir to meet our downstream City water summer demands and other obligations which include irrigation, mitigation projects, and the Lower Owens River Project. Also, an Aqueduct outage is planned for 6-8 weeks in July to perform much needed repair to the concrete sidewalls of the Los Angeles Aqueduct. The Grant spillway modification project may also require lower elevation for geotechnical investigation.

Emergencies and/or maintenance issues may arise and as a result export may need to be halted and resumed later at a different rate to achieve the 16,000 AF before the end of the RY.

Expected Mono Lake Elevations during RY 2014-15

Mono Lake began this runoff year at 6,380.7 ft AMSL where it is forecasted to decrease and end the runoff year at approximately 6,379.4 ft AMSL (see attached chart).

REVIEW OF THE MONO BASIN RY 2013-14 OPERATIONS

Rush Creek

The runoff from Rush Creek was approximately 31,501 AF which amounts to the total water delivered to GLR's 'Damsite'.

Rush Creek flows below 'the Narrows', which consist of Rush Creek releases (Return Ditch, Spill, and 5-Siphons augmentation) combined with Parker and Walker Creek flows, had an approximate total of 31,636 AF. This flow terminated into Mono Lake with the highest flow of 137 cfs occurring on June 5, 2013.

RY 2013 was forecasted as a Dry year type and as such, following Guideline 'A', there was no peak flow released.

Rush Creek Augmentation

To meet high flow targets for lower Rush Creek, LADWP at times must employ facilities in addition to the Mono Gate One Return Ditch (MGORD) which has a 380 cfs capacity limit. During these wetter years, LADWP utilizes one or both of its additional facilities to release higher peak flows. These facilities include the 5-Siphons bypass, which can release up to 100 cfs (150 cfs is the plan but that has yet to be tested due to lack of runoff) from Lee Vining Creek, and the GLR Spillway, which can release large reservoir spills, into lower Rush Creek and during the wetter year types.

5-Siphons Bypass

RY 2013 was forecasted as a Dry year type and as such, following Guideline 'A', there was no peak flow released in Rush Creek and therefore 5-Siphons were not utilized.

Grant Reservoir Spill

Grant did not spill during RY 2013.

Lee Vining Creek

RY 2013 was forecasted as a Dry year type and as such, following Guideline 'A', there was no 'pass the peak' operation.

Lee Vining Creek had its highest flow on May 13 with 128 cfs. Total runoff for the year was approximately 25,030 AF.

Dry cycle channel maintenance flows

Because RY2013 was the second consecutive dry year, channel maintenance flows were released. Every attempt was made to release for 5 days approximately 100 cfs on Rush Creek and approximately 75 cfs on Lee Vining Creek.

Parker and Walker Creeks

Parker and Walker were diverted according to Guideline 'A'. However, they were only diverted a portion of the time due to the lack of enough runoff.

Parker Creek had its highest flow on June 10 at 32 cfs. Total runoff for the year was approximately 5,299 AF.

Walker Creek had its highest flow on May 15 at 19 cfs. Total runoff for the year was approximately 2,543 AF.

Grant Lake Reservoir

Grant Lake began the runoff year at approximately 32,281 AF (7,115.5 ft AMSL). The reservoir did not spill during the RY. Final storage volume by the end of the RY of March 31, 2014 was approximately 29,218 AF (7112.2 ft AMSL).

Exports during RY 2013-14

During RY 2013-14, LADWP exported 15,046 AF from the Mono Basin, which falls below the allowed 16,000 AF under Decision 1631.

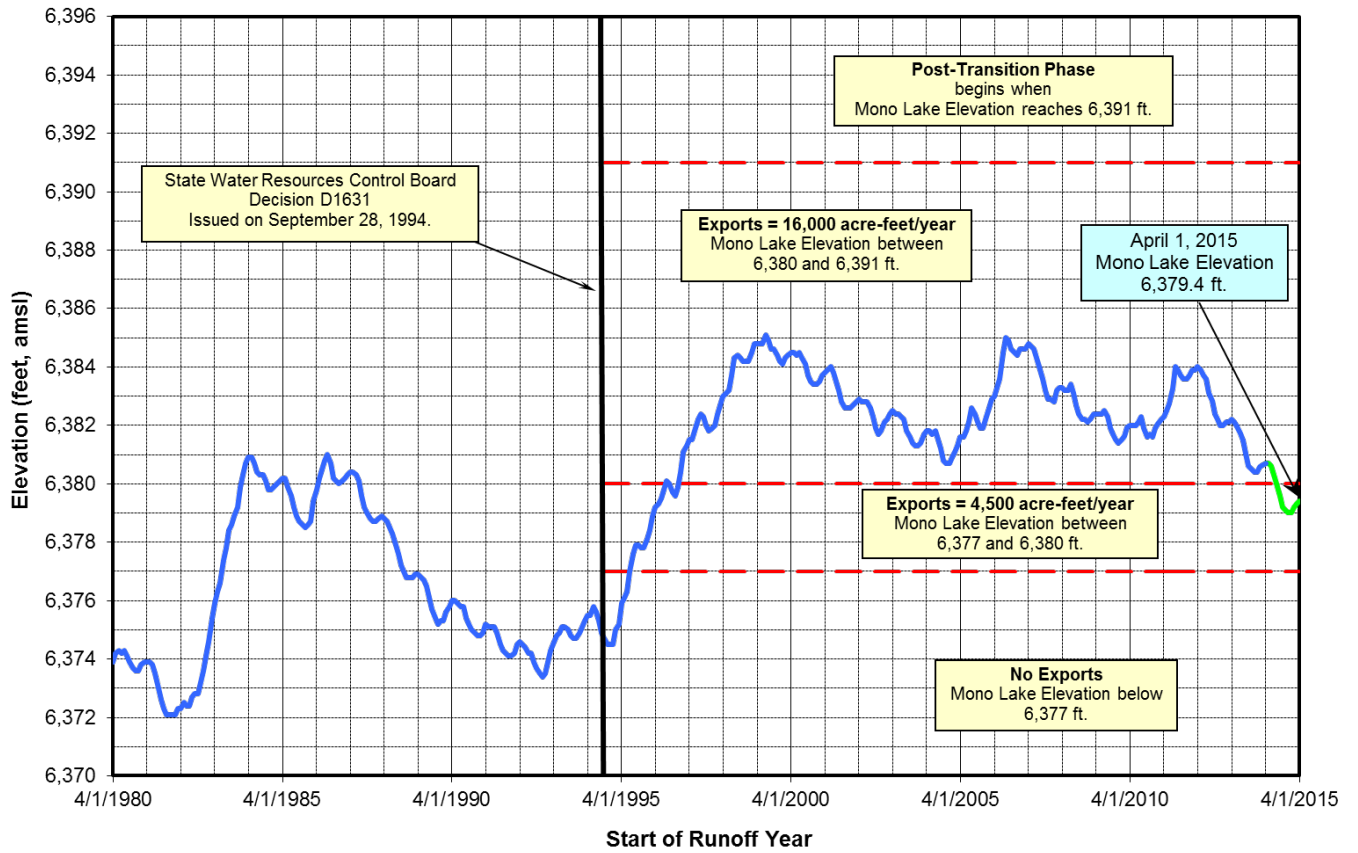
Mono Lake Elevations during RY 2013-14

In RY 2013-14, Mono Lake elevations were as shown in the following table. The Lake elevation was at 6,382.2 ft AMSL at the beginning of the runoff year, and ended the runoff year at 6,380.7 ft AMSL, a decrease of 1.5 ft.

RY 2013-14 Mono Lake Elevation Readings

April 1, 2013	6,382.2
May 1, 2013	6,382.1
June 1, 2013	6,382.0
July 1, 2013	6,381.7
August 1, 2013	6,381.5
September 1, 2013	6,381.0
October 1, 2013	6,380.6
November 1, 2013	6,380.5
December 1, 2013	6,380.4
January 1, 2014	6,380.4
February 1, 2014	6,380.6
March 1, 2014	6,380.6
April 1, 2014	6,380.7

Mono Lake Elevation



**2014 EASTERN SIERRA
RUNOFF FORECAST
April 1, 2014**

APRIL THROUGH SEPTEMBER RUNOFF

	MOST PROBABLE VALUE		REASONABLE MAXIMUM	REASONABLE MINIMUM	LONG-TERM MEAN (1961 - 2010)
	(Acre-feet)	(% of Avg.)	(% of Avg.)	(% of Avg.)	(Acre-feet)
MONO BASIN:	45,000	43%	56%	31%	103,522
OWENS RIVER BASIN:	128,300	42%	55%	29%	303,903

APRIL THROUGH MARCH RUNOFF

	MOST PROBABLE VALUE		REASONABLE MAXIMUM	REASONABLE MINIMUM	LONG-TERM MEAN (1961 - 2010)
	(Acre-feet)	(% of Avg.)	(% of Avg.)	(% of Avg.)	(Acre-feet)
MONO BASIN:	59,200	48%	62%	35%	122,333
OWENS RIVER BASIN:	205,900	50%	62%	37%	412,284

NOTE - Owens River Basin includes Long, Round and Owens Valleys (not incl Laws Area)

MOST PROBABLE - That runoff which is expected if median precipitation occurs after the forecast date.

REASONABLE MAXIMUM - That runoff which is expected to occur if precipitation subsequent to the forecast is equal to the amount which is exceeded on the average once in 10 years.

REASONABLE MINIMUM - That runoff which is expected to occur if precipitation subsequent to the forecast is equal to the amount which is exceeded on the average 9 out of 10 years.

Mono Basin Operations, Guideline ‘A’

Year Type.....DRY
 Forecasted Runoff in acre-feet.....≤ 83,655

Lower Rush Creek

Base Flows:

	Apr-Sep	Oct-Mar
Flow (cfs)	31	36

Minimum base flows are those specified above unless Grant Lake storage drops below 11,500 acre-feet (7,089.4’ elevation), in which case base flows should equal the lesser of Grant Lake inflow or the minimum requirements listed above (D-1631, p 197-198).

Peak Flows: - None.

Ramping: - None.

Lee Vining Creek

Base Flows:

	Apr-Sep	Oct-Mar
Flow (cfs)	37	25

Minimum base flows are those specified above or the stream flow at the point of diversion, whichever is less.

Peak Flows: - None.

Ramping: - None.

Diversions: - Divert flows in excess of base flows.

Augmentation: - None.

Parker and Walker Creeks

Base Flows:

	Apr-Sep	Oct-Mar
Parker (cfs)	9	6
Walker (cfs)	6	4.5

Minimum base flows are those specified above or the stream flow at the point of diversion, whichever is less.

Peak Flows: - None.

Ramping: - None.

Diversions: - Divert flows in excess of base flows.

Exports

4,500 acre-feet scenario – Maintain 6 cfs export throughout the year.

16,000 acre-feet scenario – As much as possible, maintain 22 cfs export throughout the year.

Scenario A: RY 2013 Grant Lake Reservoir Storage Projection

