November 6, 2014

Dr. Robert Harrington, Director
Inyo County Water Department
P.O. Box 337
Independence, CA 93526-0337

Dear Dr. Harrington:

Subject: Los Angeles Department of Water and Power's (LADWP) 2014 Operations Plan for the Second Six Months – October 1, 2014, through March 31, 2015

Thank you for the input provided in your October 24, 2014, correspondence and at the October 30, 2014, Technical Group meeting regarding LADWP's proposed operations plan for the second half of the 2014 runoff year.

This operations plan is being provided to you as Inyo County's senior Technical Group member and in conformance with Section V.D of the *Agreement between the County of Inyo and the City of Los Angeles and its Department of Water and Power on a Long Term Groundwater Management Plan for Owens Valley and Inyo County*. The operations plan outlines LADWP's planned operations in the Owens Valley during the six month period from October 1, 2014, through March 31, 2015. Elements of the operations plan include the 2014 Eastern Sierra Runoff Forecast, soil/vegetation water balance calculations for October 2014, Planned Owens Valley Groundwater Pumping for the Second Six Months of the 2014-15 Runoff Year (acre-feet), Historic (1981-82), and Projected (2014-15) Water Supplied by the City of Los Angeles within the Owens Valley, and Planned Los Angeles Aqueduct Operations for the 2014-15 Runoff Year. A summary of the enclosed plan is as follows:

Forecast Owens River Basin snowpack runoff during the 2014 runoff year is unrevised from the April 1, 2014, forecast at 205,900 acre-feet or about 50 percent of average runoff (Table 1).

The following wellfield monitoring sites are in "ON" status pursuant to Water Agreement Section V and Green Book Section I.B: L2, BP4, TA5, TS2, SS1, and BG2. Water

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balance calculations for the wellfield monitoring sites are summarized in Table 2. No wellfield monitoring site that was in "ON" status on April 1, 2014, has changed to "OFF" status. No wellfield monitoring site that was in "OFF" status on April 1, 2014, has changed to "ON" status.

Total planned Owens Valley pumping between October 1, 2014, and March 31, 2015, is 25,380 acre-feet. Projected groundwater production by wellfield for the second six months of the 2014 runoff year is included in Table 6.

Projected water diversions for Owens Valley uses during the 2014 runoff year are expected to be 160,764 acre-feet. Owens Valley water uses include irrigation, stockwater, enhancement/mitigation projects, the Lower Owens River Project, recreation, and wildlife. A summary of Owens Valley water uses is provided in Table 7.

Projected aqueduct delivery to Los Angeles during the 2014 runoff year is 69,617 acre-feet. Currently projected monthly reservoir storage amounts and Los Angeles Aqueduct deliveries to Los Angeles are included in Table 9.

Sincerely,

James G. Yannotta
Manager of Aqueduct

Enclosures
c: Mr. Robert Prendergast

Table 1

2014 EASTERN SIERRA RUNOFF FORECAST
April 1, 2014

APRIL THROUGH SEPTEMBER RUNOFF

	MOST PROBABLE VALUE (Acre-feet)	MOST PROBABLE VALUE (% of Avg.)	REASONABLE MAXIMUM (% of Avg.)	REASONABLE MINIMUM (% of Avg.)	LONG-TERM MEAN (1961 - 2010) (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 (Acre-feet)	MOST PROBABLE VALUE (% of Avg.)	REASONABLE MAXIMUM (% of Avg.)	REASONABLE MINIMUM (% of Avg.)	LONG-TERM MEAN (1961 - 2010) (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.

Table 2 - Monitoring site status and soil/vegetation water balance calculations for October 1, 2014 according to Green Book, Section III.

Site	July 1, 2014 Status	October, 2014 Veg. Water Req./Soil AWC for turn-on	October 2014 soil AWC	+30% annual ppt.	October 1 2014 Status	Soil AWC req. for well turn-on
		(cm)	(cm)	(cm)		(cm)
L1	OFF	4.0/15.6	1.2	NA	OFF	15.6, OFF 7-10
L2	ON	4.7/NA	9.7	9.7 + 4.7 = 14.4	ON	NA
L3	OFF	6.8/25.2	7.5	NA	OFF	25.2, OFF 10-11
BP1	OFF	4.5/22.9	1.1	NA	OFF	22.9†, OFF 10-97
BP2	OFF	13.3/28.4	1.2	NA	OFF	28.4, OFF 7-98
BP3	OFF	9.4/10.6	2.6	NA	OFF	10.6. OFF 7-12
BP4	ON	7.6/NA	37.0	37.0 + 4.9 = 41.9	ON	NA
TA3	OFF	21.6/26.0	6.4	NA	OFF	26.0, OFF 10-11
TA4	OFF	8.9/23.3	13.2	NA	OFF	23.3, OFF 10-11
TA5	ON	2.7/NA	20.6	20.6 + 4.9 = 25.5	ON	NA
TA6	OFF	13.6/17.6	9.3	NA	OFF	17.6, OFF 10-11
TS1	OFF	7.4/20.4	1.4	NA	OFF	20.4†, OFF 10-96
TS2	ON	6.2/NA	6.8	6.8 + 4.4 = 11.2	ON	NA
TS3	OFF	16.0/32.9	18.1	NA	OFF	32.9, OFF 10-12
TS4	OFF	31.0/55.9	24.6	NA	OFF	55.9, OFF 10-11
IO1	OFF	66.1/42.2	12.3	NA	OFF	42.2, OFF 10-98
IO2	OFF	4.4/18.9	5.0	NA	OFF	18.9, OFF 7-11
SS1	ON	10.6/NA	12.6	12.6 + 3.9 = 16.5	ON	NA
SS2	OFF	3.0/25.6	3.4	NA	OFF	25.6, OFF 7-11
SS3	OFF	14.6/33.8	18.5	NA	OFF	33.8, OFF 10-11
SS4	OFF	3.5/15.9	11.5	NA	OFF	15.9, OFF 7-05
BG2	ON	2.5/NA	24.3	24.3 + 4.0 = 28.3	ON	NA

†: These values of soil water required for well turn-on were derived using calculations based on percent cover that were routinely performed in the past. The values have not been updated to conform with the Greenbook equations in section III.D.2, p. 57-59.

Table 6 - Planned Owens Valley Groundwater Pumping for the Second Six Months of the 2014-15 Runoff Year (acre-feet)

Month	Laws	Bishop	Big Pine	Taboose-Aberdeen	Thibaut-Sawmill	Indep.-Oak	Symmes-Shepherd	Bairs-Georges	Lone Pine	TOTAL
October	20	460	1,700	500	660	200	0	50	50	3,640
November	20	460	1,700	1,100	660	420	150	85	50	4,645
December	20	460	1,875	1,100	660	420	150	85	50	4,820
January	20	460	1,700	1,100	660	420	150	145	50	4,705
February	20	460	1,700	180	660	420	150	145	50	3,785
March	20	460	1,700	180	660	420	150	145	50	3,785
TOTAL	120	2,760	10,375	4,160	3,960	2,300	750	655	300	25,380

Table 7. Historic (1981-82) and Projected (2014-15) Water Supplied by the City within the Owens Valley (acre-feet)

Use	April		May		June		July		August		September		TOTAL Apr-Sep	
	1981	2014	1981	2014	1981	2014	1981	2014	1981	2014	1981	2014	1981	2014
Irrigation	3,980	5,444	7,958	8,544	10,373	9,827	9,476	8,354	8,295	6,842	6,321	4,200	**46,403**	**43,211**
Stockwater	1,141	960	1,319	1,059	1,244	1,042	1,245	1,065	1,219	1,164	1,319	900	**7,487**	**6,190**
E / M	0	1,326	0	1,681	0	1,639	0	1,771	0	1,324	0	1,100	**0**	**8,841**
LORP	0	877	0	1,693	0	2,665	0	3,616	0	2,312	0	2,600	**0**	**13,763**
Owens Lake	0	7,732	0	10,406	0	5,364	0	667	0	1,128	0	12,700	**0**	**37,997**
Rec. & Wildlife	379	539	804	705	1,160	848	1,455	890	1,381	862	1,406	700	**6,585**	**4,544**
1600 ACFT Proj.	0	85	0	91	0	116	0	157	0	74	0	115	**0**	**638**
Total	***5,500***	***16,963***	***10,081***	***24,179***	***12,777***	***21,501***	***12,176***	***16,520***	***10,895***	***13,706***	***9,046***	***22,315***	***60,475***	***115,184***

Use	October		November		December		January		February		March		TOTAL Oct-Mar		TOTAL Apr-Mar	
	1981	2014	1981	2014	1981	2014	1982	2014	1982	2014	1982	2014	81-82	14-15	81-82	14-15
Irrigation	263	400	0	0	0	0	0	0	0	0	14	100	**277**	**500**	**46,680**	**43,711**
Stockwater	1,065	900	1,045	800	1,050	800	1,007	800	1,010	800	1,098	900	**6,275**	**5,000**	**13,762**	**11,190**
E / M	0	300	0	100	0	100	0	100	0	100	0	100	**0**	**800**	**0**	**9,641**
LORP	0	900	0	300	0	600	0	300	0	300	0	900	**0**	**3,300**	**0**	**17,063**
Owens Lake	0	10,800	0	3,900	0	2,000	0	2,000	0	3,900	0	9,000	**0**	**31,600**	**0**	**69,597**
Rec. & Wildlife	781	700	713	600	565	600	478	600	342	500	447	400	**3,326**	**3,400**	**9,911**	**7,944**
1600 ACFT Proj.	0	215	0	215	0	105	0	97	0	185	0	145	**0**	**962**	**0**	**1,600**
Total	***2,109***	***14,215***	***1,758***	***5,915***	***1,615***	***4,205***	***1,485***	***3,897***	***1,352***	***5,785***	***1,559***	***11,545***	***9,878***	***45,562***	***70,353***	***160,746***

NOTE: REC & WILDLIFE INCLUDES LORP OFF-RIVER LAKE & PONDS WATER USE

Table 9 - Planned Los Angeles Aqueduct Operations for 2014-15 Runoff Year

Month	Owens Valley-Bouquet Reservoir Storage 1st of month Storage (acre-feet)	Aqueduct Delivery to Los Angeles (acre-feet)
April	165,559	2,031
May	168,433	2,335
June	169,135	2,473
July	165,288	9,324
August	155,323	15,039
September	140,557	14,743
October	119,155	1,406
November	113,075	2,975
December	122,613	7,686
January	134,114	3,997
February	149,881	3,610
March	162,418	3,997
TOTAL		***69,617***